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THE MAINE BULLETIN

Vol. XXXVII APRIL, 1935 No. 11

University of Maine

Orono, Maine

Catalog Number with Records of the Sessions of 1934-1935

Announcements for the Sessions of 1935-1936

THE UNIVERSITY PRESS
ORONO, MAINE
1935

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1935

JANUARY

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JANUARY

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DECEMBER

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Calendar

1935

January 2, Wednesday, Christmas Recess ends, 8 A.M.
January 23, Wednesday, Final Examinations begin in Arts and Sciences and Education.
January 25, Friday, Final Examinations begin in Agriculture and Technology.
February 1, Friday, Final Examinations end. End of Fall Semester, 5.05 P.M.

SPRING SEMESTER

February 2, Saturday, Registration 8 A.M. to 12 M.
February 4, Monday, Spring Semester begins 8 A.M.
February 22, Friday, Washington's Birthday, a holiday.
March 22, Friday, Spring Recess begins 11:30 A.M.
April 2, Tuesday, Spring Recess ends, 8 A.M.
May 20, Monday-May 22, Wednesday, Entrance Examinations.
May 27, Monday, Final Examinations begin in Arts and Sciences and Education.
May 28, Tuesday, Final Examinations begin in Agriculture and Technology.
May 30, Thursday, Memorial Day, a holiday.
June 5, Wednesday, Final Examinations end.
June 7, Friday, Class Day.
June 8, Saturday, Alumni Day.
June 9, Sunday, Baccalaureate address.
June 10, Monday, Commencement.

SUMMER SESSION

July 1, Monday, Registration 8 A.M. to 12 M. and 1:30 to 4:30 P.M.
July 2, Tuesday, Classes begin 8 A.M.
July 4, Thursday, a holiday.
August 9, Friday, Summer Session ends, 12 M.

1935

FALL SEMESTER

September 9, Monday-September 10, Tuesday, Entrance Examinations.
September 11, Wednesday, University opens for freshmen.
September 16, Monday, Registration for transfer students 10 A.M.-12 M. and 2:00-3:00 P.M.

September 17, Tuesday, University opens for upperclassmen. Registration 8 A.M.-12 M. and 1:30-3 P.M.
November 28, Thursday, Thanksgiving Day, a holiday.
December 20, Friday, Christmas Recess begins, 11:30 A.M.

1936

January 7, Tuesday, Christmas Recess ends, 8 A.M.
January 22, Wednesday, Final Examinations begin in Arts and Sciences and Education.
January 24, Friday, Final Examinations begin in Agriculture and Technology.
January 31, Friday, Final Examinations end. End of Fall Semester, 5:05 P.M.

SPRING SEMESTER

February 1, Saturday, Registration 8 A.M. to 12 M.
February 3, Monday, Spring Semester begins 8 A.M.
February 22, Saturday, Washington's Birthday, a holiday.
March 20, Friday, Spring Recess begins at 11:30 A.M.
March 31, Tuesday, Spring Recess ends at 8 A.M.
May 18, Monday-May 20, Wednesday, Entrance Examinations.
May 25, Monday, Final Examinations begin in Arts and Sciences and Education.
May 26, Tuesday, Final Examinations begin in Agriculture and Technology.
May 30, Saturday, Memorial Day, a holiday.
June 3, Wednesday, Final Examinations end.
June 5, Friday, Class Day.
June 6, Saturday, Alumni Day.
June 7, Sunday, Baccalaureate address.
June 8, Monday, Commencement.

Board of Trustees

Hon. Harmon Gustavus Allen, President Term expires June 17, 1938	Springvale
Thomas Edward Houghton, Clerk Term expires May 6, 1941	Fort Fairfield
Bertram Everett Packard, B.A., LL.B., Ed.D., *ex officio*	Augusta
Walter Alonzo Danforth Term expires May 4, 1935	Bangor
Edward Everett Chase, B.A. Term expires January 10, 1936	Portland
Hosea Ballou Buck, C.E. Term expires July 18, 1936	Bangor
Frank Porter Washburn Term expires January 25, 1939	Augusta
John Thomas Gyger, M.S. Term expires November 20, 1940	Portland
Eugene Boutelle Sanger, Ph.B., M.D., F.A.C.S. Term expires November 20, 1940	Bangor

Executive Committee, Buck, Danforth, Packard

Officers of Administration

OF THE UNIVERSITY

ARTHUR ANDREW HAUCK, President. Alumni Hall; Campus†
JAMES NORRIS HART, Dean. Alumni Hall; 123 Main Street
GEORGE DAVIS CHASE, Dean of Graduate Study. 140 Stevens Hall; 143 Main Street
LAMERT SEYMOUR CORBETT, Dean of Men. 27 Rogers Hall; Campus
EDITH GRACE WILSON, Dean of Women. 16 Stevens, South; 6 North Main Street
ROY MERLE PETERSON, Director of the Summer Session and Editor of the University Catalog. 3 Stevens, North; 29 Bennoch Street
WALTER JOSEPH CREAMER, Director of Freshman Week. 22 Lord Hall; 331 Center Street, Bangor
LOUIS TAPPE IBBOTSON, Librarian. Library; University Place
CHARLES JOHN DUNN, Treasurer Emeritus. 114 Main Street
FREDERICK SHAW YOUNGS, Treasurer. Alumni Hall
JAMES ADRIAN GANNETT, Registrar. Alumni Hall; 166 Main Street
EDWARD HAVENER KELLEY, Acting Purchasing Agent. Alumni Hall; 225 Main Street
IRVING PIERCE, Accountant. Alumni Hall; 34 Sixth Street, Old Town
ADDIE MATILDA WEED, Recorder. Alumni Hall; Veazie
EVELYN TAYLOR, Assistant Registrar. Alumni Hall; 33 Bennoch Street
WILLIAM CARL WELLS, Steward. Alumni Hall; 229 State Street, Bangor
MAYNARD ALTON HINCKS, Student Counselor. 24 Rogers Hall; 36 Myrtle Street

OF THE COLLEGES AND EXPERIMENT STATION

PAUL CLOKE, Dean of the College of Technology. 12 Wingate Hall; 49 Forest Avenue
OLIN SILAS LUTES, Dean of the School of Education. 24 Stevens, South; College Road

†Offices and residences.

FRED GRIFFEE, Director of the Maine Agricultural Experiment Station. Holmes Hall; 32 Forest Avenue

JAMES MUILENBURG, Dean of the College of Arts and Sciences. 100 Stevens Hall; 104 Main Street

ARTHUR LOWELL DEERING, Dean of the College of Agriculture. 16 Winslow Hall; 160 College Road

OF THE DEPARTMENTS

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT. Professor Merchant, 36 Winslow Hall; 39 Mill Street

AGRICULTURAL EDUCATION. Professor Hill, 35 Winslow Hall, 162 College Road

AGRONOMY AND AGRICULTURAL ENGINEERING. Professor Chucka, 26 Winslow Hall; 48 High Street, Old Town

ANIMAL INDUSTRY. Professor Corbett, 27 Rogers Hall, Campus

BACTERIOLOGY. Professor Hitchner, 13 Winslow Hall; 51 Bennoch Street

BIOLOGICAL AND AGRICULTURAL CHEMISTRY. Professor Smith, 15 Winslow Hall; 382 College Road

BIOLOGY (AGRICULTURAL EXPERIMENT STATION). Professor Dove, Holmes Hall; 142 Park Street

BOTANY AND ENTOMOLOGY. Professor Steinmetz, 24 Coburn Hall; 38 North Main Street

CHEMISTRY AND CHEMICAL ENGINEERING. Professor Brautlecht, 333 Aubert Hall; 63 Bennoch Street

CHEMISTRY (AGRICULTURAL EXPERIMENT STATION). Professor Bartlett, Holmes Hall; 148 College Road

CIVIL ENGINEERING. Professor Evans, 21 Wingate Hall; 8 Kell Street

CLASSICS. Professor Chase, 140 Stevens Hall; 143 Main Street

ECONOMICS AND SOCIOLOGY. Professor Ashworth, 46 Stevens, South; 88 North Main Street

EDUCATION. Professor Lutes, 24 Stevens, South; College Road

ELECTRICAL ENGINEERING. Professor Barrows, 2 Lord Hall; 40 Myrtle Street

ENGINEERING DRAFTING. Professor Kent, 30 Wingate Hall; 16 Sixth Street, Bangor

ENGLISH. Professor Ellis, 230 Stevens Hall; 29 Park Street

ENTOMOLOGY (AGRICULTURAL EXPERIMENT STATION). Professor Patch, Holmes Hall; Braeside, College Road

FORESTRY. Professor Demeritt, 24 Winslow Hall; 15 University Place.

German. Professor Drummond, 325 Stevens Hall; 61 Bennoch Street
History and Government. Professor Dow, 145 Stevens Hall; Bennoch Road
Home Economics. Professor Greene, 23 Merrill Hall; 6 University Place
Horticulture. Professor Waring, 34 Winslow Hall; College Road and Kell Street
Mathematics and Astronomy. Professor Willard, 130 Stevens Hall; 100 Bennoch Street
Mechanical Engineering. Professor Sweetser, 1 Lord Hall; 109 Main Street
Mechanics. Professor Weston, 1 Fernald Hall; College Road
Military Science and Tactics. Major Oliver, Armory; 36 Myrtle Street
Music. Professor Sprague, 15 Stevens, North; 217 Union Street, Bangor
Philosophy. Professor Levinson, 335 Stevens Hall; 78 North Main Street
Physical Education. Professor Wallace, Memorial Gymnasium; 45 Park Street
Physics. Professor Fitch, 200 Aubert Hall; 32 College Road
Plant Pathology (Agricultural Experiment Station). Professor Folsom, Holmes Hall; 63 Forest Avenue
Psychology. Professor Dickinson, 31 Stevens, North; Bennoch Street
Public Speaking. Professor Bailey, 240 Stevens Hall; University Place
Pulp and Paper Technology. Professor Bray, 135 Aubert Hall; 47 Forest Avenue
Romance Languages. Professor Peterson, Chairman, 1934-35, 3 Stevens, North; 29 Bennoch Street
Zoology. Professor Murray. 16 Coburn Hall; 3 Summer Street

OF THE DORMITORIES

Delia Bird Sullivan, Superintendent of Colvin Hall
Gertrude Hayes, Superintendent of the University Inn
Celestia Stiles, Superintendent of the Maples
Ruth Esther Cope, Superintendent of Balentine Hall

MAJOR ADMINISTRATIVE ASSISTANTS

Florence Elizabeth Johnson, Secretary to the President. Alumni Hall
Blandena Couillard Garland, Secretary to the Dean of the University. Alumni Hall

YVONNE MORIN, Secretary to the Dean of the College of Agriculture. 16 Winslow Hall

KATHLEEN KELLEY, Secretary to the Dean of the College of Arts and Sciences. 100A Stevens Hall

MILDRED FRENCH CREAMER, Secretary to the Dean of the College of Technology. 12 Wingate Hall

THELMA DEMONT, Secretary to the Dean of the School of Education. 22 Stevens, South

MARY NORTON CAMERON, Secretary to the Director of the Experiment Station. Holmes Hall

DOROTHEA LEWIS MILLER, Secretary to the Treasurer. Alumni Hall

GENEVA MORTON, Secretary to the Dean of Men. 27 Rogers Hall

Faculty of Instruction*

ARTHUR ANDREW HAUCK, President.
A.B., Reed, 1915; Ph.D., Columbia, 1932

LUCIUS HERBERT MERRILL, Professor Emeritus of Biological and Agricultural Chemistry.
B.S., Maine, 1883; Sc.D., 1908

JAMES NORRIS HART, Dean of the University and Professor of Mathematics and Astronomy.
B.C.E., Maine, 1885; C.E., 1890; S.M., Chicago, 1897; Sc.D., Maine, 1908; Ph.D., 1922

FREMONT LINCOLN RUSSELL, Professor Emeritus of Bacteriology and Veterinary Science.
B.S., Maine, 1885; V.S., New York College of Veterinary Surgeons, 1886

JAMES STACY STEVENS, Dean Emeritus of the College of Arts and Sciences.
B.S., Rochester, 1885; M.S., 1888; M.S., Syracuse, 1889; LL.D., Rochester, 1907; Litt.D., Maine, 1922

JOHN HOMER HUDDILSTON, Professor of Ancient Civilization and Lecturer on Art History.
B.A., Baldwin-Wallace, 1890; M.A., 1892; A.B., Harvard, 1893; Ph.D., Munich, 1898

GEORGE DAVIS CHASE, Dean of Graduate Study and Professor of Classics.
A.B., Harvard, 1889; A.M., 1895; Ph.D., 1897; LL.D., Maine, 1927

CAROLINE COLVIN, Professor Emeritus of History and Government.
A.B., Indiana, 1893; Ph.D., University of Pennsylvania, 1901; LL.D., Maine, 1927

CHARLES PARTRIDGE WESTON, Professor of Mechanics.
B.C.E., Maine, 1896; C.E., 1899; A.M., Columbia, 1902

GEORGE EDWARD SIMMONS, Professor Emeritus of Agronomy.
B.S., Ohio Northern, 1902; M.S., 1905; B.Sc., Ohio State, 1909; D.Sc., Ohio Northern, 1922

WILLIAM EDWARD BARROWS, Professor of Electrical Engineering.
B.S., Maine, 1902; E.E., 1908

*Arranged in groups in order of seniority of appointment.

LAMERT SEYMOUR CORBETT, Dean of Men and Professor of Animal Industry.
B.S., Massachusetts State College, 1909; B.S.A., Boston University, 1909; M.S., Kentucky, 1913

WILLIAM JORDAN SWEETSER, Professor of Mechanical Engineering.
S.B., Massachusetts Institute of Technology, 1901

ROY MERLE PETERSON, Professor of Romance Languages (Chairman, 1934-35) and Director of the Summer Session.
A.B., Coe, 1906; A.M., Harvard, 1910; Ph.D., 1912; F.A.A.R.

ROBERT RUTHERFORD DRUMMOND, Professor of German.
B.S., Maine, 1905; Ph.D., University of Pennsylvania, 1909

HERBERT STAPLES HILL, Professor of Agricultural Education.
A.B., Bowdoin, 1905

HARLEY RICHARD WILLARD, Professor of Mathematics and Astronomy.
A.B., Dartmouth, 1899; A.M., 1902; A.M., Yale, 1910; Ph.D., 1912

JOHN H ASHWORTH, Professor of Economics and Sociology.
A.B., Emory and Henry, 1906; Ph.D., Johns Hopkins, 1914

CHARLES ANDREW BRAUTLECHT, Professor of Chemistry and Chemical Engineering.
Ph.B., Yale, 1906; Ph.D., 1912

MILTON ELLIS, Professor of English.
B.A., Maine, 1907; M.A., 1908; A.M., Harvard, 1909; Ph.D., Harvard, 1913

EMBERT HIRAM SPRAGUE, Professor of Sanitary Engineering.
B.S., Dartmouth, 1900

ALBERT LEWIS FITCH, Professor of Physics.
A.B., Albion, 1911; A.M., 1912; Ph.D., University of Michigan, 1916

FRED MANSFIELD BRICE, Professor of Physical Education.

JAMES ADRIAN GANNETT, Registrar.
B.S., Maine, 1908; M.A., 1928

FRANÇOIS JOSEPH KUENY, Professor of Romance Languages.
B. ès L., University of Paris, 1897; L. ès L., Besançon, 1901

CHARLES HENRY MERCHANT, Professor of Agricultural Economics and Farm Management.
B.S., Cornell University, 1920; M.S., 1922; Ph.D., 1928

MARK BAILEY, Professor of Public Speaking.
A.B., Yale, 1915; A.M., University of Michigan, 1917

JAMES HOWARD WARING, Professor of Horticulture.
B.S., Pennsylvania State, 1920; M.S., 1921; Ph.D., Michigan State College, 1930

PAUL CLOKE, Dean of the College of Technology and Director of the Technology Experiment Station.
E.E., Lehigh, 1905; M.S., 1913; Eng.D., Maine, 1934

Charles Alexius Dickinson, Professor of Psychology.
A.M., Clark, 1922; Ph.D., 1925

Olin Silas Lutes, Dean of the School of Education and Professor of Education.
A.B., Ohio University, 1915; M.A., State University of Iowa, 1923; Ph.D., 1926

Pearl Stuart Greene, Professor of Home Economics.
B.A., Northwestern, 1909; B.S., Lewis Institute, 1914; A.M., Columbia, 1923

Arthur St. John Hill, Professor of Electrical Engineering.
E.E., Polytechnic Institute of Brooklyn, 1911; M.S.E., University of Michigan, 1932

Ronald Bartlett Levinson, Professor of Philosophy.
A.B., Harvard, 1920; Ph.D., Chicago, 1924

Ferdinand Henry Steinmetz, Professor of Botany and Entomology.
B.S., Illinois, 1915; M.S., Minnesota, 1921; Ph.D., 1926

Louis Tappe Ibbotson, Librarian.
A.B., Hamilton, 1922; B.L.S., University of the State of New York, 1925

Edward James Oliver, Professor of Military Science and Tactics.
Major of Infantry (D.O.L.), U. S. Army. B.A., Wisconsin, 1908

Loren Prescot Stewart, Professor of Military Science and Tactics.
Major, Infantry (D.O.L.), U. S. Army. B.S., Maine, 1915

Benjamin Calvin Kent, Professor of Engineering Drafting.
B.S,. Maine, 1912

Chester Albert Jenkins, Professor of Physical Education.
B.S., Dartmouth, 1911; M.S., Maine, 1931

Maurice Daniel Jones, Professor of Agricultural Economics and Farm Management.
B.S., Maine, 1912; M.S., 1927

Elmer Reeve Hitchner, Professor of Bacteriology.
B.S., Pennsylvania State, 1915; M.S., 1916; Ph.D., Wisconsin, 1931

Llewellyn Morse Dorsey, Professor of Dairy Husbandry.
B.S., Maine, 1916; M.S., 1923

Stanley Moore Wallace, Professor of Physical Education.
Diploma, New Haven Normal School of Gymnastics, 1917

Harry Woodbury Smith, Professor of Biological and Agricultural Chemistry.
B.S., Maine, 1909; M.S., 1922; Ph.D., Rutgers, 1934

Marion Deyoe Sweetman, Professor of Home Economics.
B.S., Iowa State College, 1921; M.S., 1922; Ph.D., Minnesota, 1927

Adelbert Wells Sprague, Professor of Music.
B.S., Maine, 1905; A.M., Harvard, 1907

THEODORE SMALL CURTIS, Faculty Manager of Athletics.
B.S., Maine, 1923

SIDNEY SOHNS EBERLE, Professor of Military Science and Tactics.
Major, Infantry (D.O.L.), U. S. Army. A.B., University of Washington, 1914

JAMES MUILENBURG, Dean of the College of Arts and Sciences.
A.B,. Hope, 1920; A.M., Nebraska, 1922; Ph.D., Yale, 1926

ARTHUR LOWELL DEERING, Dean of the College of Agriculture.
B.S., Maine, 1912; Sc.D., 1934

DWIGHT BURGESS DEMERITT, Professor of Forestry.
B.S., Maine, 1922; M.F., Yale, 1923

JOSEPH ANTHONY CHUCKA, Professor of Agronomy.
B.S., Wisconsin, 1927; M.S., 1928; Ph.D., 1930

PAUL DECOSTA BRAY, Professor of Pulp and Paper Technology.
B.S., Maine, 1914; Ch.E., 1918

WESTON SUMNER EVANS, Professor of Civil Engineering.
B.S., Maine, 1918; M.S., 1923

JOSEPH MAGEE MURRAY, Professor of Zoology.
B.A., Maine, 1925; M.A., University of Michigan, 1927; Ph.D., 1929

ARCHIE ELLSWORTH PHINNEY, Professor of Military Science and Tactics.
Captain, Infantry (D.O.L.), U. S. Army

ALPHEUS CROSBY LYON, Associate Professor of Civil Engineering.
B.S., Maine, 1902; S.B., Massachusetts Institute of Technology, 1904; C.E., Maine, 1913

BERTRAND FRENCH BRANN, Associate Professor of Chemistry.
B.S., Maine, 1909; M.S., 1911; S.M., Massachusetts Institute of Technology, 1912

AVA HARRIET CHADBOURNE, Associate Professor of Education.
B.A., Maine, 1915; M.A., 1918; A.M., Columbia, 1919; Ph.D., 1928

HAROLD WALTER LEAVITT, Associate Professor of Civil Engineering and Secretary Technology Experiment Station.
B.S., Maine, 1915; C.E., 1918; M.S., 1921

ALBERT AMES WHITMORE, Associate Professor of History and Government.
B.S., Maine, 1906; M.A., 1917

NOAH ROSENBERGER BRYAN, Associate Professor of Mathematics.
B.A., Pennsylvania State, 1913; A.M., University of Pennsylvania, 1918; Ph.D., Columbia, 1921

*Albert Morton Turner, Associate Professor of English and Comparative Literature.
A.B., Harvard, 1912; A.M., 1914; Ph.D., 1920

Walter Joseph Creamer, Associate Professor of Electrical Communication and Director of Freshman Week.
B.S., Maine, 1918; E.E., 1921; B.A., 1923

Maynard Fred Jordan, Associate Professor of Mathematics and Astronomy.
B.A., Maine, 1916; M.A., 1921

Charles Burton Crofutt, Associate Professor of Physics.
B.A., Cornell College, 1919; M.S., State University of Iowa, 1920; Ph.D., 1923

John Robert Smyth, Associate Professor of Poultry Husbandry.
B.S., Purdue, 1920; M.S., Kentucky, 1928

George William Small, Associate Professor of English.
B.A., Tennessee, 1915; M.A., Johns Hopkins, 1921; Ph.D., 1922; B.Litt., Oxford, 1927

Edward French Dow, Associate Professor of History and Government and Head of the Department.
B.S., Bowdoin, 1925; A.M., Harvard, 1926; Ph.D., 1932

Harry Dexter Watson, Associate Professor of Mechanical Engineering.
B.S., Maine, 1920; M.S., 1929

Stanley Royal Ashby, Associate Professor of English.
B.A., Texas, 1904; B.A., Oxford, 1907; M.A., 1923; A.M., Harvard, 1925; Ph.D., 1927

Ernest Jackman, Associate Professor of Education and Director of Teacher Training.
A.B., Colby, 1912; A.M., Columbia, 1924

Walter Whitmore Chadbourne, Associate Professor of Economics and Sociology.
B.A., Maine, 1920; M.B.A., Harvard, 1922

Edward Newcomb Brush, Associate Professor of Psychology.
A.B., Vermont, 1925; A.M., Harvard, 1926; Ph.D., 1932

George Baer Fundenburg, Associate Professor of Romance Languages.
A.B., Princeton, 1916; A.M., 1917; Ph.D., Columbia, 1919

Allen Wright Goodspeed, Associate Professor of Forestry.
B.S., Maine, 1928; M.F., Yale, 1929

Lyle Clayton Jenness, Associate Professor of Chemistry.
B.S., New Hampshire, 1922; M.S., Maine, 1925

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*On leave of absence, spring semester, 1934-35.

George Farrington Dow, Associate Professor of Agricultural Economics and Farm Management.
B.S., Maine, 1927; M.S., 1929

Chauncey Wallace Lord Chapman, Assistant Professor of Forestry.
B.S., Maine, 1914; M.S,. 1921

Leigh Philbrook Gardner, Assistant Professor of Poultry Husbandry.
B.S., Maine, 1920; M.S., 1923

Warren Stanhope Lucas, Assistant Professor of Mathematics.
B.A., Maine, 1914; M.A., 1922

Carl Everett Otto, Assistant Professor of Chemistry.
B.A., Cincinnati, 1916; M.A., 1920; Ph.D., 1922

Frances Elizabeth Arnold, Assistant Professor of Romance Languages.
B.A., Maine, 1910; M.A., 1923

Marion Stephanie Buzzell, Assistant Professor of Romance Languages.
B.A., Maine, 1914; M.A., 1915

Harold Clayton Swift, Assistant Professor of Agronomy.
B.S., Maine, 1918; M.S., 1923

Everett Louis Roberts, Assistant Professor of Electrical Engineering.
B.S., Maine, 1920

Charles Orville Dirks, Assistant Professor of Entomology.
B.S., Kansas State College, 1924; M.S., Iowa State College, 1925

Helen Anna Lengyel, Assistant Professor of Physical Education for Women.
Diploma, Sargent School for Physical Education, 1915; B.A., Maine, 1927

Irving Henry Prageman, Assistant Professor of Mechanical Engineering.
Ph.B., Yale, 1918; M.E., 1923

Richard George Wood, Assistant Professor of History and Government.
A.B., Dartmouth, 1922; A.M., Harvard, 1924; Ph.D., 1934

William Francis Scamman, Assistant Professor of English.
B.A., Maine, 1908; M.A., 1930

George Peter Steinbauer, Assistant Professor of Botany.
B.S., Minnesota, 1925; M.S., 1927; Ph.D., 1929

Marguerite Ruth Musgrave, Assistant Professor of Home Economics.
B.S., Columbia, 1925; A.M., 1926

Himy Benjamin Kirshen, Assistant Professor of Economics and Sociology.
B.S., Whitman, 1926; A.M., Columbia, 1929

Ruth Crosby, Assistant Professor of English.
A.B., Mount Holyoke, 1919; A.M., Radcliffe, 1920; Ph.D., 1929

JOHN RAYMOND CRAWFORD, Assistant Professor of Education and Director of Bureau of Educational Research and Service.
B.A., Culver-Stockton, 1924; M.A., State University of Iowa, 1929; Ph.D., 1931

MONROE EDWARD FREEMAN, Assistant Professor of Biological and Agricultural Chemistry.
B.A., Minnesota, 1928; M.S., 1929; Ph.D., 1931

ROBERT IRVING ASHMAN, Assistant Professor of Forestry.
A.B., Cornell University, 1913; M.F., Yale, 1929

HOWE WIGGIN HALL, Assistant Professor of Animal Husbandry.
B.S., Maine, 1914; M.S., 1925

EARL MAYNARD DUNHAM, Assistant Professor of Engineering Drafting.
B.A., Maine, 1924; M.A., 1928

FAY HYLAND, Assistant Professor of Botany.
B.S., Michigan State College, 1925; M.S., Maine, 1929

WILLIAM LESTER GILLILAND, Assistant Professor of Chemistry.
B.S., University of Washington, 1920; M.S., 1921; Ph.D., Massachusetts Institute of Technology, 1925

ALFRED CARLETON ANDREWS, Assistant Professor of Classics.
A.B., Bowdoin, 1926; A.M., University of Pennsylvania, 1930; Ph.D., 1931

HELENE HEYE, Assistant Professor of Home Economics.
B.S., Hastings, 1925; M.S,. Iowa State College, 1927

JOHN FRANKLIN WITTER, Assistant Professor of Animal Pathology.
B.S., Maryland, 1928; D.V.M., Michigan State College, 1932

JOHN HENRY MAGEE, Assistant Professor of Economics and Sociology.
B.A., Maine, 1917; M.A., 1931; M.S., 1933

HOWARD LLOYD FLEWELLING, Assistant Professor of English.
A.B., Dartmouth, 1921; M.A., Maine, 1925; Ph.D., University of Michigan, 1931

EVELYN FAYE WILSON, Assistant Professor of History.
A.B., Beloit, 1921; M.A., University of Washington, 1924; Ph.D., California, 1930

EDITH ELIZABETH MORTENSEN, Assistant Professor of Zoology.
B.A., Carleton, 1925; M.A., Minnesota, 1927

JOHN FREDERICK KLEIN, Assistant Professor of German.
A.B., Cornell University, 1912; A.M., 1913; Ph.D., 1920

CHARLES EARL PACKARD, Assistant Professor of Zoology.
A.B., Bates, 1919; S.M., Yale, 1924

CLARENCE EDWIN BENNETT, Assistant Professor of Physics.
Ph.B., Brown, 1923; Sc.M., 1924; Ph.D., 1930

STEPHEN MARTIN RALEIGH, Assistant Professor of Agronomy.
B.S., Kansas State College, 1927; Ph.D., Minnesota, 1934
ROGER CLAPP, Assistant Professor of Horticulture.
B.S., Cornell University, 1928; M.S., Maine, 1932
RICHARD MCVAY RILEY, Assistant Professor of Horticulture.
B.S., Ohio University, 1926; M.S., Cornell University, 1929
DONALD MCLEAN PURDY, Assistant Professor of Psychology.
A.B., Cornell University, 1921; A.M., Harvard, 1926; Ph.D., 1930
FREDERICK EUGENE MELDER, Assistant Professor of Economics.
B.B.A., University of Washington, 1926; M.A., 1931

PERCIE HOPKINS TURNER, Lecturer in English.
A.B.,. Smith, 1917; A.M., 1920; A.M., Radcliffe, 1923; Ph.D., 1924
GERTRUDE ELVIRA EBBESON, Special Lecturer in Architectural Design and Drawing, Department of Engineering Drafting.
B.Arch., Massachusetts Institute of Technology, 1933

EVERETT WILLARD DAVEE, Instructor in Mechanical Engineering.
EVERETT JOSHUA FELKER, Instructor in Civil Engineering.
B.S. in Ed., Maine, 1931
HARRY ROY PERKINS, Instructor in Mechanical Engineering.
HERMAN SAMUEL SILVERMAN, Instructor in Mathematics.
B.A., Maine, 1925; M.A., 1927
JOHN GEORGE LESLIE CAULFIELD, Instructor in Pulp and Paper Technology.
B.S., Maine, 1924; M.S., 1926
KENNETH GERARD CRABTREE, Instructor in Electrical Engineering.
S.B., Massachusetts Institute of Technology, 1922
WILLIAM CURTIS KENYON, Instructor in Physical Education.
GEORGE OGILVIE, Instructor in Military Science and Tactics.
Sergeant (D.E.M.L.), U. S. Army
BEULAH ELIZABETH OSGOOD, Instructor in Home Economics.
B.S., Maine, 1926; A.M., Columbia, 1931
THERON ALONZO SPARROW, Instructor in Mechanical Engineering.
B.S., Maine, 1924
MARION ELIZABETH ROGERS, Instructor in Physical Education for Women.
Diploma, Sargent School for Physical Education, 1927; B.A., Maine, 1930
HERSCHEL LEONARD BRICKER, Instructor in Public Speaking.
A.B., Coe, 1928

Gladys Marie Gould, Instructor in Home Economics.
B.S., Maine, 1922

Lawrence Lewis Osborn, Instructor in Chemistry.
A.B., Indiana, 1924; A.M., 1927

John Emmons Stewart, Instructor in Mathematics.
B.A., Maine, 1927; M.A., 1928

Edgar Junior Bogan, Instructor in Chemistry.
A.B., Miami, 1926; A.M., Princeton, 1929

Ralph Albert Sawyer, Instructor in Engineering Drafting.
B.S., Norwich, 1925

Leonidas Dacosta Stephenson, Jr., Instructor in Civil Engineering.
B.S., North Carolina State College, 1927

Fred Lincoln Lamoreau, Instructor in Mathematics and Astronomy.
B.A., Maine, 1930; M.A., 1934

James Moreland, Instructor in English, in charge of University Publicity.
B.A., Georgetown College, 1924; M.A., Maine, 1934

Delyte Wesley Morris, Instructor in Public Speaking.
A.B., Park, 1928; M.A., Maine, 1934

Wilbur Everett Tomlin, Instructor in Chemistry.
A.B., Kentucky Wesleyan, 1926; A.M., Columbia, 1931

Warren Herbert Bliss, Instructor in Electrical Engineering.
B.S., Michigan State College, 1928; M.S., 1931

Mabel Lancaster Stewart, Instructor in Home Economics.
B.S., Maine, 1931

Henry Gruber Stetler, Instructor in Sociology.
B.S., Franklin and Marshall, 1928; A.M., Columbia, 1930

Hugh Donald Chase, Instructor in Civil Engineering.
S.B., Massachusetts Institute of Technology, 1931; S.M., 1932

Edward Bays, Instructor in Military Science and Tactics.
Sergeant (D.E.M.L.), U. S. Army

Carl Munro Flynn, Instructor in Zoology.
B.A., Maine, 1930; M.A., Wesleyan, 1932

Arthur Eugene Jensen, Instructor in English.
Ph.B., Brown, 1926; A.M., 1928; Ph.D., Edinburgh, 1933

Richard Wilder Merrill, Instructor in German.
B.S., Bowdoin, 1928; M.A., Maine, 1933

Edwin Kenneth Miles, Instructor in German.
B.A., Lawrence, 1929; M.A., Northwestern, 1930; Ph.D., University of Pennsylvania, 1933

Elven Clifford Nelson, Instructor in Zoology.
B.A., University of Colorado, 1929; M.A., 1930; Sc.D., Johns Hopkins, 1933

EDITH GRACE WILSON, Dean of Women and Instructor in Education.
B.A., Southern California, 1923; M.A., 1928

*LAWRENCE ALFRED CHATTO, Acting Instructor in Agricultural Economics and Farm Management.
B.S., Maine, 1934

MARTHA JANE GIBSON, Instructor in English.
B.A., Cincinnati, 1912; M.A., 1914; Ph.D., Yale, 1933

ROBERT BECHTOLD HEILMAN, Instructor in English.
A.B., Lafayette, 1927; M.A., Ohio State, 1930; M.A., Harvard, 1931

KARL DAVIS LARSEN, Instructor in Physics.
B.A., Maine, 1929; M.A., 1930; Ph.D., Pennsylvania State, 1934

GAYLORD CLARKE LEROY, Instructor in English.
A.B., Oberlin, 1930; A.M., Harvard, 1931

FRED PERLEY LORING, Director of Short Courses in the College of Agriculture.
B.S., Maine, 1916

FREDERIC THURMAN MARTIN, Instructor in Mechanical Engineering.
Ch.E., Lehigh, 1925; Ph.D., Johns Hopkins, 1929

RISING LAKE MORROW, Instructor in History and Government.
A.B., Wesleyan, 1923; A.M., Harvard, 1925; Ph.D., 1932

CECIL CLOUGH TYRRELL, Instructor in Mechanical Engineering.
B.S., Purdue, 1931; M.S., 1932

HAROLD WAVE WHICKER, Instructor in English.
B.A., Washington State College, 1922

CHARLES LESTER SMITH, Instructor and Critic Teacher, School of Education.
A.B., Harvard, 1907

VEYSEY HIRAM ROBINSON, Instructor and Critic Teacher, School of Education.
B.Pd., Maine, 1917

ALICE LOWE BROWN, Critic Teacher, School of Education.
A.B., Colby, 1899

GRACE STETSON GRANT, Critic Teacher, School of Education.
A.B., Colby, 1907

HELEN LOUISE HATHORNE, Critic Teacher, School of Education.
B.A., Maine, 1922

HORACE ALEXANDER CROXFORD, Critic Teacher, School of Education.
B.A., Maine, 1930

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*Appointment effective from August 20, 1934 to November 30, 1934.

Caroline Ella Collins, Critic Teacher, School of Education.
B.A., Maine, 1929
Sarah Jane Thompson, Critic Teacher, School of Education.
B.A., Maine, 1929

Howard Lewis Mendall, Assistant in Zoology.
B.A., Maine, 1931; M.A., 1934
Roger Aylmer Allen, Graduate Fellow in Physics.
B.S., Parsons, 1933
Garnet Edward Davis, Graduate Fellow in Dairy Husbandry.
B.S., Maryland, 1934.
Arnold Evans Hook, Graduate Fellow in Bacteriology.
B.S., Wisconsin, 1934
Clifford Egerton Lloyd, Graduate Fellow in Botany and Entomology.
B.S., Cornell University, 1932
Neil Moody Calderwood, Graduate Assistant, College of Technology.
B.S., Maine, 1932

Herbert Burr Abbott, Mechanician in the Mechanical Engineering Department.
Leo Edward Day, Highway Laboratory Assistant.
Ralph Freeman Bowden, Electrician in the Electrical Engineering Department.
Clayton Leonard Sawyer, Highway Laboratory Assistant.
Horace Asa Pratt, Assistant Engineer, Technology Experiment Station.
B.S., Maine, 1930
Anne Morrison Tropp, Resident Health Nurse.
R.N., Eastern Maine General Hospital, Bangor, 1928
Helen Louise O'Leary, Resident Health Nurse.
R.N., Eastern Maine General Hospital, Bangor, 1933
Dorothy Smith, Reference Librarian.
B.S., Simmons School of Library Science, 1921
Mary Florence Reed, Cataloger.
B.A., Maine, 1929; B.S., Simmons School of Library Science, 1930
Dorothy Mayo Morris, Circulation Assistant in the Library.
B.A., Maine, 1930
Louise Grindle Gray, Clerk in the Library.
Mary Rich Carter, Assistant in the Library.
B.A., Maine, 1931

VISITING MEMBERS OF SUMMER SESSION FACULTY

Session of 1934

ESTHER VIOLA BALDWIN, Nutritionist and Executive Secretary, Penobscot County Chapter, Red Cross, Bangor, Maine.
B.S., Simmons, 1923 *Home Economics*

DOROTHY BROWN DEAN, Formerly Supervisor of Music, Public Schools, Bangor, Maine.
A.B., Smith, 1924 *School Music*

ORA LEE EVERTS, Director of the Training School and of the Kindergarten-Primary Department, State Normal School, Glassboro, New Jersey.
Graduate, Sam Houston State Teachers College, Huntsville, Texas, 1914; B.S., Columbia, 1927; A.M., 1928 *Education*

MATTIE LOUISE HATCHER, Specialist in Reading and Supervisor of Elementary Education, State Normal School, Paterson, New Jersey.
Ph.B., Chicago, 1909 *Education*

ARTHUR LEWIS JONES, Director of Physical Education and Supervisor of Junior High School Athletics, Public Schools, Framingham, Massachusetts.
Graduate, Teachers College, East Stroudsburg, Pennsylvania, 1924; B.S. in Ed., Boston University, 1931 *Physical Education*

PAUL SLOATE MILLER, Principal of Eastern School, East Orange, New Jersey.
B.A., Gettysburg, 1910; A.M., Yale, 1922; Ph.D., New York University, 1928 *Education*

EMILY PENDLETON, Teacher of English, High School, Sanford, Maine.
B.A., Maine, 1926; M.A., 1927 *English*

JEANNE ROSSELET, Assistant Professor of French, Goucher College.
A.B., and A.M., Vassar, 1925; Ph.D., Radcliffe, 1930 *French*

Faculty of Investigation

(THE MAINE AGRICULTURAL EXPERIMENT STATION)

Fred Griffee, Director.
B.S., Kansas State College, 1919; M.S., Minnesota, 1920; Ph.D., 1924

James Monroe Bartlett, Chemist.
B.S., Maine, 1880; M.S., 1883; Sc.D., 1927

Edith Marion Patch, Entomologist.
B.S., Minnesota, 1901; M.S., Maine, 1910; Ph.D., Cornell University, 1911

Donald Folsom, Plant Pathologist.
A.B., Nebraska, 1912; M.A., Minnesota, 1914; Ph.D., 1917

Elmer Robert Tobey, Chemist.
B.S., Maine, 1911; M.S., 1917; Ch.E., 1920

Charles Henry Merchant, Agricultural Economist.
B.S., Cornell University, 1920; M.S., 1922; Ph.D., 1928

Pearl Stuart Greene, Home Economist.
B.A., Northwestern, 1909; B S., Lewis Institute, 1914; A.M., Columbia, 1923

William Franklin Dove, Biologist, Animal Breeding and Nutrition.
B.S., Iowa State College, 1922; M.S., Wisconsin, 1923; Ph.D., 1927

Frank Heidtman Lathrop, Entomologist.
B.S., Clemson, 1913; M.S., Ohio State, 1915; Ph.D., 1923

Mary Morris Clayton, Nutritionist.
B.S., Columbia, 1918; M.S., Rochester, 1926; Ph.D., 1929

Charles Harry White, Associate Chemist and Photographer.
Ph.C., Maine, 1899

Reiner Bonde, Associate Plant Pathologist.
B.S., Minnesota, 1922; M.S., Maine, 1926

George Farrington Dow, Associate Agricultural Economist.
B.S., Maine, 1927; M.S., 1929

Marion Deyoe Sweetman, Associate Home Economist.
B.S., Iowa State College, 1921; M.S., 1922; Ph.D., Minnesota, 1927

Joseph Anthony Chucka, Associate Biologist, Plant Breeding and Nutrition.
B.S., Wisconsin, 1927; M.S., 1928; Ph.D., 1930

Russell Manley Bailey, Associate Biologist, Plant Breeding and Nutrition.
B.S., Maine, 1928

Bernie Elliott Plummer, Jr., Assistant Chemist.
B.S., Maine, 1924; M.S., 1925

John Henry Hawkins, Assistant Entomologist.
B.S., Illinois, 1926; M.S., Maine, 1927

Florence Lydia Markin, Assistant Plant Pathologist.
B.S., Montana State College, 1924; M.S., Wisconsin, 1926

William Ernest Schrumpf, Assistant Agricultural Economist.
B.S., Maine, 1928; M.S., 1930

Frederick Barker Chandler, Assistant Biologist in Charge of Blueberry Investigations.
B.S., Maine, 1928

Geddes Wilson Simpson, Assistant Entomologist.
A.B., Bucknell, 1929; A.M., Cornell University, 1931

Delmar Simon Fink, Assistant Biologist, Plant Breeding and Nutrition.
B.S., Wisconsin, 1930; M.S., 1931; Ph.D., 1934

George Peter Steinbauer, Seed Analyst, Department of Inspections.
B.S., Minnesota, 1925; M.S., 1927; Ph.D., 1929

Mildred Rebecca Covell, Assistant in Biology.

Iva Merchant Burgess, Assistant in Biology.
B.S., Maine, 1923; M.S., 1925

Elizabeth Florence Murphy, Assistant in Animal Breeding and Nutrition.
B.A., Maine, 1930; M.A., 1934

Merna Myrtha Monroe, Assistant in Home Economics Research.
B.S., Iowa State College, 1929; M.S., Kansas State College, 1932

Elaine Mary Pooler, Chief Assistant in Agricultural Economics.

Magretta Blackmore, Assistant in Agricultural Economics.

Iris MacIntosh Williams, Assistant in Agricultural Economics.

Alice Woods Averill, Laboratory Assistant in Entomology.

Emmeline Wilson Kenney, Laboratory Assistant in Biology.

Gladys Elizabeth Babbin, Seed Analyst and Laboratory Assistant in Plant Pathology.

Delmar Boynton Lovejoy, Laboratory and Field Assistant, Plant Breeding and Nutrition.
B.S., Maine, 1928

Irvin Carrol Mason, Laboratory and Field Assistant, Blueberry Investigations.
B.S., Maine, 1930; M.S., 1932

Andrew Elwell Watson, Graduate Assistant in Agricultural Economics.
B.S., Maine, 1934

Faculty of Extension Service

(COLLEGE OF AGRICULTURE)

ARTHUR LOWELL DEERING, Director.
B.S., Maine, 1912; Sc.D., 1934
GEORGE EDGAR LORD, Assistant Director.
B.S., Maine, 1924

STATE AGENTS

RAYMON NEALE ATHERTON, Extension Economist, Marketing.
B.S., Maine, 1918
EDNA MANSFIELD COBB, Home Management Specialist.
B.S., Cornell University, 1928
ALBERT KINSMAN GARDNER, Crops Specialist.
B.S., Maine, 1910
GEORGE EDGAR LORD, County Agent Leader.
B.S., Maine, 1924
WENDALL EARL MOSHER, Executive Secretary to Director of Extension.
B.S., Maine, 1929
ESTELLE NASON, State Home Demonstration Agent Leader.
B.S., Maine, 1922
ALBERT DEANE NUTTING, Forestry Specialist.
B.S., Maine, 1927
DONALD WINSLOW REED, Extension Economist, Farm Management.
B.S., Maine, 1922
WAYNE SCHERMERHORN RICH, Assistant Extension Editor.
B.S., Maine, 1934
HARRISON LAMBERT RICHARDSON, Poultry Specialist.
B.S., Maine, 1924
GLENN KENTON RULE, Extension Editor.
B.S., Ohio State, 1917
LESTER HALE SHIBLES, State Club Leader.
A.B., Colby, 1915
HELEN CONSTANCE SPAULDING, Clothing Specialist.
B.S., Simmons, 1913
LOANA MARY SPEARIN, Assistant State Club Leader.
RICHARD FOSTER TALBOT, Dairy Specialist.
B.S., Maine, 1907

Clesson Nathan Turner, Agricultural Engineer.
B.S., Cornell University, 1931
Therese Elizabeth Wood, Foods Specialist.
B.S., Western Reserve, 1923

County Agents

Verne Curtis Beverly, Aroostook County.
B.S., Maine, 1920
Richard Francis Blanchard, Oxford County.
B.S., Maine, 1931
Ralph Ashton Corbett, Franklin County.
B.S., Maine, 1930
Clarence Albert Day, Kennebec County.
M.S., Maine, 1929
Richard Carlton Dolloff, Assistant County Agent, Aroostook County
B.S., Maine, 1927
Gerald Cobb Dunn, Somerset County.
B.S., Maine, 1923
Charles Leslie Eastman, Androscoggin and Sagadahoc Counties.
B.S., Maine, 1922
Ralph William Hobson, Washington County.
B.S., Maine, 1925
Raymond Harwood Lovejoy, York County.
B.S., Maine, 1921
Philip Stewart Parsons, Waldo County.
B.S., Maine, 1934
Wilfred Sherman Rowe, Cumberland County.
Melzor Stetson Smith, Penobscot County.
B.S., Maine, 1931
Gardner Berry Tibbetts, Hancock County.
B.S., Maine, 1922
Ralph Carlton Wentworth, Knox and Lincoln Counties.
B.S., Maine, 1918
Oscar Lewis Wyman, Piscataquis County.
B.S., Maine, 1926

Home Demonstration Agents

Hortense Bradbury, Washington County.
Ruth Isabel Callaghan, Oxford County.
B.S., Maine, 1933

Margaret Lillian Childs, Kennebec County.
Charlotte Elizabeth Cleaves, Penobscot County.
B.S., Maine, 1931
Leone Mae Dakin, Aroostook County.
B.S., Maine, 1926
Lucy Farrington, Piscataquis County.
B.S., Maine, 1927
Agnes Freyer Gibbs, Cumberland County.
B.S., Framingham Normal, 1926
Jessie Mildred Lawrence, Knox and Lincoln Counties.
B.S., Maine, 1928
Agnes May Massé, Waldo County.
B.S., Maine, 1928
Evelyn June Mills, Hancock County.
B.S., Maine, 1933
Elizabeth Tryon, Franklin County.
B.S., Maine, 1933
Doris Elaine Urquhart, Somerset County.
B.S., Rhode Island State, 1927
Jean Warren, York County.
B.S., Cornell University, 1929
Hortense Agnes Welch, Androscoggin and Sagadahoc Counties.
B.S., Maine, 1927

County Club Agents

Earle Theodore Blodgett, York County.
B.S., Maine, 1927
Ruth Mabelle Clark, Knox and Lincoln Counties.
B.S., Maine, 1932
Frank Wilbur Hagan, Cumberland County.
B.S., Maine, 1933
Allegra Maxine Ingerson, Kennebec County.
B.S., Maine, 1934
Kenneth Cousins Lovejoy, Waldo County.
B.S., Maine, 1928
Martha Corinne Merrill, Penobscot County.
B.S., Farmington Normal, 1928
Doris Eleanor Rosen, Oxford County.
B.S., Maine, 1934

Faculty Committees

ADMINISTRATION—President, University and College Deans, Dean of Men, Registrar, Treasurer

ASSEMBLIES—Fielder, Lutes, Muilenburg

ATHLETICS—Corbett, Gardner, A. K., Kent

COE RESEARCH FUND—Dickinson, Ashby, Brautlecht, Chase, G. D., Griffee, Hill, A. S., Hitchner, Steinmetz

EDUCATIONAL RESEARCH—Hart, Brautlecht, Bryan, Chadbourne, W. W., Crawford, Dickinson, Evans, Fitch, Fundenburg, Greene, Jones, Leavitt, Lutes, Merchant, Sweetman

ELIGIBILITY—Gannett, Curtis, Sprague, A. W., Wilson, E. G.

FINANCIAL AFFAIRS—Youngs, Kent, Pierce

HEALTH—Tomlinson, Greene, Oliver, Wallace, Wilson, E. G.

HONORS—Ellis, Brann, Chadbourne, A. H., Creamer, Greene, Merchant

MILITARY—Oliver, Hauck, Cloke, Deering, Lutes, Muilenburg

PUBLICATIONS—Gannett, Crawford, Dorsey, Ibbotson, Leavitt, Peterson

PUBLICITY—Moreland, Bray, Crawford, Crossland, Gannett, Jones

RHODES SCHOLARSHIP—Chase, G. D., Ashby, Brautlecht, Corbett, Hart

SCHEDULE—Weston, Dorsey, Evans, Gannett, Peterson, and College Deans

SECONDARY SCHOOL RELATIONS—Hart, Cloke, Deering, Gannett, Lutes, Muilenburg

SOCIAL AFFAIRS—Small, Corbett, Sweetser, Wilson, E. G., Youngs

WOMEN STUDENTS—Wilson, E. G., Buzzell, Chadbourne, A. H., Crosby, Greene, Lengyel, Sweetman

GENERAL INFORMATION

HISTORY

The University of Maine is a part of the public educational system of the State. It was established originally as the State College of Agriculture and the Mechanic Arts under the provisions of the Morrill Act, approved by President Lincoln in 1862. The next year the State of Maine accepted the conditions of the Act and in 1865 created a corporation to administer the affairs of the college.

The institution opened September 21, 1868, with a class of twelve members and a faculty of two teachers; Dr. Merritt Caldwell Fernald was appointed acting president. By 1871 four curricula had been arranged—Agriculture, Civil Enginering, Mechanical Engineering, and Elective. By gradual growth these curricula developed into the College of Agriculture, the College of Technology, and the College of Arts and Sciences. Women have been admitted as students since 1872, in compliance with special legal enactment. The original name was changed to the University of Maine in 1897. The School of Education was established in 1930.

The Maine Agricultural Experiment Station was established as a division of the University by act of the Legislature of 1887, as a result of the passage by Congress of the Hatch Act. It succeeded the Maine Fertilizer Control and Agricultural Experiment Station, which had been established in 1885.

The College of Law was opened in 1898. It was an integral part of the institution and until the year 1917 occupied quarters at the corner of Union and Second streets in Bangor. Later it was located on the campus at Orono. It was discontinued in 1920.

Graduate instruction has been given by various departments for many years. The first master's degree was conferred in 1881. Since 1923 graduate work has been a separate division in charge of a dean.

Beginning with 1902, a Summer Session has usually been held annually, consisting at first of five weeks, but now of six. It is designed primarily for teachers and educational administrators and for college students who desire to make up work or secure additional credits.

To provide permanently for the support of the University the Legislature in 1929 passed an act levying a tax of one mill on the general property valuation of the State.

The University is controlled by a Board of Trustees. The first Board was composed of sixteen members, each county delegation in the Legislature selecting one member. Various changes have occurred in the appointment of Trustees. At the present time seven members are appointed by the Governor of the State, with the advice and consent of the Council, for a term of seven years. One member is appointed for three years by the Governor upon the nomination of the Alumni Association. The Commissioner of Education is *ex officio* a member of the Board.

The institution has been served by the following presidents: Rev. Charles Frederick Allen, Dr. Merritt Caldwell Fernald, Dr. Abram Winegartner Harris, Dr. George Emory Fellows, Dr. Robert Judson Aley, Dr. Clarence Cook Little, Dr. Harold Sherburne Boardman, and Dr. Arthur Andrew Hauck.

LOCATION

The University is located in Orono, an attractive town of 3,400 population, with good schools and four churches. The extensive campus, situated about a mile from the business section, borders the Stillwater River, a branch of the Penobscot, and is of great beauty.

Orono is situated on the main line of the Maine Central Railroad, eight miles east of Bangor. It is half way between Kittery, the most southerly town in the State, and Fort Kent, the most northerly. It is not far from the center of population of the State. The campus, which is nine miles from Bangor and three from Old Town, is connected with both cities by a paved highway offering easy access by automobile. Cars of the Bangor Hydro-Electric Company also afford a half-hour trolley service in both directions.

Bangor, the third city of the State in size, has a population of about 29,000 and is an important business center. The location of the University gives students an opportunity to avail themselves of its social, religious, and other advantages. Old Town is a manufacturing city with about 7,200 inhabitants.

BUILDINGS AND THEIR EQUIPMENT

Balentine Hall.—This building, erected in 1914, is the largest dormitory for women on the campus. It consists of three stories and a basement and has accommodation for 121 students. The name was given in honor of Elizabeth Abbott Balentine, secretary and registrar of the University from 1895 to 1913.

Colvin Hall.—This building, the newest dormitory on the campus, was completed in 1930. It is a three-story brick structure of colonial style

with accommodations for forty-eight girls. It was named for Professor Caroline Colvin, of the Department of History and Government, who served as the first dean of women at the University.

Hannibal Hamlin Hall.—A men's dormitory, completed in 1911, which contains four stories and a concrete basement. It was named for the Hon. Hannibal Hamlin, of Hampden and Bangor, the first president of the Board of Trustees. It will accommodate 152 students.

The Maples.—A three-story wooden building remodeled in 1931, accommodating forty-nine students. It is used as a dormitory for freshman women.

North Hall.—A two-story frame building used as the laboratory for the course in Household Administration by the Department of Home Economics.

Oak Hall.—This dormitory for men was erected in 1871 and was named for the Hon. Lyndon Oak, of Garland, a long-time member and president of the Board of Trustees. It is a four-story building and has rooms for ninety-six students.

University Inn.—A four-story wooden building, located in the village of Orono, which was purchased by the University to provide living quarters for members of the faculty. It has accommodations for twenty persons.

Alumni Hall.—This building, erected in 1900, was given its name because a part of the funds required for its erection was furnished by the alumni of the University. It contains principally administrative offices but also a gymnasium for women and a Little Theatre for the use of the Deparment of Public Speaking.

Alumni Memorial.—This structure, consisting of an Indoor Field, Armory, and Gymnasium, stands as a memorial to those Maine men who died in the service of their country in the Spanish and World Wars. It cost nearly $500,000 and is the gift of alumni, faculty, and friends of the University. The Indoor Field, built in 1926, was believed to be, at the time of its construction, the largest in the world, being 340 feet long, 168 feet wide, and 70 feet high.

The Gymnasium was completed in 1933. It is 150 feet deep, 137 feet wide, and three stories high. The main hall and balconies have a seating capacity of approximately 2500. Opportunity is afforded to play two basketball games at one time. Equipment and training rooms are centrally located with reference to the Athletic and Physical Education Departments. The facilities for home and visiting teams are ideal, with shower and locker rooms for varsity, freshmen, and faculty. The offices are located on the ground floor adjoining one another. On the second floor handball, boxing, and wrestling are carried on in separate rooms, and a corrective room offers additional

opportunities for restrictive physical education. The large kitchen is used for pre-season football training as well as banquets. At present the Gymnasium is also used as an auditorium for lectures and student assemblies.

AUBERT HALL.—A four-story building, including a high basement, which was named in honor of the late Alfred Bellamy Aubert, professor of chemistry from 1874 to 1910. It is used by the Departments of Chemistry and Physics.

COBURN HALL.—This building is chiefly used by the Department of Botany and Entomology and the Department of Zoology. It was named for ex-Governor Abner Coburn, of Skowhegan, a former president of the Board of Trustees and benefactor of the University.

CROSBY LABORATORY.—This building, with a main section two stories high and two wings of one story, contains the laboratories of the Department of Mechanical Engineering. The main section houses the equipment for work in hydraulics, steam engineering, and compressed air; the wings are devoted to testing operations of various kinds. The building is named in honor of the Hon. Oliver Crosby, class of '76, who bequeathed $100,000 for its construction.

FERNALD HALL.—This building, the oldest on the campus, was named in honor of ex-President Merritt C. Fernald. It contains offices and classrooms used by the College of Technology for work in mechanics and geology, the office of the Alumni Association, the University Store, and the rooms reserved for the Health Department.

HOLMES HALL.—A two-story building, in addition to a basement, which contains the offices and laboratories of the Maine Agricultural Experiment Station. It was named for Dr. Ezekiel Holmes, of Winthrop.

LIBRARY BUILDING.—The Library Building is of stone, two stories above a basement, and surmounted by a dome. For its erection and furnishing, Andrew Carnegie gave $55,000, and the Hallowell Granite Works furnished the granite at a price that was equivalent to a gift of several thousand dollars.

LORD HALL.—This building was erected for the Departments of Electrical Engineering and Mechanical Engineering. It is two stories in height and contains recitation rooms, laboratories, drawing room, and offices for the members of these departments. It was named for the Hon. Henry Lord, of Bangor, a former president of the Board of Trustees.

MERRILL HALL.—This three-story brick building was erected in 1930 for resident teaching, extension, and experiment station work in Home Economics. Besides offices and classrooms it contains laboratories for student work in child development, institutional management, household equipment, foods and nutrition, art, clothing and textiles; and research laboratories for nutrition, foods, and household management. The building is named in honor of Leon S. Merrill, formerly dean of the College of Agriculture.

ROGERS HALL.—A two-story brick building for dairy manufactures forming the eastern end of the agricultural quadrangle. In it are housed the divisions of Animal Husbandry and Dairy Husbandry of the Department of Animal Industry. The first floor is made up of laboratories for butter, ice cream, and cheese making, market milk processing, and milk and milk products testing. On this floor are also located cold-storage rooms, a refrigerating machinery room, and a supplies room. The second floor contains offices, classrooms, and a research laboratory. The building was named in honor of Dr. Lore A. Rogers, Chief, Research Laboratories, Bureau of Dairy Industry, United States Department of Agriculture.

STEVENS HALL.—This building, formerly known as the Arts and Sciences Building, was rechristened Stevens Hall in 1932 in honor of Dean Emeritus James S. Stevens. It consisted originally of forty-six classrooms and offices used by the College of Arts and Sciences. Two wings have recently been added with spacious and attractive rooms. These house, besides the School of Education, the Departments of Economics and Sociology, Romance Languages, Music, and Psychology. A large part of the floor of one wing is devoted to the laboratories and work rooms of the Department of Psychology.

WINGATE HALL.—This building, containing four stories and a basement, is used by the Departments of Civil Engineering and Engineering Drafting. It contains also the offices and laboratories of the Technology Experiment Station as well as the offices of the dean of the College of Technology.

WINSLOW HALL.—A four-story building, including the basement, which contains offices, laboratories, and recitation rooms for various departments of the College of Agriculture. It was named in honor of Hon. Edward B. Winslow, of Portland, a former president of the Board of Trustees.

AGRICULTURAL ENGINEERING BUILDING.—A large two-story wooden building located on the north side of the road leading to the dairy barns is used by the Department of Agronomy for laboratory instruction purposes in connection with its courses in agricultural engineering.

FARM BUILDINGS.—These comprise two large modern dairy barns having accommodations for 150 head of cattle, a hay storage barn, a piggery, a sheep barn, and a tool house; also a modern horse barn and a farm implement storage building, both located directly north of the dairy barns.

HORTICULTURAL GREENHOUSES.—Three modern steel-frame houses interconnected with one another and with a two-story brick service and educational building are located near the south end of the campus. Two of these houses are devoted to the growing of flowers, ornamental plants, and vegetables. The third house was erected in 1932 by the Maine Agricultural Experi-

ment Station for use in experimental studies of plant breeding, physiology, and pathology. The service building contains work rooms, laboratories, a classroom, sales and storage rooms, and a basement winter-storage room.

Milk House.—The milk house, located west of the dairy barns, is designed to serve as a demonstrational laboratory in milk handling and processing. It contains a milk room, bottle and can washing room, laundry, boiler room, milk testing room, mechanically refrigerated holder for milk, and an office for herdsman and dairyman.

Poultry Buildings.—These are two frame buildings of two stories each at the south end of the campus. One building houses the divisions of Animal Pathology and Poultry Husbandry of the Department of Animal Industry. On the ground floor are a poultry fattening and killing room, an autopsy room, and a detention and hospital room. On the second floor are offices, recitation room, and an animal pathology laboratory.

The second building, recently enlarged, contains, on the ground floor, an egg-candling and grading room, incubator rooms, and a room for battery brooders. On the second floor are laboratories for students and quarters for the plant poultryman.

The laying houses adjacent to this latter building have capacity to accommodate 600 laying hens. These laying houses are supplemented by six modern colony houses, available for chick brooding and special investigational or research work.

Research Building.—The old greenhouse of wood-frame type, east of Holmes Hall, is utilized by several departments for investigational work requiring greenhouse space. The two-story frame building attached provides office space on the second floor for several extension specialists, while the first floor is devoted to research laboratories equipped for studies in biological chemistry and in bacteriology.

Stock Judging Pavilion.—This is an octagonal structure located in the rear of Winslow Hall. It has a seating capacity of 400.

Mechanical Engineering Shops.—The Mechanical Engineering Department Shops are located in a one-story brick building erected in 1934 and located about one hundred feet northeasterly of Crosby Laboratory. The building plan has the form of the letter E. The three parallel sections are 100 x 30 feet each and contain the machine shop at the south, the pattern shop at the north, and the forge shop and foundry in the center. The connecting sections contain the offices and stockrooms, under which are basements for storage, wash-room, and lockers.

Maine Christian Association Building.—Used chiefly by the Maine Christian Association, but also contains the offices of the Maine *Campus*. On the ground floor are reading and social rooms for men and the general offices of the M.C.A., and on the second floor recreation, study, and lunch rooms for

women, the office of the Secretary for Women, and a chapel for private devotions. The *Campus* offices are on the third floor.

Observatory.—The astronomical observatory stands on a slight elevation near the farm buildings. It contains equipment for work in descriptive and practical astronomy.

Infirmary.—This building is used in caring for cases of infectious diseases that may appear among the students. It is located in the rear of Hannibal Hamlin Hall.

Print Shop.—The University Press is located in a wooden building north of Aubert Hall. It contains a modern outfit for the printing required by the University.

Central Heating Plant.—The Central Heating Plant is located on low ground so that the buildings drain by gravity to the plant. It contains three 150 H.P. horizontal return tubular boilers equipped with perfection semi-automatic stokers, and two 290 H.P. H-type Stirling water tubular boilers equipped with Westinghouse automatic stokers with overhead coal bunkers and scales for weighing coal. The smoke stack is 150 feet in height.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house and five residences occupied by members of the faculty.

Marine Station.—The University of Maine Marine Biological Station is located at East Lamoine on the northeast shore of Frenchman's Bay within fifty miles of the University. The buildings provide adequate housing for laboratories, research workers, students, and faculty. A pier with 400 foot frontage, row boats, and a motor boat, and various types of collecting apparatus facilitate marine investigation. Both research work and organized class work have been in operation at the Station.

Fraternity Houses.—The local chapters of Beta Theta Pi, Delta Tau Delta, Kappa Sigma, Lambda Chi Alpha, Phi Kappa Sigma, Sigma Alpha Epsilon, Theta Chi, Sigma Nu, and the Phi Eta Kappa Society have houses on the campus. The following chapters own houses in the vicinity of the University: Alpha Tau Omega, Phi Gamma Delta, Phi Mu Delta, Tau Epsilon Phi, and Beta Kappa on College Road; Alpha Gamma Rho on Grove Street; Phi Kappa on College Road at the intersection of North Main Street; Delta Chi Alpha on Park Street; and Sigma Chi on North Main Street. These houses accommodate from twenty to fifty students each.

ATHLETIC FIELDS

Alumni Field.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, and track and field athletics. It contains a grandstand with a seating capacity of 2,100 and also bleachers seating 4,600.

A new varsity baseball field has been completed and will be used for the 1935 intercollegiate schedule for the first time. The field is one of the best in New England and conforms to all major league field requirements. Additional territory is being developed adjoining the baseball field for freshman baseball, practice football fields, tennis courts, and for physical educational purposes.

Athletic Field for Women.—A new field on the southern end of the campus consists of a regulation hockey field, archery range, seventy-five yards of cinder straightaway, and a twenty-four foot jumping pit. A field house on the northern end houses all the athletic supplies, and serves as a shelter for teams not in action.

A field house on the western border overlooking the field has just been completed. This adds materially to the quality of teaching and the comfort of the students. It consists of a club room with fireplace, a store room adequate to house all the athletic equipment, and a small kitchenette.

THE UNIVERSITY FARMS

The University farms consist of approximately 645 acres divided into two farms, one of which adjoins the campus while the other is located in Stillwater. The land under cultivation amounts to 258 acres, divided as follows: 208 acres for farm crops, ten acres for orchards, two acres for the forest nursery, eighteen acres for poultry lots, twenty acres for systematic forestry, and 387 acres of forest and pasture lands. These farm lands, together with the campus, make the University holdings at Orono and vicinity approximately 735 acres.

THE LIBRARY

The University Library contained at the end of the academic year 113,451 volumes and 39,420 pamphlets. In addition to the general collection of books it includes the following of a more special nature: Law Library, 5,600 vol-

umes, the greater part of which are on deposit in the Court House at Bangor; Agricultural Experiment Station Library, 9,011 volumes, on deposit in the Library Building; Reference Collections shelved in the Department of Physics and the College of Agriculture. About 460 periodicals are subscribed for by the library; 200 received as gift or exchange; 100 received by the Experiment Station.

The library is housed in a building erected in 1906 by gift of Andrew Carnegie. The reading and seminar rooms have seating accommodations for 150 students. In the seminar rooms are shelved German, French, Spanish, Italian, Greek, and Latin literature and language; history; and material relating to the State and the University of Maine. The two basement reading rooms contain the books and periodicals on the subjects of education and agriculture. The reference room contains a working collection of almanacs, atlases, concordances, dictionaries, encyclopedias, and yearbooks for the convenience of the student, and for use in the room. Magazines for the current year are on file in the periodical room.

The library is classified by the Dewey decimal system. Each book is fully cataloged by author, subject, and title. The catalog is situated in the rear of the delivery room, where are kept magazine indexes and bibliographies as well.

Elementary instruction in the use of the library is given new students during Freshman Week. This includes lectures and practice in the use of the catalog and magazine indexes.

Books will be loaned to other libraries, to schools, and to residents of the State when it can be done without interference with local needs. Transportation charges are payable by the borrower.

Any book in circulation or shelved elsewhere on the campus may be recalled to the library at any time. All library books must be returned to the library before the close of the academic year in June for inventory, repair, and binding.

Library Hours

7:45—9:30 p.m. Monday—Thursday
7:45—5 p.m. 6:30—9 p.m. Friday
8 a.m.—5 p.m. Saturday
2 p.m.—9:30 p.m. Sunday

COLLECTIONS

Art Collection

This collection, assembled to facilitate art history, consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a temporary home in the Library building, the gallery of which is used for the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the lecture room, and a seminar room. In the latter is a specially constructed cabinet for mounted photographs.

The entire collection numbers over 5,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, Venetian, and Saracenic schools are particularly representative. For much of the work the photographs are supplemented by lantern slides.

The University possesses several of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia* and the *Sistine Madonna* the reproductions were imported in the frames, which are stucco copies of the originals in Dresden and Florence.

The lecture room in the Library building contains examples of the work of the chief Florentine and Umbrian masters of the fourteenth and fifteenth centuries.

Scientific Collections

The biological collections are located in Coburn Hall.

Zoology.—These collections consist of a working collection of bird skins; a display collection of bird mounts; a study collection of various other groups of both vertebrates and invertebrates. These are arranged in the various rooms and laboratories where they are best available for purposes of class use.

Botany.—These collections are situated in room 24 on the second floor. The herbarium includes several collections of considerable value, the most important of which is the one made by the late Rev. Joseph Blake and presented to the University by Mr. Jonathan G. Clark, of Bangor. It contains more than 7,000 species of both flowering and flowerless plants, and represents

more especially the flora of Maine and other New England States, but includes many forms from the Western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor F. L. Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algae of the Maine Coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticae, Cummings and Seymour's North American Lichens.

Geology.—The greater part of these collections are stored in the basement of the South Wing of Stevens Hall. One case is in the basement of the Maine Christian Association Building. Wall cases, containing such specimens as are necessary for classroom and lecture illustrations, have been placed in Winslow and Fernald Halls.

UNIVERSITY PUBLICATIONS

Maine Bulletin.—This is a publication issued monthly from August to May inclusive with two issues in the month of March, to give information to the alumni and the general public. It includes the Biennial Report, the Summer Session Bulletin, and the Annual Catalog.

University of Maine Studies, Second Series.—This is a series of research studies by members of the faculty and graduate students, published under the direction of the Faculty of Graduate Study. For a list of numbers published to date and of the issues of the first series, see the section on graduate study.

Annual Report of the Agricultural Experiment Station and the Agricultural Experiment Station Bulletins.—These give complete results of the investigations by the Station and the results of the inspections of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs and foods, and fungicides and insecticides.

Official Inspections.—These are published by the Agricultural Experiment Station, and contain the result of the work of inspection of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs, foods, fungicides and insecticides.

Extension Bulletins, News, and Radio Releases.—These are issued by the Extension Service. Single copies of bulletins and circulars will be mailed to any Maine resident who makes the request. News releases are sent to all daily and weekly newspapers. Radio releases are issued each week to four cooperating broadcasting stations in Maine.

TECHNOLOGY EXPERIMENT STATION PUBLICATIONS.—Bulletins are published giving the results of investigations and research, and are usually sent free of charge on request.

THE MAINE ALUMNUS.—This is published nine times during the academic year by the General Alumni Association and is sent to former students of the University.

Student publications are described in the section "Student Activities."

HEALTH SERVICE

This department, located in 20 Fernald Hall, offers to the students the services of two nurses and part time services of four physicians. It is equipped to supervise the care of students on the campus who are ill; assists and cooperates with the Departments of Physical Education and Military Science in conducting physical examinations; when and wherever possible, aids students in securing the correction of defects revealed by the physical examination; maintains office hours for private consultations; and, so far as possible, supervises the health of students.

TEACHERS' REGISTRATION BUREAU

A registration bureau for teachers, located in the office of the Dean of the School of Education in Stevens Hall, undertakes to assist properly qualified graduates and former students in securing positions. All seniors who plan to teach are urged to register with the committee. Correspondence with officials who are looking for teachers is welcomed. A fee of $1.50 is charged for this service to students.

STUDENT ACTIVITIES

Cooperative Government

STUDENT SENATE.—The men's Student Senate exists to act as a coördinating body between the University administration and the student body and to make recommendations to the administration. It is formally recognized by the faculty and the board of administration as the official and truly representative group in all matters that call for discussion and adjustment between the student body and its superiors. The Senate is empowered to investigate any question relative to the student body or any member thereof and to recom-

mend action on the same to the administration. The Senate is empowered to summon before it any student or students for trial or testimony. It is truly representative of the men students of the University, being composed of representatives from: (a) each fraternity, (b) the dormitory men, (c) the off-campus men. It maintains a joint committee with the Women's Student Government. It is a member of the National Student Federation of America.

Women's Student Government Association.—All women registered at the University of Maine are members of this association. The purpose of the organization is to encourage among the women of the University an active sense of responsibility for self government. It also attempts to promote the highest standards of honor and integrity in all matters of personal conduct. The association enacts whatever laws are necessary to maintain congenial relationships on the campus.

Religious Activities

Maine Christian Association.—The Maine Christian Association, open to all students, has as its object the promotion of Christian fellowship, knowledge, and service. The work is done by student committees, under the guidance of a man and a woman secretary and a group of coöperating pastors. The Association conducts religious services, discussions of practical student questions and social problems, holds retreats, sends out religious deputations to churches and schools, brings comfort to the sick, and in general seeks to meet the spiritual needs of the students. The secretaries act as representatives of several coöperating denominations. The work centers in the Maine Christian Association Building, which also serves as a union building for student activities. Its rooms for reading, rest, recreation, meals, study, and worship are open all day.

National Honor and Professional Societies

Phi Kappa Phi.—The society of Phi Kappa Phi, founded at the University of Maine in 1897, is a national honor society that aims to recognize excellence in any field of knowledge. At the end of the junior year and near the beginning of the senior year it elects to membership a total of seven of the highest ranking members of the class. In the second semester of the senior year it elects additional members of the class who meet its standards.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in thirty-seven other universities. Membership is honorary and is restricted to students attaining high class standing or to graduates who have shown marked ability along the lines of agricultural study and research.

KAPPA DELTA PI.—The Maine chapter of Kappa Delta Pi, a national honor society in education, was established in 1932. Membership is open to students in the School of Education who attain a required rank in scholarship. The purpose of the society is to foster scholarship and high standards of preparation for those students who plan to enter teaching as a life career.

OMICRON NU.—A national honor society for students in curricula leading to a degree in home economics. The chapter at the University was established in 1931. Membership is restricted to juniors, seniors, and graduate students who give promise of future achievement by having maintained high scholarship throughout their college careers.

PHI BETA KAPPA.—A chapter of Phi Beta Kappa, the oldest national honorary scholarship society, was granted to the College of Arts and Sciences of the University in 1922. Its object is to promote scholarship in the liberal arts. Elections to membership are based upon scholarship, breadth of culture, and general promise.

TAU BETA PI.—Tau Beta Pi is an honor fraternity for engineers and has chapters in leading universities and technical schools. Elections are made from those juniors and seniors in engineering who have shown high mental and moral qualifications.

XI SIGMA PI.—A national honorary forestry fraternity open to upperclass students in forestry who possess the proper qualifications. The local chapter was organized in 1917.

ALPHA CHI SIGMA.—A professional fraternity made up of majors in the Departments of Chemistry and Chemical Engineering and Pulp and Paper Technology. Two meetings are held monthly.

AMERICAN CHEMICAL SOCIETY.—Orono is headquarters for the Maine section. Students of chemistry and chemical engineering and of pulp and paper technology may become student members. Meetings, held monthly, are open to those interested.

STUDENT BRANCH OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS.—Composed of juniors and seniors enrolled for the curriculum in Civil Engineering. The object of the society is to investigate by reading and discussion engineering topics of the day. Monthly lectures are given by teachers of engineering and practicing engineers.

BRANCH OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—Composed of members of the teaching staff, graduate students, and undergraduates of the Department of Electrical Engineering. Its aim is to promote interest in electrical engineering and to foster acquaintance and good fellowship among faculty and students. Talks and lectures are given by members of the branch and practicing engineers.

American Society of Mechanical Engineers.—The members of the A.S.M.E. Branch at the University include accepted student grade members of A.S.M.E. Regular meetings of the local branch are held for presentation of papers by members and outside speakers, and one delegate is sent yearly to the regional conference of student branches.

University of Maine Branch of the American Home Economics Association.—Composed of members of the staff, and students from the three upper classes in home economics. The object of the society is to stimulate professional interest, and keep in touch with current problems. Election is on the basis of scholarship in home economics courses.

Kappa Phi Kappa.—A national educational fraternity whose membership is restricted to men who intend to make teaching their profession and who have a high scholastic record.

Phi Sigma.—A national honor society for students in biology who have completed a certain number of courses with honor grade.

Scabbard and Blade.—An honorary military fraternity with active membership restricted to cadet officers of high moral and scholastic standing. Commissioned officers of the United States Army and non-military persons deemed worthy of the honor may be elected as honorary members. The local company was organized in 1916.

Departmental Clubs

Agricultural Club.—An organization composed of students of agriculture. At the bimonthly meetings important agricultural topics are discussed by club members and also by prominent outside speakers.

Circulo Español.—An organization established in 1921 to afford practice in the use of the Spanish language, promote a knowledge of the culture of Spain and the Spanish-American nations, and encourage good fellowship among students of Spanish.

College 4-H Club.—An organization composed of students who have completed one or more years of Boys' and Girls' Agricultural and Home Economics Club Work. It was organized in 1924 to increase the interest in Club Work and to strengthen the friendships of College 4-H men and women. Meetings are held in October, January, and May.

Contributors' Club.—This organization, composed of students and members of the faculty who have shown ability in writing, has as its object the cultivation of the literary talents of its members and the general encouragement of literary interest in the University. It occasionally brings to the campus distinguished writers and speakers for literary lectures.

Delta Pi Kappa.—A musical fraternity which was founded at the University of Maine in 1929. The purpose of this fraternity is to promote the best interest of college music and to encourage a high type of musicianship.

Deutscher Verein.—The purpose of this society is to stimulate interest in the various phases of German life and literature, and to afford practice in speaking German. Meetings are held once a month.

Forestry Club.—This organization, which is open to all majors in forestry, affords the opportunity for presenting informal discussions and technical papers on forestry subjects and aims to promote coöperation and good fellowship among students in the department. Meetings are held monthly.

Home Economics Club.—Students receiving an average of 2.5 or better in their Home Economics subjects are elected to membership in this club. Monthly meetings are held at which subjects of interest to Home Economics students are discussed by club members and outside speakers.

Kappa Gamma Phi.—This is a local honorary journalistic fraternity, organized in 1924. The fraternity is made up of members of the *Campus* and *Prism* boards and conducts an annual State Journalistic Conference for secondary school editors in Maine.

The Language Conference.—An organization of faculty members and graduate students interested in the study of languages and literature. The meetings are devoted to discussions and papers on research problems or other topics of general interest.

Maine Masque.—A dramatic club which aims to make a practical study of the acted drama, and to present each year several plays before the public. The Masque considers for active and associate membership all students who have participated in one or more plays, who have helped in the stage production of these plays, and who have aided the organization in a business way.

Physics Club.—Open to members of the faculty and students who are taking courses in physics or allied subjects. Meetings are held every two weeks at which papers are presented and current topics are discussed.

Sigma Delta Zeta.—Open to all students majoring in mathematics and other students interested in the study of the subject who have attained a certain required proficiency in mathematics and in general college work. The purpose of this club is to stimulate interest in the study of mathematics and to give mathematics students the opportunity to present papers and take part in discussion.

Sigma Mu Sigma.—The local honorary psychological fraternity holds its meetings twice monthly. Its purpose is the furtherance of interest in the theories and practical application of psychology. Members are chosen principally from those majoring and minoring in psychology whose records indicate an interest in this science.

Sodalitas Latina.—Students who elect Latin a second year are eligible to membership. The club holds meetings occasionally for lectures, informal entertainments, or social gatherings.

Musical Organizations

University Band.—This organization is attached to the Military Department. Rehearsals are credited as regular class work under the director of music. A particular aim is to develop leadership, and to this end, in coördination with the course in interpretation and conducting in the Music Department, students properly qualifying are coached to conduct the concert presentations of the band. The band plays for various university functions and games and makes concert trips.

University Chorus.—This organization, open to both men and women students, has for its objective the study and public performance of choral music. Participation in college assemblies, student concerts, and the annual Bangor Music Festival is a part of the program. The sharing in programs at the Festival with world-famous musicians and concert artists renders this choral work inspiring and memorable. The chorus is conducted by the director of music as class work, for which students receive credit. Conditions of membership are listed under the Department of Music (Courses 25, 26).

University Orchestra.—This organization, recruited from the outstanding student talent, devotes weekly rehearsals to the study of standard and symphonic music. Its repertoire is presented at the university dramatic performances and in concerts on and off the campus. It accompanies the University Chorus and soloists in the annual Music Night program.

Social Fraternities and Sororities

The following fraternities and sororities have chapters, the figures in parentheses giving the dates chapters were established at the University.

Fraternities.—National: Beta Theta Pi, (1879); Kappa Sigma (1886); Alpha Tau Omega, (1891); Phi Kappa Sigma, (1898); Phi Gamma Delta, (1899); Sigma Alpha Epsilon, (1901); Sigma Chi, (1902); Theta Chi, (1907); Delta Tau Delta, (1908); Lambda Chi Alpha, (1913); Sigma Nu, (1913); Sigma Phi Sigma, (1921); Phi Mu Delta, (1923); Alpha Gamma Rho, (1924); Beta Kappa, (1926); Phi Kappa, (1926); Tau Epsilon Phi, (1929). Local: Phi Eta Kappa, (1906); Delta Chi Alpha, (1926).

Sororities.—National. Alpha Omicron Pi, (1908); Phi Mu, (1912); Delta Delta Delta, (1915); Pi Beta Phi, (1920); Chi Omega, (1921); Delta Zeta, (1924). Local: Sigma Tau, (1927).

Student Publications

Maine Campus.—This is a newspaper published weekly during the academic year by an editorial board composed of students.

THE MAINE REVIEW.—A quarterly magazine under student management, designed to express the various intellectual interests of the University.

PRISM.—The Prism is an illustrated annual published by the junior class.

Men's Debating Society

The Debating Society is open to all students interested in forensic work. Questions of public interest are discussed. The members make a special study of the questions used for intercollegiate debating. From this group representatives are chosen to speak before luncheon clubs, grange meetings, and community gatherings, and to participate in the intercollegiate debates.

The University of New Hampshire, Bates College, Rhode Island State College, New York University, Rutgers University, the University of Vermont, Boston University, Massachusetts State College, Bowdoin College, and Colby College are among the institutions usually scheduled for these debates, which are frequently of a dual nature. Members of this society are selected to represent the University on a debating tour of Eastern institutions.

Women's Forum

Membership in the Forum is open to all University women. The group meets once every three weeks for the purpose of discussing informally subjects of special interest to its members. Women's intercollegiate debating is sponsored by the Forum; however, no one is obligated to participate in this phase of the activity. During past years, the teams have taken part in debate with nearly every outstanding university in the East.

CHURCH SERVICES

Students receive a cordial welcome at the services of the churches of Orono—the Methodist Episcopal Church, St. John's Universalist Church, St. Mary's Roman Catholic Church, and the undenominational Fellowship Church. Other denominations are represented at Old Town and Bangor.

ADMISSION

ADMISSION TO THE FRESHMAN CLASS

General Requirements

Candidates for admission to the freshman class should apply to the Dean of the University for an application card and other necessary blanks.

These blanks should be returned promptly together with the application fee of $10 (and room deposit of $15 if a dormitory room is desired).

In order that all candidates may receive equal consideration, it is desired that applications be filed as early as May first of the year the candidate wishes to enter. Candidates must present satisfactory certificates of fitness, or pass the required examinations and on registration day make a cash deposit covering the bills of one semester.

The University admits men and women, both residents of Maine and non-residents; it reserves the right to terminate admissions whenever the capacity of the University to care properly for the students has been reached.

It is requested that all entering students submit a certificate from a physician stating that they have been vaccinated for smallpox within the past seven years, or be vaccinated at the time of their physical examination.

Admission from Schools in Maine

Graduates from Maine high schools and academies may be admitted upon their school records, under the restrictions shown below, provided they have pursued a course of study including all the subjects required for admission to the curriculum they propose to follow and a sufficient number of elective subjects to make a total of fifteen units.

Candidates whose four-year average is as stated under I of the following table, may be admitted in full standing. If, however, such a candidate has a poor record during his last year, or shows weakness in any subject vital for success in the curriculum that he wishes to undertake in college, he may be refused admission. In general greater weight will be given to the character of the candidate's work in the latter part of his course than to his earlier record.

Additional Information about Candidates

In addition to the school record, the following information is asked for:

A. From the student. The student is asked to answer a series of questions showing his favorite studies, his school activities, his choice of a life

work, reasons for this choice, and other matters bearing upon his preparation for college life.

B. From principal and teachers. The principal and two teachers named by the student are asked to give details regarding his character, class standing, activities, and general fitness for pursuing a college course.

C. Personal interview. So far as possible, a personal interview will be held with each candidate.

The information gained from the interview and from the information sheets furnished by candidate, principal, and teachers will be used to supplement the school record in determining whether the candidate shall be admitted.

Admission on Trial

Applicants from Maine schools whose four-year average is as shown under II of the table below, may be considered for admission on trial. Action upon such applications will ordinarily be deferred until after August first. Candidates will not be considered for admission on trial whose applications are received after September first.

All trial admissions will be reviewed at the close of Freshman Week. Trial candidates whose Freshman Week tests are unsatisfactory may be advised to withdraw.

A student admitted on trial may be dropped from the University at any time if his work is reported as unsatisfactory. The student's record will be carefully reviewed at the end of eight weeks and again at the end of the first half-year, and he will be placed in full standing, continued on the trial list, or required to withdraw, according to his record. While on trial, a student is not eligible to represent the University in any competition wih students from other institutions.

	I	II	III
Pass mark of school	Candidate admitted in full standing if rank is above	Candidate may be admitted on trial if rank lies between	Candidate not admitted if rank is below
60	76	68 and 76	68
65	79	72 and 79	72
70	82	76 and 82	76
75	85	80 and 85	80
80	88	84 and 88	84

Admission from Schools Outside of Maine

Applications of candidates from schools outside of Maine will be received provided the school is accredited by its State University or by the recognized accrediting agency of the state or region in which the school is located.

Certificates will not be accepted for non-graduates except in unusual cases, and then only provided the candidate is expressly recommended for admission by the principal. Certificates must be made out on blanks furnished by the University.

Certificates issued by the Regents of the University of the State of New York are accepted for any of the subjects in which we give admission credit and which are certified as having been passed with a satisfactory grade.

Admission by Examinations

Entrance examinations are held at Orono before the fall registration of freshmen. A schedule of the examinations will be furnished on request. Candidates for admission who wish to be examined in the spring can take the examinations at their own school, provided the principal is willing to arrange for giving the tests. These examinations are given during the fourth week in May. On request of any principal the University will send the necessary examination papers. Such requests should be received before May 15. Candidates for admission by examination should present statements from their school principals regarding their fitness to take the examinations and to undertake college work.

The examinations given by the College Entrance Examination Board will be accepted by the University. These examinations will be held during the week June 17-22, 1935. All applications for these examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application. Applications must be made before May 26 and must be accompanied by the examination fee of $10.00.

Information on Freshman Week

About August 12 parents of each candidate admitted will receive from the Registrar's office a letter giving detailed instruciton about arrangements for Freshman Week. Parents of candidates admitted after August 12 will receive the information at the time the candidate is admitted to the University.

Required Subjects

College of Arts and Sciences

English	3	units
Foreign languages (three years in one or two in each of two)	3 or 4	"
History	1	"
Mathematics (Algebra and Plane Geometry)	2	"
Total	9 or 10	units

College of Agriculture

English	3	units
*Algebra	1	"
*Plane Geometry	1	"
Science (including laboratory notebook)	1	"
History	1	"
Total	7	units

College of Technology

English	3	units
Foreign language (two years in one)	2	"
Algebra	2	"
Plane Geometry	1	"
History	1	"
Science	1	"
Total	10	units

Elective Subjects

A total of fifteen units is required for admission to any four-year curriculum. The units not named under required subjects may be selected as shown in the following table. Subjects not listed may be accepted among the electives, provided they represent a satisfactory equivalent for any of those listed.

*For admission to the Home Economics curriculum, two units in mathematics acceptable to the Committee on Administration are required.

Subjects	Units Accepted		Units required and units accepted in the several colleges					
			Arts and Sciences		Agriculture		Technology	
	Min.	Max.	Req.	Acc.	Req.	Acc.	Req.	Acc.
English	3	3	3	3	3	3	3	3
French	*2	4	Three units in one language or two in each of two	2, 3, or 4		1, 2, 3, or 4	Two units in one language††	1, 2, 3, or 4
German	2	4		2, 3, or 4		1, 2, 3, or 4		1, 2, 3, or 4
Greek	2	3		2 or 3		1, 2, or 3		1, 2, or 3
Latin	2	4		2, 3, or 4		1, 2, 3, or 4		1, 2, 3, or 4
Spanish	2	3		2 or 3		1, 2, or 3		1, 2, or 3
Algebra (Elem.)	1	**2	1	2	§1	2	2	2
Plane geometry	1	1	1	1	§1	1	1	1
Solid geometry	½	½		½		½		½
Trigonometry	½	½		½		½		½
Algebra (Adv.)	½	½		½		½		½
History	1	4	1	1, 2, 3, or 4	1	1, 2, 3, or 4	1	1, 2, 3, or 4
Civics	½	1		½ or 1		½ or 1		½ or 1
Economics	½	1		½ or 1		½ or 1		½ or 1
Biology	†1	1		1	One unit in Science	1	One unit in Science	1
Botany	†1	1		1		1		1
Chemistry	†1	2		1 or 2		1 or 2		1 or 2
Physics	†1	2		1 or 2		1 or 2		1 or 2
Physiography	½	1		½ or 1		½ or 1		½ or 1
Physiology	½	1		½ or 1		½ or 1		½ or 1
Zoology	†1	1		1		1		1
General Science	½	1		½ or 1		½ or 1		½ or 1
Agriculture	1	4	Not over two units in all of these		Not over five units in all of these		Not over four units in all of these	
Domestic Science and Art	1	4						
Drawing	‡½	2						
Manual Training	‡½	2						
Commercial Subjects	½	4						
Music	½	1		½ or 1		½ or 1		½ or 1
Bible Study	½	1		½ or 1		½ or 1		½ or 1
Debating	½	1		½ or 1		½ or 1		½ or 1

*The minimum accepted in foreign languages applies to the College of Arts and Sciences only.

**Two units credit for elementary algebra completed. Technology can-

didates are expected to take some mathematics during their last year in school.

†The work in these subjects must include laboratory work with notebook, as specified in the detailed statement.

‡Credit for these subjects and for bookkeeping and typewriting is at the rate of one-half unit for a subject taken five forty-five minute periods per week for a year.

§See footnote at bottom of page 51.

††Latin or French preferred.

Recommended Subjects

While practically free election is permitted for the units not specified as required for each college, it is strongly recommended that the choice should be mainly from the fields of language, mathematics, natural science, and social science.

Requirements in Detail

ENGLISH

The entrance examination in English presupposes a study of English literature and of composition and rhetoric pursued throughout the preparatory school course. Candidates are expected to have had practice in writing equivalent to at least one composition a week during each of the four years in high school, and to have studied the elements of rhetoric in some such text as, for example, Tanner's *Rhetoric and Composition*.

The examination is designed mainly to test the candidate's ability to express his thoughts correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Candidates are advised to give special attention to sentence construction, grammar, idiomatic usage in words and phrases, spelling, punctuation as a means of securing clearness, paragraph formation.

Grammar and Rhetoric.—The examination will include questions and exercises dealing with sentence structure and grammatical principles and with the elementary principles of rhetoric.

Composition.—The student will be required to write, as an important part of the examination, one or two short compositions on topics based on the classics studied in high school or on the student's personal experiences.

Literature.—A portion of the examination will be devoted to questions on the works in English and American literature customarily studied in high

school. These are designed to reveal how thorough and intelligent has been the student's understanding of what he has read.

FOREIGN LANGUAGES

LATIN.—The following requirements are based upon a report to the College Entrance Examination Board in 1925.

I. *Amount and range of the reading recommended.* There are no prescribed readings in Latin, but the following recommendations are made:

1. In the second year the pupil should read easy Latin of gradually increasing difficulty. This may consist in part of "made" or adapted Latin. Not less than one semester of this year should be devoted to the reading of selections from Caesar. The reading for the year may also include easy selections from such authors as Aulus Gellius, Eutropius, Nepos, Phaedrus, Quintus Curtius Rufus, and Valerius Maximus.

2. In the third year, if the reading is in prose, not less than one semester should be devoted to the reading of selections from Cicero. The reading for the year may also include selections from such authors as Pliny, Sallust, and Livy.

3. In the fourth year, if the reading is in poetry, not less than one semester should be devoted to the reading of selections from Vergil. The reading for the year may also include selections from such works as the *Metamorphoses, Tristia, Heroides,* and *Fasti* of Ovid, or books of selections containing poems or extracts from Ovid or other poets.

II. *Description of the examination.* The examination aims to test the proficiency of those who have studied Latin in a secondary course of five lessons each week extending through two, three, or four years. (An examination on forms, syntax, and easy translation is provided for candidates in Agriculture and Technology offering one year of Latin, and for candidates in Arts offering one year of Latin taken in the last two years of the high-school course.)

The paper will include:

1. Passages of Latin prose and verse for translation.

2. Passages of Latin prose and verse for comprehension. Candidates will be asked qustions to test their understanding of these passages but will not be required to translate them.

3. English passages to be translated into Latin for candidates presenting two or three years of Latin. Candidates presenting four years of Latin in one examination will also be expected to answer these questions.

4. Questions on forms, syntax, and idioms in these passages, as well as such questions on subject matter, historical and literary, as may fairly be asked.

Credit will be given for passing the following College Entrance Board Examinations: Cp. 2, Cp. 3, Cp. 4, Cp. H, and Cp. K.

III. *Latin Word List.* The College Entrance Examination Board has prepared a Word List which indicates the vocabulary that students are expected to have at the end of two, three, and four years of study. Students will be expected to know accurately the words in this list.

FRENCH.—The admission requirements in elementary and intermediate French are those recommended by the Modern Language Association of America.

I. *Elementary French.*—Students who desire to receive credit for two units of high-school French should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life or based upon a portion of the French text read, and to answer questions on the fundamentals of French grammar.

II. *Intermediate French.*—Those who desire credit for three units should be able to read modern prose and verse of moderate difficulty and to write a composition upon any subject within the range of everyday experience. Such students should also have a thorough knowledge of French grammar as presented by the Fraser and Squair and other textbooks of the same type, including a thorough study of the uses of the conditionals and subjunctives, and in general of such material as may have been in the work of the first two years.

The examination of the College Entrance Certificate Board in Elementary French will be accepted for two units, and that in Intermediate French for one additional unit.

GERMAN—*Elementary.*—The first year's work should comprise: Careful drill upon pronunciation and oral work; the rudiments of grammar including the inflection of nouns, pronouns, and adjectives; the conjugation of the more common weak and strong verbs; the use of the more common prepositions; the conjugation and meanings of the modal auxiliaries; the elementary rules of syntax and word order; dictation and elementary composition; the reading of 75 to 100 pages of prose and poetry.

The second year's work should include the continued study of the grammar and composition, and the reading of 150 to 200 pages of literature.

The advanced German should include constant practice in conversation and composition, and the reading of about 400 pages of moderately difficult prose and poetry.

SPANISH—*Elementary.*—The equivalent of Course 1, 2 offered by the University. The first year's work should comprise: Careful drill in the pronunciation; the rudiments of grammar, including the conjugation of the regular and more common irregular verbs; exercises containing illustrations of the principles of grammar; dictation; the translation of simple Spanish when spoken; sufficient translation from English to Spanish to illustrate the prin-

ciples of grammar; the reading of about 125 pages of modern prose. In the second year in addition to the continued study of the grammar and the use of suitable exercises similar to those employed in the preceding year there should be read from 300 to 400 pages belonging to modern Spanish literature.

HISTORY

One unit is required by all colleges of the University for entrance. Four may be offered.

The student will be expected to show judgment as well as memory and be able to make comparisons and give summaries. Some knowledge of geography is required, and collateral reading is essential

I. *Greek and Roman History.*—One unit.

Greek History.—To the death of Alexander with due consideration of Greek life, literature, and art. One-half unit.

Roman History.—To 800 A.D. with emphasis on government and institutions. One-half unit.

II. *English History.*—A general knowledge of the political and social development of England; in particular the growth of the limited monarchy with parliamentary government and the British Empire and Commonwealth. One unit.

III. *American History.*—Including civics and with especial attention to social and economic life. One unit.

IV. *Medieval and Modern History.*—One unit.

Medieval History.—To 1500. One-half unit.

Modern European History.—From 1500 to the present. One-half unit.

V. *General History.*—Beginning with ancient civilization and coming down to the present time. One unit.

MATHEMATICS

The requirements in mathematics given here are essentially those published by the College Entrance Examination Board. A pamphlet giving fuller details of the requirements can be obtained from the secretary of that Board.

Algebra to Quadratics.—One unit.

(1) The meaning, use, evaluation, and necessary transformations of simple formulas involving ideas with which the pupil is familiar, and the derivation of such formulas from rules expressed in words.

(2) The graph, and graphical representation in general. The construction and interpretation of graphs.

(3) Negative numbers; their meaning and use.

(4) Simultaneous equations. The solution of systems of equations of the first degree and also of systems consisting of one quadratic and one linear equation involving two unknown quantities, with verification of results.

(5) Ratio, as a case of simple fractions; proportion, as a case of an equation between two ratios; variation. Problems.

(6) The essentials of algebraic technique.

(7) Exponents and radicals; simple cases.

(8) Numerical trigonometry.

Quadratics and Beyond.—One unit.

(1) Numerical and literal quadratic equations in one unknown quantity. Problems.

(2) The binomial theorem for positive integral exponents, with applications.

(3) Arithmetic and geometric series.

(4) Simultaneous equations of the first degree in three unknown quantities.

(5) Simultaneous equations (in two unknown quantities), consisting of one quadratic and one linear equation, or of two quadratic equations of certain types. Graphs.

(6) Exponents and radicals.

(7) Logarithms.

Plane Geometry.—The usual theorems and constructions which treat the general properties of plane rectilinear figures, the circle and the measurements of angles, similar polygons, areas, regular polygons, and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions which treat the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions considered as ratios; circular measurement of angles, proofs of principal formulas; in particular those for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum and the difference of two sines and of two cosines; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles, and practical applications.

Advanced Algebra.—Permutations and combinations with applications of the theory limited to simple cases: complex numbers with graphical representation of sums and differences: determinants, chiefly of the second, third, and fourth orders; methods of evaluating such determinants including the method involving the use of minors; the application of determinants to the

solution of systems of equations of the first degree: so much of the theory of equations including graphical methods, Descartes' rule of signs and Horner's method, but not Sturm's functions or multiple roots, as is necessary for the solution of equations of higher degree with numerical coefficients; also the application of the theory to the solution of equations of this type.

SCIENCES

Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoology alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoology; but in such cases it must be treated as an integral part of the subject under consideration.

The requirements in botany and zoology are the same as those of the College Entrance Examination Board, and are outlined in the syllabus of the Board. The notebook should include properly labeled drawings, and descriptions of experiments, representing as much of the work in this syllabus as may be practicable, and should be the record of a year's laboratory work in the subject. The making of an herbarium is optional.

Chemistry.—The necessary ground is covered by the first textbooks in chemistry, such as Brownlee and others; Hessler and Smith; McPherson, Henderson, and Fowler's *Chemistry for Today;* Newell; and Black and Conant. Records of laboratory work should be kept in permanent notebook form.

The work in chemistry should include at least ninety hours of classroom work and a full year of individual laboratory work of two double class periods weekly. The laboratory requirement is not limited to a specific number of experiments or exercises but must include a broad general training. The notebooks of students seeking entrance credit in chemistry must be certified by the instructor and presented as evidence, when called for, by the Department of Chemistry and Chemical Engineering.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Davis's *Physical Geography* or one of similar grade.

Physics.—The necessary preparation is covered in one year in a good fitting school. This covers the fundamental facts in mechanics, heat, light, sound, electricity and magnetism. A two-hour laboratory period per week should be a part of the course. Approximately forty exercises should be covered in the laboratory. It is expected that the principal submitting a credit in physics vouches for a satisfactory notebook.

ADMISSION OF SPECIAL STUDENTS

Persons twenty-one years of age, not candidates for a degree, may be admitted as special students, if they give satisfactory evidence that they are prepared to take the desired subjects.

Admission to the Two-year Course in Agriculture.—Candidates for admission to the Two-Year Course in Agriculture must have satisfactorily completed two years of high-school work.

ADMISSION BY TRANSFER

A student desiring to transfer to the University of Maine from another college of recognized standing must present the following credentials:

A statement of his entrance record.

A statement showing a complete record of his work while in attendance including faculty action, if any.

A letter of honorable dismissal.

These credentials must be sent directly from the Registrar's office and should be addressed to the Registrar of the University of Maine.

Applicants should notify the Registrar whether they desire admission to the College of Agriculture, the College of Arts and Sciences, the School of Education, or the College of Technology. A college catalog should be mailed unless the Registrar knows that the University of Maine is on the permanent mailing list.

REGISTRATION

Freshmen.—All members of the incoming freshman class are REQUIRED to be in residence on the campus during the period known as Freshman Week. The dates are announced in the calendar in the front of the catalog. Following the general plan employed for the past eleven years, it will be devoted to tests of various sorts whereby the University authorities may obtain more accurate information concerning the type and degree of mental qualifications of the new students, and to lectures and demonstrations by which the students may be more intelligently informed of the University and its customs.

NO EXCUSES FOR NON-ATTENDANCE OTHER THAN ILLNESS CERTIFIED TO BY A PHYSICIAN IN GOOD STANDING WILL BE ACCEPTED.

Upperclassmen.—In the fall semester of 1935, upperclassmen will be required to register on September 17, or to present written evidence that they have been excused from so registering by the University authorities. In other

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words, upperclassmen must before September 17 have communicated with the dean of their college giving him their reasons for desiring to register late, and have received from him written authorization so to do. In the event of an unusual circumstance wholly beyond the control of the student, and occurring just prior to the opening of the fall semester, the student may present his case in person to the dean upon his arrival at the University. Late registration is a handicap both to students and to University authorities, and will be rigidly discouraged whenever and wherever possible.

STUDENT EXPENSES

A partial list of necessary expenses is indicated below. It includes only items which are fairly uniform for all students. The estimates are prepared upon the basis of students living in University halls.

	Students from within the State		Students from without the State	
Tuition	$150.00		$250.00	
Textbooks	25.00	to 50.00	25.00	to 50.00
Board 34 weeks @ $5.50	187.00		187.00	
Room in Dormitory	85.00		85.00	
Special Assessment for Athletics & Debating	10.50		10.50	
Health Service Fee	2.00		2.00	
	$459.50	to $484.50	$559.50	to $584.50

The tuition for students taking the Two-Year Course in Agriculture is $70.00 a year. Such students do not pay the special assessment for athletics and debating.

Application for Admission

A fee of $10.00 is required at the time of application. Checks should be made payable to the University of Maine. This fee is refunded if the applicant is not admitted. When the applicant enters the University the fee will be applied toward payment of the first semester's tuition.

Application for Room

A deposit of $15.00 is required at the time application is made for a room. If a student is unable to enter, the deposit will be refunded provided the room

is given up on or before August 1. If notice of withdrawal is given on or before September 1, $10.00 will be refunded. In case of withdrawal after September 1, the entire deposit is forfeited, but may be applied toward the payment for a room if the applicant enrolls in the University the following year.

When a student enters the University the deposit of $15.00 will be applied toward payment of dormitory charges.

Special Charges

A fee of $2.00 is charged a student for each special examination.

Students registering after the prescribed day of registration for the fall or spring semester shall pay an additional fee of two dollars.

Rooms

The rooms in the Maples, a freshman dormitory for women, accommodate one, two, or three students.

The rooms in Balentine Hall, accommodating one and two students each, and those in Colvin Hall, accommodating two and four students each, are available to all women students.

The rooms in Oak Hall and the middle section of Hannibal Hamlin Hall accommodate two students each; the north and south sections of Hannibal Hamlin Hall accommodate four students each. Oak Hall and Hannibal Hamlin Hall are freshman dormitories for men.

Dormitory charges include steam heat and electric lights. The rooms in the dormitories are furnished with beds, mattresses, chiffoniers, desks, and chairs. Each resident in the dormitory has bed linen and three towels laundered each week without extra charge. Students furnish pillows, bed linen, and blankets.

Women students not living at home are required to live in one of the women's dormitories. In exceptional cases women students are allowed to live at some boarding house approved by the Dean of Women.

Applications for dormitory rooms should be addressed to the Registrar.

Gymnasium Uniform for Women

Every woman will be expected to purchase a prescribed uniform before coming to college. Information regarding uniform and place where it can be bought will be sent with application blanks. The approximate cost of the uniform is $15.00.

All women students who are using locker rooms and shower baths will be assessed fifty cents each semester for the use of towels. This assessment will be added to the term bill at the end of each semester.

Deposits to Cover Expenses

The University *requires all students to pay in advance.* The payments indicated below are required at the beginning of each semester.

Deposit	Residents of Maine	Non-Residents of Maine
Tuition	$ 75.00	$125.00
Board and Room	136.00	136.00
Key Deposit (men only)	5.00	5.00
Military Deposit (required of all men taking military instruction)	30.00	30.00
Special Assessment for Athletics and Debating	5.25	5.25
Health Service Fee	1.00	1.00
Freshman Week (Freshmen only)	8.00	8.00
	$260.25	$310.25

For students who do not room and board in University halls the above amounts are reduced by $141.00.

All men taking military are required to make a deposit of $30.00 to cover cost of equipment. This deposit is returned at the end of the year, less a charge for goods furnished, plus a charge for lost and misused equipment.

For students in the Two-Year Course in Agriculture the deposit required for tuition is $35.00.

Diploma Fee

All students receiving a degree are required to pay a diploma fee of $5.00.

Communications

Communications with reference to financial affairs of students should be addressed to the Treasurer of the University of Maine.

LOAN FUNDS

Kittredge Fund.—This fund, amounting to over $2500, was established by Nehemiah Kittredge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in

the three upper classes. In the deed of gift it was prescribed that no security but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest be paid promptly, and that the principal be returned from the first earnings after graduation. Individual loans are limited to $50.

Boston Alumnae Fund.—This is a fund now amounting to over $500, available for women of high scholastic standing who have completed at least two years of college work. Loans are made at the discretion of the faculty Committee on Honors, and shall in no case exceed $200. The recipient is required to sign a promissory note on which interest at the current rate is charged; she is expected to begin payment immediately upon leaving college and to complete the same within two years.

Maine Campus Fund.—This fund, the gift of the Maine *Campus*, amounting to $320, is loaned to juniors and seniors whose conduct and scholarship are satisfactory, preference being given to those interested in the literary activities of the University. Amount loaned is limited to $50 per person with interest at 4 per cent while in college and 6 per cent thereafter. Loans must have the endorsement of a satisfactory second party. Fund is in control of the Treasurer of the University, and the custodian, editor-in-chief, and business manager of the *Campus*. Payment is to be made from first earnings after graduation or withdrawal from college.

Class of 1926 Loan Fund for Seniors.—This fund, the gift of the Class of 1926, amounting to over $1100, is loaned to seniors of good scholastic standing during the last semester of their senior year. Amount loaned is $50 per person, exceptional cases to be allowed $100. Payment of such loan is to be made before March 1 of the following year, with interest at the prevailing rate. The fund is under the same control as the Kittredge Fund.

Women's Loan Fund.—This fund was inaugurated by the American Association of University Women, University of Maine Branch, in 1925. It provides for loans to undergraduate women of the University who have successfully completed one or more years of university work, and have been found by the University to be thoroughly satisfactory in regard to character, scholarship, and general ability, and to be in genuine need. The fund amounts at present to $1300; and loans to one student shall not exceed $200 a year. Loans bear interest at the rate of 4 per cent, and are made at the discretion of a committee of the local branch of the Association.

Mary S. Snow Memorial Fund.—Students and friends of Mary S. Snow, one-time superintendent of schools in Bangor, and later a leader in home economics education, have established as a tribute to her memory a loan fund to be used in helping earnest and deserving young women secure a home economics education at the University of Maine. The fund at present amounts to over $3700 and is administered by a committee consisting of the President

of the University, the Dean of the College of Agriculture, and the head of the Home Economics Department. Loans may be granted to young women of such character and scholarship as give promise that the education thus made possible will be of genuine value to the students and to society. Interest is charged at the rate of 3 per cent while the student is in school, 6 per cent thereafter. Conditions of repayment shall be made for the individual student on the basis of her obligation to contribute to the education of other students by repayment as soon as possible after graduation.

American Pulp and Paper Mill Superintendents' Association Fund.—This fund amounts to $2500. The income is to be used to improve instruction and aid investigations in pulp and paper chemistry and technology, to develop coöperation between pulp and paper mill superintendents and young technical graduates, or to be loaned to meritorious students pursuing the pulp and paper course. A report is to be made annually to the Association.

Drummond Fund.—This fund of $1000 was established in memory of Frank Hayden Drummond, of Bangor, by his widow and children. It is in control of the President and the Treasurer of the University by whom it is loaned to needy students of good character who have attained an average of C or its equivalent. Loans shall bear interest at 5 per cent, and the principal must be paid from the first earnings after leaving the University.

Carleton Orchard Fund.—This fund originated in the gift to the State of Maine by James A. Gregory of one interest-bearing first mortgage bond for $1000, the interest on which was to be used for the promotion of scientific orcharding in Maine. At first administered by the Maine Department of Agriculture, the income from this bond was transferred in 1925 to the College of Agriculture of the University "for the assistance of needy students who shall be residents of the State of Maine, majoring in horticulture at the said college of agriculture." Loans are made at the discretion of a committee consisting of the head of the Department of Horticulture, the Dean of the College of Agriculture, and the Treasurer of the University. They bear interest at the current rate from the date of issue until repaid.

The Bangor Business and Professional Women's Loan Fund.—This fund now amounting to $345 was established by the Business and Professional Women's Club of Bangor, Maine, for needy and deserving women students, preferably from Bangor and vicinity, who have been in attendance at least two years and who have maintained an average grade of "C" or better. Loans shall not exceed $250 per student and the recipient shall sign a promissory note to begin payments on the loan within four months after leaving the University at the rate of not less than $10 per month, with interest at the current rate from the date of the loan. The recommendation to the President for loans shall be made upon the recommendation of the Registrar, the Dean of Women, and the Chairman of the Education Committee of the Bangor Business and Professional Women's Club.

General Loan Fund.—This fund, now amounting to $1380, was donated by unknown friends, students, and faculty of the University. The first donation was made in May, 1930, and has been increased at various periods since that time. Loans from this fund are made at the discretion of the Dean of Men, or Dean of Women, and the President of the University.

Kappa Psi Loan Fund.—This fund, amounting to $200, was donated by the Kappa Psi Sorority during the spring of 1933, to be used for the benefit of women students.

SCHOLARSHIPS AND PRIZES

Applications for scholarships, unless otherwise indicated, should be sent to the Chairman of the Committee on Honors before April 15. Application blanks may be obtained from the Chairman of the Committee on Honors or from the Registrar's office.

Scholarships available for graduate students are described in the section of the catalog devoted to graduate study.

Trustee Scholarships.—Five undergraduate scholarships of the value of a year's tuition are awarded annually by authorization of the Board of Trustees, primarily on a basis of scholarship standing. One scholarship at large is offered to a student of distinguished record in any college or school of the University, without restriction as to residence. Of the other four, for residents of Maine only, one is offered in each of the three colleges and one in the School of Education.

Secondary School Contest Scholarships.—Eight tuition scholarships, established by the Board of Trustees, are awarded each year to freshmen entering the University from Maine secondary schools. These scholarships are awarded, one in each of eight districts of the State, to the secondary school senior making the highest rank in his district in the Senior Scholarship Contest sponsored by the School of Education. This contest is held in May, and the scholarships are available the following September. The highest ranking senior of the eight selected is awarded a tuition scholarship for four years, the second highest for three years, the third highest for two years, and the remaining five for one year each. Each scholarship is issued for one semester and will be continued in the second semester upon evidence of satisfactory work in the University.

Hovey Memorial Scholarship.—The Stone and Webster Corporation in 1931 permanently allocated to the University of Maine the Hovey Memorial Fund of $5900, established in 1932 in honor of the late Francis J. Hovey. The income from this fund makes available annually two or three scholarships of approximately $150 for students in the College of Technology, on the

basis of scholastic attainment, character, and general promise. A scholastic standing of at least 3.00 must be attained to be eligible, and must be maintained during tenure. Award is made by the Dean and the heads of departments in the College, subject to the approval of the President. Preference is given to students residing in the State of Maine, if there are suitable candidates in this group.

Charles H. Hood Fund Scholarships.—Seven scholarships of $200 each are available annually to men and women students of the College of Agriculture whose intention is to promote farming as a life opportunity. They are awarded by a committee comprising the Dean of the College of Agriculture as chairman, the head of the Department of Animal Industry, and the Treasurer of the University, and are distributed as follows: Two sophomore and two junior scholarships are granted to students whose scholastic standing for the previous year places them in the upper half of their class; and three senior scholarships are granted to students whose scholastic standing for the previous year places them in the upper third of the class. The junior and senior scholarships are further restricted to students specializing in some phase of dairy industry promotion.

W. H. Bowker Scholarships.—The American Agricultural Chemical Company has established two scholarships in honor of W. H. Bowker, one of the first technically trained agricultural college graduates to utilize agricultural research in the manufacture of commercial fertilizers. These scholarships provide $300 each to pay two years' tuition in the College of Agriculture. One scholarship is to be awarded to some boy now studying vocational agriculture in any high school or academy in Aroostook County, or in Patten Academy, Penobscot County. The second scholarship is to be awarded to some boy now studying vocational agriculture in any high school or academy in the state. The awards will be made in June, 1935. Each scholarship is to be awarded by a committee comprising the Dean of the College of Agriculture, the Professor of Agricultural Education, and the teachers of vocational agriculture in the section involved.

William Emery Parker Scholarship.—In memory of William Emery Parker, Class of 1912, the income from a one thousand dollar bond donated by Hosea B. Buck, Class of 1893, is awarded annually to that male student of the sophomore or junior class who, in addition to being above the average rank scholastically, shows most clearly those qualities of manliness, honesty, and constructive effort which characterized the college career of the alumnus in whose memory the scholarship is given. It is to be awarded by the Committee on Honors with the approval and agreement of the President.

Women's Student Government Association Scholarships.—Two scholarships of fifty dollars each are awarded annually by the Women's Student Government Association to deserving women students who are in need

of financial assistance and whose conduct and scholarship record are satisfactory. Applications must be submitted to the president of the Student Council by April 1. Award is made by the Committee on Honors on recommendation of the Dean of Women and the Student Council.

NEW YORK ALUMNI ASSOCIATION SCHOLARSHIPS.—Two scholarships of fifty dollars each are annually offered by the New York Alumni Association for the encouragement of proficiency in written and oral expression.

SCHOLARSHIP No. 1 is offered for excellence in debating by the faculty Committee on Honors, on recommendation of the Department of Public Speaking. In case the effort in debating does not justify the award in any year or years, the amount shall be accumulative.

SCHOLARSHIP No. 2 is offered annually to a junior in the College of Technology, to encourage advancement and proficiency in English, particularly in correct, clear, direct, and efficient writing as equipment for later professional, commercial, and civil life. The candidates shall assemble on an announced date, and each shall write an essay on a subject selected from a list of ten, of which five are chosen by the Department of English and five by the College of Technology. The award, based upon the quality of the essay and the advancement which is indicated by the student's grade in courses in English, shall be made by three judges, of whom one shall represent the College of Technology and the other two shall be selected by the Department of English.

THE KIDDER SCHOLARSHIP.—A scholarship of thirty dollars was endowed by Frank E. Kidder, Ph.D., of Denver, Colorado, a graduate of the University in the Class of 1879. This scholarship is awarded by the Committee on Honors, with the approval of the President, to a student whose rank excels in his junior year.

THE PITTSBURGH ALUMNI ASSOCIATION SCHOLARSHIP.—A scholarship of thirty dollars is awarded annually by the Pittsburgh Alumni Association to a member of the junior class in the College of Technology whose ability and needs justify the award. The selection is made by the President and the Dean and professors of the College of Technology.

THE JOSEPH RIDER FARRINGTON SCHOLARSHIP.—The income from a one thousand dollar bond, a gift of Arthur M., Edward H., Oliver C., Horace P., and Wallace R. Farrington, all graduates of the University of Maine and sons of Mr. and Mrs. Joseph Rider Farrington, is offered annually as a scholarship in honor of their parents. The following order of preference is considered in awarding this scholarship: (a) To any direct descendant of Joseph Rider and Ellen Holyoke Farrington, or anyone whom three of such descendants may select; (b) To any student bearing the surname of Farrington or Holyoke; (c) To the student in the junior class of the College of Agriculture who attains the highest rank in studies and deportment during the year of award and who shall make application for the scholarship.

THE STANLEY PLUMMER SCHOLARSHIP.--The income of one thousand dollars, the bequest of Colonel Stanley Plummer of Dexter, Maine, is awarded anunally to a needy and deserving student selected by the Committee on Honors. Students born in Dexter, Maine, shall have the preference; but if there are none such, any needy and deserving student may be selected.

THE ELIZABETH ABBOTT BALENTINE SCHOLARSHIP.—A scholarship of the value of seventy-five dollars was endowed by the Gamma Chapter of Alpha Omicron Pi, to be awarded to a woman member of the sophomore class to be selected by the Committe on Honors on recommendation of the chapter with the approval of the President. Both scholarship and individual need are to be considered in the award.

THE CLASS OF 1905 SCHOLARSHIP.—The income from a one thousand dollar bond, donated by members of the Class of 1905, shall be awarded to a man of the freshman class pursuing a regular curriculum, whose deportment is satisfactory, and who attains the highest rank in the mid-year examinations.

CARROL C. JONES SCHOLARSHIP.—The net income of a fund of one thousand dollars, bequeathed by Minnie E. Jones, of Solon, in memory of her son, Carrol C. Jones, of the Class of 1914, is awarded annually to the student who makes the greatest improvement in his college work during his or her freshman year.

THE PHI SIGMA SCHOLARSHIP.—A scholarship of thirty dollars is offered annually by the Phi Sigma Fraternity to a sophomore student on the basis of proficiency, interest, and general promise in biology and of general need. The award shall go toward payment of tuition and shall be made by the Phi Sigma Executive Committee in conference with the faculty of the Departments of Botany and Zoology.

THE DELTA DELTA DELTA SCHOLARSHIP.—A scholarship of fifty dollars, established by Alpha Kappa chapter of the Delta Delta Delta sorority, is awarded annually to that girl in the sophomore or junior class whom the Faculty Committee on Honors considers most deserving on a basis both of need and of scholarship.

OHIO ALUMNI ASSOCIATION SCHOLARSHIP.—A scholarship of the value of fifty dollars, established in 1934 by the Ohio Alumni Association, is awarded annually by the Committee on Honors, with the approval of the President, to a student whose character, scholarship, and need justify the award.

THE CHI OMEGA SOCIOLOGY PRIZE.—In accordance with its national policy, the Chi Omega Sorority offers annually a twenty-five dollar prize to the woman student in the sophomore or junior class who secures the highest grade in the beginners' course in sociology. Her general deportment and

interest in the study of sociology may also be considered in determining the award.

PRIZE OF THE CLASS OF 1873.—The income of one thousand dollars, the gift of Russell W. Eaton, of Brunswick, a member of the Class of 1873, is awarded annually to that member of the sophomore class who is able to show the greatest improvement in mechanical drawing during the first two years of his college course. It is expected that candidates for this prize shall have had no training in mechanical drawing previous to entering the University.

THE ALPHA OMICRON PI ALUMNAE PRIZE.—A prize of ten dollars, given by the Bangor Alumnae Chapter of Alpha Omicron Pi, is awarded annually to the woman student showing the greatest improvement in her work during her freshman year. The record at the Registrar's office, showing the comparison of grades of the fall semester with those of the spring semester, shall furnish the basis of award.

SIGMA MU SIGMA AWARD.—An award of twenty-five dollars is made annually by the honorary society Sigma Mu Sigma to a member of the current sophomore class who shall have completed a semester and a half of the introductory course in General Psychology, on a basis of proficiency, interest, and general promise in the subject. Nominations for the award shall be made to the president of the society by the instructors in the course when the spring midsemester grades are reported to the Registrar, and it becomes available upon the student's return to the University in the following semester.

THE PALE BLUE KEY AWARD.—An award of fifty dollars is given each year by the Pale Blue Key to some member of the freshman class who needs help. He must have shown promise in track athletics in his freshman year and have maintained a satisfactory scholarship standing. The award shall be in the hands of a committee composed of the president of the Pale Blue Key, the coach of track athletics, and a member of the faculty to be chosen by the club, subject to the approval of the President. The winner will be given the award upon his return to college in his sophomore year. Applications must be made in writing and sent to either the coach of track athletics or the president of the Pale Blue Key before May 1.

THE HENRY L. GRIFFIN PRIZE IN ENGLISH COMPOSITION.—A prize of ten dollars, in honor of the late Rev. Henry L. Griffin, of Bangor, is awarded by the Department of English for excellence in the freshman course in composition. The chief basis of the award is a competition in writing held during the month of April.

FRANKLIN DANFORTH PRIZE.—A prize of fifteen dollars, the gift of the Hon. Edward F. Danforth of Skowhegan, a graduate of the University of the Class of 1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the College of Agriculture who attains the highest standing throughout his curriculum.

GREEK CULTURE PRIZE.—A prize of fifteen dollars, the gift of the Hon. Edward F. Danforth, of Skowhegan, a graduate of the University in the Class of 1897, is awarded annually to that member of the senior class who shall have given evidence of the best appreciation of the spirit of Greek culture. The award is made on recommendation of the Professor of Ancient Civilization.

THE SPANISH CLUB PRIZE.—A prize of ten dollars is awarded annually by the Círculo Español for excellence in Elementary Spanish to a student of the freshman class, on the basis of a competitive examination.

THE ROBERT C. HAMLET PRIZE.—In accordance with the will of Robert Crosby Hamlet, a graduate of the University in the Class of 1925, a fund was left in the keeping of the University of Maine Foundation, the income of which is to provide an annual prize for that student in the University who shall have written the best original play during the year of award. The judges shall be the Dean of the College of Arts and Sciences, the head of the Department of English, and the president of the Maine Masque. The first award will be offered in the spring of 1936.

THE CLASS OF 1908 COMMENCEMENT CUP.—A cup, donated by the Class of 1908 alumni, is awarded to that graduate class, the largest percentage of whose members register during Commencement Week.

THE FRATERNITY SCHOLARSHIP CUP.—The 1910 Senior Skulls Society presented to the University a cup to be awarded in turn at each Commencement to that fraternity having the highest standard in scholarship for the preceding calendar year. The cup was to become the permanent property of the fraternity to which it should be awarded the greatest number of times through an eleven-year period. The award was renewed in 1921 for an eleven-year period by the 1921 Skulls, and in 1932 by the 1932 Skulls. The first cup was awarded in 1921 to Phi Eta Kappa and the second in 1932 to Lambda Chi Alpha.

THE PAN-HELLENIC SORORITY CUP.—A scholarship cup presented by the Pan-Hellenic Council is awarded in turn at each Commencement to the sorority having the highest scholarship standing, on terms similar to those of the Fraternity Scholarship Cup. The first cup was awarded in 1933 to Delta Zeta.

FRESHMAN SCHOLARSHIP CUP.—A cup is awarded by the University each spring to that secondary school in Maine having three or more of its graduates in full standing in the freshman class, whose freshman representatives as a group shall have attained the highest scholastic standing for the fall semester preceding. The award was made first in 1931, to Fort Kent High School, in 1932 to Boothbay Harbor High School, in 1933 to Deering High School, and in 1934 to South Portland High School.

THE WASHINGTON ALUMNI ASSOCIATION WATCH.—The Alumni Association of Washington, D. C., presents annually a watch to the male member of the graduating class who, in the opinion of the students and the University administration, has done the most for the University during his curriculum. This award is made as the result of a secret ballot by the students, passed upon by the President and the Administrative Committee.

PORTLAND ALUMNAE ASSOCIATION WATCH.—The Portland Club of University of Maine Women presents annually a watch to the woman member of the graduating class who, in the opinion of the students and the University administration, has done the most for the University during her curriculum. This award is made as the result of a secret ballot by the students, passed upon by the President and the Administrative Committee.

AGRICULTURAL CLUB MEMBERSHIP CUP.—A cup furnished by the Agricultural Club is engraved each year with the numerals of that undergraduate class which can show the best record of membership in the club.

THE CHARLES RICE CUP.—The Kappa Sigma Fraternity presented in 1921 a cup in honor of Charles Anthony Rice, of the Class of 1917, who was killed in service, to be held for one year by the team winning the Intramural Track Championship.

THE INTRAMURAL PLAQUES.—The Intramural Athletic Association donates each year a plaque to the fraternity making the best showing in each major intramural sport, and a special plaque to that fraternity which makes the best performance in all the sports.

STUDENT REGULATIONS

It is assumed that all students entering the University are willing to subscribe to the following: *A student is expected to show, both within and without the University, respect for order, morality, and the rights of others, and such sense of personal honor as is demanded of good citizens.*

The quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of seventeen hours in the College of Arts and Sciences, from a minimum of fourteen hours to a maximum of eighteen hours in the School of Education, and from a minimum of seventeen hours to a maximum of twenty-two hours in the College of Technology and the College of Agriculture except that in the Department of Home Economics the limits are fourteen hours and nineteen hours. In the application of this rule, two or three hours of laboratory work count as one hour.

Each student is expected to be present at every college exercise for which he is registered.

Detailed information about the regulations affecting students is contained in a pamphlet which may be obtained at the office of the Registrar.

Use of Automobiles by Freshmen

Freshmen are not allowed to bring automobiles or motorcycles upon the campus except those who use them to commute daily from their homes.

DEGREES

The degree of Bachelor of Arts (B.A.), with specification of the major subject, is conferred upon all students who complete a curriculum in the College of Arts and Sciences.

The degree of Bachelor of Science (B.S.) in the curriculum pursued is conferred upon students who complete the work of four years in the Colleges of Agriculture or Technology according to the requirements prescribed by those Colleges and the University.

The degree of Bachelor of Arts in Education (B.A. in Ed.), or Bachelor of Science in Education (B.S. in Ed.) is conferred upon students who complete the prescribed work in the School of Education.

A minimum residence of one year is required for the attainment of any bachelor's degree. This regulation refers to the senior year. No student will be recommended for a degree who, having been reported to the Committee on Student's Use of English of his college, shall have failed to satisfy the requirements of the committtee.

The degrees of Master of Arts (M.A.), Master of Science (M.S.), Master of Arts in Education (M.A. in Ed.), and Master of Science in Education (M.S. in Ed.) are granted for one year's graduate work completed with distinction.

DEGREES WITH DISTINCTION

Degrees with distinction are conferred at Commencement for the following attainments in rank:

Seniors in the Colleges of Agriculture and Technology having an average grade of 3.50 or above are graduated with highest distinction, 3.25 to 3.49 with high distinction, and 3.00 to 3.24 with distinction.

Seniors in the College of Arts and Sciences and the School of Education having an average grade of 3.75 or above are graduated with highest distinction, 3.50 to 3.74 with high distinction, and 3.25 to 3.49 with distinction.

The average grade is based on the work of the first three and one-half years, which must include three years of resident study at the University of Maine for students in the Colleges of Agriculture, Arts and Sciences, and Technology and two years in the School of Education for students who have transferred from other institutions. Candidates in the Colleges of Agriculture, Arts and Sciences, and Technology must have completed seven-eighths and in the School of Education three-fourths of the required hours at the end of the fall semester of the senior year. Candidates must take their senior year at the University of Maine.

THESES

Theses shall be printed, or typewritten in black record, unless the subject matter prevents, and the paper used shall be a standard thesis paper, 8 x 10 1-2 inches, which may be procured at the University Store. Care should be taken to have a margin of one inch on the inner edge, at least one-half inch on the outer edge, one and one-half inches at the top, and one inch at the bottom of the page.

If drawings accompany the thesis, they may be bound in with the rest of the pages or placed in a pocket on the inside of the back cover; or if too many for this, they may be bound separately according to personal instructions of the head of the department.

A draft of all undergraduate theses must be passed to the major instructor before May 1.

Complete instructions may be found in a pamphlet entitled "Degrees and Theses."

Organization of the University

The University is divided for purposes of administration by the Trustees into two divisions, the academic and the financial. The former is divided into the Colleges of Agriculture, Arts and Sciences, and Technology, the School of Education, and the Maine Agricultural Experiment Station. The policies of the University as a unit are determined by the Board of Trustees, the administrative officers, and the general faculty, but each division regulates those affairs which concern itself alone. In addition to the faculties of the colleges there are the Faculty of Graduate Study and the Faculty of the Summer Session.

College of Agriculture

Curricula in Agricultural Economics and Farm Management, Agricultural Education, Agronomy and Agricultural Engineering, Animal Husbandry, Bacteriology, Biological and Agricultural Chemistry, Botany, Dairy Husbandry, Dairy Technology, Entomology, Forestry, Home Economics, Horticulture, and Poultry Husbandry.

Two-Year Course in Agriculture.

Short Courses in Agriculture.

Farm and Home Week.

Extension Lecture Courses.

College of Arts and Sciences

Major subjects may be selected according to definite departments (Chemistry, Classics, Economics and Sociology, English, German, History and Government, Mathematics and Astronomy, Philosophy, Physics, Psychology, Public Speaking, Romance Languages, and Zoology) or according to definite areas of pre-professional interest such as medicine, law, social work, politics, and journalism.

School of Education

Professional training is offered for superintendents, supervisors and principals, and teachers of academic subjects in the secondary schools. The degrees of Master of Arts in Education and Master of Science in Education are offered.

College of Technology

Curricula in Chemical Engineering, Chemistry, Civil Engineering, Electrical Engineering, General Engineering, and Mechanical Engineering.

Faculty of Graduate Study

Courses leading to the degrees of Master of Arts and Master of Science have been organized in a considerable number of departments.

Maine Agricultural Experiment Station

Offices and principal laboratories at Orono; Highmoor Farm at Monmouth; Aroostook Farm at Presque Isle.

Summer Session

A session of six weeks is maintained for teachers and college students. Work is offered at present in sixteen departments.

College of Agriculture

FACULTY OF INSTRUCTION

ARTHUR LOWELL DEERING, B.S., Sc.D., *Dean*
LAMERT SEYMOUR CORBETT, M.S., *Professor of Animal Industry*
HERBERT STAPLES HILL, A.B., *Professor of Agricultural Education*
CHARLES HENRY MERCHANT, Ph.D., *Professor of Agricultural Economics and Farm Management*
JAMES HOWARD WARING, Ph.D., *Professor of Horticulture*
PEARL STUART GREENE, A.M., *Professor of Home Economics*
FERDINAND HENRY STEINMETZ, Ph.D., *Professor of Botany and Entomology*
*MAURICE DANIEL JONES, M.S., *Professor of Agricultural Economics and Farm Management*
ELMER REEVE HITCHNER, Ph.D., *Professor of Bacteriology*
LLEWELLYN MORSE DORSEY, M.S., *Professor of Dairy Husbandry*
HARRY WOODBURY SMITH, Ph.D., *Professor of Biological and Agricultural Chemistry*
MARION DEYOE SWEETMAN, Ph.D., *Professor of Home Economics*
DWIGHT BURGESS DEMERITT, M.F., *Professor of Forestry*
JOSEPH ANTHONY CHUCKA, Ph.D., *Professor of Agronomy and Agricultural Engineering*
JOHN ROBERT SMYTH, M.S., *Associate Professor of Poultry Husbandry*
ALLEN WRIGHT GOODSPEED, M.F., *Associate Professor of Forestry*
GEORGE FARRINGTON DOW, M.S., *Associate Professor of Agricultural Economics and Farm Management*
CHAUNCEY WALLACE LORD CHAPMAN, M.S., *Assistant Professor of Forestry*
LEIGH PHILBROOK GARDNER, M.S., *Assistant Professor of Poultry Husbandry*
HAROLD CLAYTON SWIFT, M.S., *Assistant Professor of Agronomy*
CHARLES ORVILLE DIRKS, M.S., *Assistant Professor of Entomology*
GEORGE PETER STEINBAUER, Ph.D., *Assistant Professor of Botany*
MARGUERITE KUTH MUSGRAVE, A.M., *Assistant Professor of Home Economics*
MONROE EDWARD FREEMAN, Ph.D., *Assistant Professor of Biological and Agricultural Chemistry*
ROBERT IRVING ASHMAN, M.F., *Assistant Professor of Forestry*
HOWE WIGGIN HALL, M.S., *Assistant Professor of Animal Industry*

* On leave of absence to November 30, 1934.

FAY HYLAND, M.S., *Assistant Professor of Botany*
HELENE HEYE, M.S., *Assistant Professor of Home Economics*
JOHN FRANKLIN WITTER, D.V.M., *Assistant Professor of Animal Pathology*
STEPHEN MARTIN RALEIGH, Ph.D., *Assistant Professor of Agronomy*
ROGER CLAPP, M.S., *Assistant Professor of Horticulture*
RICHARD MCVAY RILEY, M.S., *Assistant Professor of Horticulture*
BEULAH ELIZABETH OSGOOD, A.M., *Instructor in Home Economics*
GLADYS MARIE GOULD, B.S., *Part-Time Instructor in Home Economics in Charge of Student Teaching*
MABEL LANCASTER STEWART, B.S., *Instructor in Home Economics*
FRED PERLEY LORING, B.S., *Director of Short Courses*
†LAWRENCE ALFRED CHATTO, B.S., *Acting Instructor in Agricultural Economics and Farm Management*
GARNET EDWARD DAVIS, B.S., *Graduate Fellow in Dairy Husbandry*
ARNOLD EVANS HOOK, B.S., *Graduate Fellow in Bacteriology*
CLIFFORD EGERTON LLOYD, B.S., *Graduate Fellow in Botany and Entomology*

GENERAL INFORMATION

The College of Agriculture comprises the Departments of Agricultural Economics and Farm Management, Agricultural Education, Agronomy, Animal Industry, Bacteriology, Biological and Agricultural Chemistry, Botany and Entomology, Forestry, Home Economics, Horticulture, and Extension Service. This college offers to young men and women an opportunity to secure a broad education and thorough training in the sciences and technics relating to the major course of study they may elect to pursue. It aims to prepare them for lives of usefulness as citizens of the State and for effective service in their chosen vocations or professions.

More specific and detailed information concerning the purposes of each major course of study offered by the college will be found in the description of the various curricula.

The four-year curricula in the College of Agriculture require the completion of 147 credit hours with the exception of those of Forestry and Home Economics which comprise 153 and 128 hours respectively. In addition each student must accumulate a total of grade points equal to the number of hours required for graduation in the curriculum chosen. These grade points are computed by multiplying each hour of the letter grade by a factor as follows: A by 3, B by 2, C by 1, and D by 0. Upon the completion of the required

† Acting Instructor to November 30, 1934.

curriculum, with the necessary number of grade points, the student will be recommended for the degree of Bachelor of Science (B.S.).

On entering either a four-year curriculum in Agriculture or the Two-Year Agricultural Course a student is required to fill out a practical experience blank. Those who have not had experience in general farming are required to work during at least one summer vacation on some farm approved by the faculty of the college. Before receiving their degrees or certificates candidates must satisfy the faculty that they are familiar with the methods of conducting operations incident to general farming. This does not apply to students majoring in Botany, Bacteriology, Biological and Agricultural Chemistry, Entomology, Forestry, or Home Economics.

Physical training is required in each semester of the first two years. No credit toward a degree is allowed for this work. Physical training is not required in the two-year agricultural curriculum.

Students in agriculture who contemplate entering experiment station chemical work should elect the courses offered by the Department of Biological and Agricultural Chemistry covering the qualitative and quantitative chemical analysis of feeds, fertilizers, and dairy products. They should also elect a preparatory course in quantitative chemical analysis.

Students desiring to specialize in the botanical or entomological aspects of Forestry may offer freshman and sophomore years in Forestry as equivalent to the first two years' work in Agriculture and register in the curriculum in Botany or Entomology during the junior or senior years.

A star (*) before the time designated for a course indicates that three or sometimes more hours of actual work are required to obtain a credit of one hour; a dagger (†) indicates that two hours of actual work are required to obtain a credit of one hour.

REGULAR CURRICULA AND COURSES OF INSTRUCTION

The courses of instruction are organized as follows:

1. Four-Year Major Agriculture Curricula:
   Agricultural Economics and Farm Management, Agricultural Education, Agronomy and Agricultural Engineering, Animal Husbandry, Bacteriology, Biological and Agricultural Chemistry, Botany, Dairy Husbandry, Dairy Technology, Entomology, Horticulture, and Poultry Husbandry.
2. Four-Year Forestry Curriculum

3. Four-Year Home Economics Curriculum:
   Vocational Sequences
   1. Home Economics Education
   2. Extension-Home Demonstration or 4-H Club Work
   3. Foods and Nutrition
   4. Textiles and Clothing
   5. Development and Training
   6. Special Sequences: Home Economics Journalism, Household Equipment, Social Service, and others formulated to fit individual cases
4. The Two-Year Course in Agriculture
5. Short Courses in Agriculture
6. Farm and Home Week
7. Extension Lecture Courses

THE FOUR-YEAR AGRICULTURAL CURRICULA

The four-year agricultural curricula are designed for those who wish to engage in the business of farming; for those contemplating the special fields of agricultural economics and farm management, agronomy and agricultural engineering, animal husbandry, bacteriology, biological and agricultural chemistry, botany, dairy husbandry, dairy technology, entomology, horticulture, and poultry husbandry; for those desiring to enter Federal or State agricultural research work; for those planning to prepare themselves for the teaching of agriculture and the allied sciences in secondary schools and colleges; and for those seeking to fit themselves to become agricultural extension agents or specialists in any of the various phases of agriculture. In addition to the specific fields mentioned above there are many other opportunities open to the college trained man in the agricultural and associated industries.

Certain studies are fundamental to all work in agricultural lines, and for this reason as many of these subjects as possible are offered in the first year, during which the student is necessarily given no choice of subjects. Beginning with the sophomore year each student should start specialization in one of the following major curricula: Agricultural Economics and Farm Management, Agricultural Education, Agronomy and Agricultural Engineering, Animal Husbandry, Bacteriology, Biological and Agricultural Chemistry, Botany, Dairy Husbandry, Dairy Technology, Entomology, Horticulture, or Poultry Husbandry; and at the beginning of the junior year he must establish a definite major course of study to be followed until the requirements for graduation shall have been satisfied.

It should be noted that each major curriculum allows a student a number of elective hours. The elective subjects are selected with the advice of the major instructor. In view of the fact that the economic aspects of the agricultural industry have become so vitally important, it is suggested that the student elect subjects in the field of agricultural economics in addition to those which may be required in his major curriculum; particularly is it suggested that he obtain as much information as he possibly can on the marketing of agricultural products. In the case of those students majoring in Agricultural Economics opportunity is offered in the way of elective hours to obtain training in such of the agricultural production subjects as may be desired to furnish a basic production background.

Honor Course in Agriculture

Any student who has obtained an average grade of at least 3.25 in the courses offered by his major department during the first three years of his college course may register for honor courses in his major department or in an allied department during his senior year providing his average grade in such allied department is at least 3.25 in all subjects taken in that department. Such courses may be substituted for any elective course, the total number of credit hours not to exceed four. Such honor courses shall be designed especially to promote initiative and organizing ability in the student. The scope of such courses shall constitute a broad survey in the field selected for study and shall in no way be substituted for a thesis. The general plan shall be worked out by the head of the department in which the course is taken, and must be approved by the head of the student's major department.

Curriculum for the Freshman Year for All Students Taking Four-Year Curricula in Agriculture

Fall Semester				*Spring Semester*			
No.		Subject	Cr. Hours	No.		Subject	Cr. Hours
Ag	11	Field Crops, 2 †2	3	An	2	Types of Live Stock, 2 †2	3
Ch	5	Inorganic Chemistry, 2 †4	4	Bt	2	General Botany, 2 †4	4
Eh	1	Composition	3	Ch	6	Inorganic Chemistry, 2 †4	4
Mt	1	Military, †3	1½	Eh	2	Composition	3
Ph	1	Types, Breeds, Mgt. of Poultry, 2 †2	3	Ht	2	Tree Fruit Production, 2 †2	3
Zo	1	General Zoology, 2 †4	4	Mt	2	Military, †3	1½
Pt	1	Physical Education, 2	0	Pt	2	Physical Education, 2	0
			18½				18½

Curriculum for Students Specializing in Agricultural Economics and Farm Management

The curriculum in Agricultural Economics and Farm Management is planned to give the student a broad, comprehensive training in the economic principles of the production and marketing of agricultural products. The training in crops and livestock production, provided in this curriculum, is essential for a clear and proper understanding of the application of the principles of agricultural economics. The student may choose from the elective hours a sufficient amount of work in another department to prepare himself for a position in Agricultural Economics and Farm Management dealing with a particular group of agricultural products. The student upon completing this curriculum of study may engage in some phase of one of the main divisions in the field, such as: agricultural economics, farm management, agricultural marketing including coöperative marketing, agricultural statistics, or agricultural finance. Any one of these divisions offers many opportunities to the graduate.

SOPHOMORE YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 1	Soils, 2 *3	3		Ag 14	Sweet Corn, Beans, and Peas, 1 †2		
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4			or		2
Bt 45	General Genetics	3		Ag 16	Forage and Pasture Crops, 1 †2		
Dh 1	General Dairying, 2 †2	3		Bc 8	Agricultural Chemistry	2	
Es 1a	Principles of Economics	3		Fm 48	Agricultural Economics	3	
Mt 3	Military, †3	2		Mt 4	Military, †3	2	
Pt 3	Physical Education, 2	0		Pt 4	Physical Education, 2	0	
					Elective	10	
		18				19	

JUNIOR YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
*Ag 15	Potato Production, 2 †2	3		Fm 52	Farm Accounting, 1 *6		
By 3	Bacteriology	2		Fm 62	Agricultural Business Accounting, 2 *3	3	
Eh 5	Technical Composition	2					
Fm 73	Adv. Agr. Economics	3		Fm 76	Agr. Marketing	3	
Fm 75	Agricultural Statistics, 1 *3	2			Elective	12	
Fm 79	Cooperative Marketing	2					
	Elective	8 or 5					
		19				18	

SENIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Fm 77	Agricultural Finance	2	Fm 74	Farm Management, 3 *3	4
Fm 81	Current Economic Problems	1	Fm 82	Current Economic Problems	1
Fm 83	Thesis	3	Fm 84	Thesis	3
Fm 87	Agricultural Prices	2	†	Agr. Marketing	2
	Agr. Marketing	2		Elective	8 or 10
	Elective	8			
		18			18

*Not required if Ag 14 or Ag 16 was taken in Sophomore year.

†Not required if taken in Fall.

Curriculum for Students Specializing in Agricultural Education

In recent years there has grown a need in this state and a majority of the other states for young men especially trained to conduct agricultural courses in secondary schools. The Federal government, recognizing the importance of teaching agriculture in secondary schools, has through the Smith-Hughes Act made it possible for school boards to obtain Federal aid in this work. In order to receive this aid the teacher employed must be trained at an agricultural college following a specific agricultural education curriculum or teacher-training course, as it is called. There are two such teacher-training courses in the College of Agriculture. When these requirements have been met, the graduate may become a candidate for appointment under the Smith-Hughes provisions as a teacher of agricultural subjects. It is a wise policy in any event for a student contemplating a career of teaching to follow the major agricultural teacher-training curriculum given below. For those students wishing to specialize in some other major curriculum but at the same time elect enough of the teacher-training curriculum to render themselves eligible to Smith-Hughes teaching positions, the following electives should be taken provided they are not required in their major curricula: Education 59 or Education 78; Agricultural Education 1 or 2; Agricultural Education 3; Agricultural Education 6; Farm Management 74; Dairy Husbandry 1; and Agronomy 34.

Students who elect either of the teacher-training courses must have had at least two years of practical farm work since their fourteenth birthdays.

One of these years must include year-round experience. Experience on the home farm while attending school satisfies the requirement. Those who do not meet this requirement of practical experience will be allowed to take the course only with the understanding that they will be expected to get this experience before they will be allowed to teach.

SOPHOMORE YEAR

Fall Semester

No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4
Bc 1	Organic Chemistry, 2 †2	3
En 21	Gen'l Entomology, 2 †4	4
Ht 1	Commercial Fruit Handling, 2 †2	3
Mt 3	Military, †3	2
Pt 3	Physical Education, 2	0
		19

Spring Semester

No.	Subject	Cr. Hours
Bc 2	Biochemistry, 3 †4	5
Fm 48	Agricultural Economics	3
Mt 4	Military, †3	2
Pt 4	Physical Education, 2	0
	Elective	9
		19

JUNIOR YEAR

No.	Subject	Cr. Hours
Ag 33	Farm Structures, 2 *3	3
An 5	Anatomy of Domestic Animals, 2 †2	3
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 1	General Dairying, 2 †2	3
Ed 59	Prin. Secondary Education	3
Eh 5	Technical Composition	2
		19

No.	Subject	Cr. Hours
Ag 36	Farm Machinery and Power, 2 *3	3
An 6	Physiology of Domestic Animals	3
Bc 8	Agricultural Chemistry	2
Ed 78	Principles and Methods of Teaching in Secondary Schools	3
Ht 20	Vegetable Gardening, 2 †2	3
	Elective	4
		18

SENIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ae 3	Special Methods in Teaching Agriculture, 2 †2	3	Ae 4	Practice Teaching	4
Ag 71	Drainage and Land Reclamation, 2 *3	3	Ae 6	Special Methods in Teaching Agriculture	2
An 7	Animal Hygiene	2	Ag 6	Soils and Fertilizers	2
Fm 73	Advanced Agr. Economics	3	Ag 34	Farm Shop, †4	2
	Elective	7	Fm 52	Farm Accounting, 1 *6	3
			Fm 74	Farm Management, 3 *3	4
		18			17

Curriculum for Students Specializing in Agronomy and Agricultural Engineering

Agronomy in a large sense is a study of the principles underlying modern methods of crop production, plant breeding, adaptation and care of the soil, the source and use of fertilizer materials, the management of the farm, and various phases of agricultural engineering. This curriculum provides a well-rounded training in these subjects, and presents opportunity also for elective studies in stock raising, fruit and vegetable growing, economics, botany, zoology, bacteriology, and kindred subjects.

The graduate having followed this curriculum will find numerous fields of activity open to him; the more common of which are farming for himself, farm management positions, agricultural extension work, experiment-station investigational work, agricultural teaching, and opportunities in the various fertilizer and agricultural machinery industries.

SOPHOMORE YEAR

Fall Semester

No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3
Ag 5	Soil Formation, Erosion and Conservation	3
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4
Bc 1	Organic Chemistry, 2 †2	3
En 21	Gen'l Entomology, 2 †4	4
Mt 3	Military, †3	2
Pt 3	Physical Education, 2	0
		19

Spring Semester

No.	Subject	Cr. Hours
Ag 16	Forage and Pasture Crops, 1 †2	2
Bc 2	Biochemistry, 3 †4	5
Bc 8	Agricultural Chemistry.	2
Fm 48	Agricultural Economics.	3
Mt 4	Military, †3	2
Pt 4	Physical Education, 2	0
	Elective	5
		19

JUNIOR YEAR

No.	Subject	Cr. Hours
Ag 15	Potato Production, 2 †2	3
Ag 81	Seminar	1
Bt 53	Plant Physiology, 2 †4	4
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Eh 5	Technical Composition	2
	Elective	3
		18

No.	Subject	Cr. Hours
Ag 6	Soils and Fertilizers	2
Ag 30	Agricultural Engineering, 2 *3	3
Ag 82	Seminar	1
Bt 30	Plant Ecology, 1 †2	2
Bt 56	Plant Pathology, 2 †4	4
Fm 76	Agr. Marketing	3
	Elective	3
		18

SENIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
Ag 81	Seminar	1
Bt 45	General Genetics	3
By 55	Bacteriology (Soil), 1 †4	3
	Elective	11
		18

Spring Semester

No.	Subject	Cr. Hours
Ag 82	Seminar	1
Fm 74	Farm Management, 3 *3.	4
	Elective	13
		18

Curricula for Students Specializing in Animal Husbandry, Dairy Husbandry, Dairy Technology, or Poultry Husbandry

SOPHOMORE YEAR

No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4
Bc 1	Organic Chemistry, 2 †2	3
Dh 1	General Dairying, 2 †2	3
En 21	Gen'l Entomology, 2 †4	4
Mt 3	Military, †3	2
Pt 3	Physical Education, 2	0
		19

No.	Subject	Cr. Hours
Ag 16	Forage and Pasture Crops, 1 †2	2
Bc 2	Biochemistry, 3 †4	5
Fm 48	Agricultural Economics	3
Mt 4	Military, †3	2
Pt 4	Physical Education, 2	0
	Elective	7
		19

ANIMAL HUSBANDRY

The curriculum in Animal Husbandry is so arranged that the student receives a comprehensive training in animal breeding, feeding, and management, consideration being given to the four chief groups of farm animals, cattle, horses, swine, and sheep. Because of the importance of crops to the maintenance of farm animals, this curriculum embraces subjects relating to crop production and farm management. The student on completion of this curriculum may engage in the business of animal breeding, furthering the promotion of pure bred livestock utilization; he may enter special phases of animal industry, such as Federal extension, control and investigational lines; he may become the superintendent of an animal breeding establishment; he may engage in college or university teaching of Animal Husbandry; or he may enter into any one of the great allied industries of animal industry, such as the meat packing business or the commercial feed business. The training he has received has furnished him with the necessary fundamental equipment to enable him to succeed.

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
An 5	Anatomy of Domestic Animals, 2 †2	3
Bc 9	Animal Biochemistry	2
Bt 45	General Genetics	3
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Eh 5	Technical Composition	2
	Elective	3
		18

Spring Semester

No.	Subject	Cr. Hours
An 6	Physiology of Domestic Animals	3
An 42	Adv. Live Stock Judging and Mgt., †2	1
An 44	Adv. Live Stock Feeding	2
By 52	Bacteriology, 1 †4	3
	Elective	9
		18

SENIOR YEAR

No.	Subject	Cr. Hours
Ag 35	Drainage and Land Reclamation, 2 *3	3
An 7	Animal Hygiene	2
An 55	Animal Nutrition	2
An 63	Seminar	1
	Elective	10
		18

No.	Subject	Cr. Hours
Ag 6	Soils and Fertilizers	2
Ag 36	Farm Machinery and Power, 2 *3	3
An 60	Adv. Animal Breeding, 1 †2	2
An 64	Seminar	1
Fm 52	Farm Accounting, 1 *6	3
	Elective	7
		18

DAIRY HUSBANDRY AND DAIRY TECHNOLOGY

These curricula are more specialized than that for Animal Husbandry in that dairy production and dairy manufactures are dealt with more specifically. The student pursuing one or the other of these curricula prepares himself to follow the business of dairy farming from the standpoint of efficient dairy-cattle breeding and efficient milk production, or some other phase of the dairy industry such as the market-milk business, butter manufacturing, cheese manufacturing, condensed and powdered milk industry, and ice-cream manufacturing, each of which is constantly adding to its personnel young men who have received training similar to that offered in the Dairy Husbandry and Dairy Technology curricula. In addition to the foregoing there are many

opportunities to follow special lines of endeavor, Federal, state, and commercial, all of which require specialized training in dairy production and dairy manufactures.

DAIRY HUSBANDRY

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
An 5	Anatomy of Domestic Animals, 2 †2	3
Bc 9	Animal Biochemistry	2
Bt 45	General Genetics	3
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 5	Market Milk, 3 †2	4
Eh 5	Technical Composition	2
		19

Spring Semester

No.	Subject	Cr. Hours
An 6	Physiology of Domestic Animals	3
An 42	Adv. Live Stock Judging and Mgt., †2	1
An 44	Adv. Live Stock Feeding	2
By 52	Bacteriology, 1 †4	3
Dh 2	Butter Making, 1 †4	3
	Elective	2
		17

SENIOR YEAR

No.	Subject	Cr. Hours
Ag 35	Drainage and Land Reclamation, 2 *3	3
An 7	Animal Hygiene	2
An 55	Animal Nutrition	2
An 63	Seminar	1
Dh 3	Cheese Making, 2 *6	4
	Elective	6
		18

No.	Subject	Cr. Hours
Ag 6	Soils and Fertilizers	2
Ag 36	Farm Machinery and Power, 2 *3	3
An 60	Adv. Animal Breeding, 1 †2	2
An 64	Seminar	1
By 54	Bacteriology (Dairy), 1 †4	3
Fm 52	Farm Accounting, 1 *6	3
	Elective	4
		18

DAIRY TECHNOLOGY

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 5	Market Milk, 3 †2	4
Eh 5	Technical Composition	2
	Elective	7
		18

Spring Semester

No.	Subject	Cr. Hours
By 54	Bacteriology (Dairy), 1 †4	3
Dh 2	Butter Making, 1 †4	3
Dh 4	Condensed Milk, 2 *3	3
Dh 6	Dairy Products Judging, †2	1
Fm 76	Agricultural Marketing	3
	Elective	5
		18

SENIOR YEAR

No.	Subject	Cr. Hours
Dh 3	Cheese Making, 2 *6	4
Dh 51	Dairy Technology	2
Dh 55	Dairy Refrigeration	2
Dh 63	Adv. Dairy Products Testing, †2	1
Fm 85	Agr. Marketing (Dairy & Poultry Products)	2
	Elective	7
		18

No.	Subject	Cr. Hours
Dh 58	Ice Cream Making, 2 †4	4
Dh 64	Adv. Dairy Products Testing, †2	1
Dh 66	Dairy Machinery, †2	1
Fm 62	Agricultural Business Accounting, 2 *3	3
	Elective	9
		18

POULTRY HUSBANDRY

The poultry industry of the United States has come to be recognized as one of the highest-ranking agricultural industries and while it relies for its vastness on the widespread farm flock, nevertheless it offers abundant opportunities to men possessing special training in poultry breeding, feeding, and management. Commercial poultry raising calls for a specialized training in poultry husbandry and is becoming a business of large proportions. Many openings also occur in poultry extension work, either Federal or State, and

also in the poultry supplies business. The curriculum in Poultry Husbandry furnishes the necessary training for the student contemplating entrance into the fast-growing poultry industry.

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
An 5	Anatomy of Domestic Animals, 2 †2	3
Bc 9	Animal Biochemistry	2
Bt 45	General Genetics	3
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Eh 5	Technical Composition	2
Ph 3	Exhibition and Production Judging, 1 †2	2
	Elective	1
		18

Spring Semester

No.	Subject	Cr. Hours
An 6	Physiology of Domestic Animals	3
By 52	Bacteriology, 1 †4	3
Fm 76	Agricultural Marketing.	3
Ph 2	Poultry Breeding	2
	Elective	7
		18

SENIOR YEAR

No.	Subject	Cr. Hours
Ag 35	Drainage and Land Reclamation, 2 *3	3
Fm 85	Agricultural Marketing	2
Ph 5	Poultry Feeding	2
Ph 7	Poultry Literature	2
	Elective	9
		18

No.	Subject	Cr. Hours
Ag 6	Soils and Fertilizers	2
Fm 52	Farm Accounting, 1 *6	3
Ph 4	Incubation and Brooding, 2 †2	3
Ph 6	Poultry Farm Management, 1 †2	2
Ph 8	Poultry Diseases	2
	Elective	6
		18

Curriculum for Students Specializing in Bacteriology

This curriculum is designed primarily for those students who desire to fit themselves for laboratory technicians or for research in the field of general or applied bacteriology. Stress is placed not only upon the agricultural phases of bacteriology, but also upon the sanitary and technical aspects. Students

interested in bacteriology as applied to agriculture will take the regular freshman curriculum in agriculture; others will be guided by the freshman curriculum as outlined below. Two years of German or its equivalent are required.

FRESHMAN YEAR

Fall Semester

No.		Subject	Cr. Hours
Ch	1	Inorganic Chemistry, 2 †4	4
Eh	1	Composition	3
Gm	1	1st Year German	5
Mt	1	Military, †3	1½
Zo	1	General Zoology, 2 †4	4
Pt	1	Physical Education, 2	0
		Elective	1
			18½

Spring Semester

No.		Subject	Cr. Hours
Ch	2	Inorganic Chemistry, 2 †4	4
Bt	2	General Botany, 2 †4	4
Eh	2	Composition	3
Gm	2	1st Year German	5
Mt	2	Military, †3	1½
Pt	2	Physical Education, 2	0
		Elective	1
			18½

SOPHOMORE YEAR

No.		Subject	Cr. Hours
Ag	1	Soils, 2 *3	3
Bc	1	Organic Chemistry, 2 †2	3
Ch	31	Qualitative Analysis, 2 †2, *6	5
Gm	3	Short Story	3
Mt	3	Military, †3	2
Pt	3	Physical Education, 2	0
		Elective	4
			20

No.		Subject	Cr. Hours
Bc	2	Biochemistry, 3 †4	5
Ch	40	Quantitative Analysis, 1 †2, *6	4
Gm	4	Short Story	3
Mt	4	Military, †3	2
Pt	4	Physical Education, 2	0
		Elective	6
			20

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
Bc 51	Biochemistry	3
Bt 53	Plant Physiology, 2 †4	4
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 1	General Dairying, 2 †2..3 or Elective ..3	3
	Elective	3
		19

Spring Semester

No.	Subject	Cr. Hours
Bc 64	Biochemical Laboratory Methods, †6	3
By 52	Bacteriology, 1 †4	3
By 54	Bacteriology (Dairy), 1 †4	3
	Elective	8
		17

SENIOR YEAR

No.	Subject	Cr. Hours
Bc 57	Biological Colloids	3
By 55	Bacteriology (Soil), 1 †4	3
By 61	Seminar	1
By 101	Problems in Bacteriology, †4 to †8	2 to 4
Ch 71b	Physical Chemistry, 3 †4	5
	Elective	1 to 3
		17

No.	Subject	Cr. Hours
By 62	Bacteriology Seminar	1
By 102	Problems in Bacteriology, †4 to †8	2 to 4
Ch 72b	Physical Chemistry, 3 †4	5
	Elective	7 to 9
		17

Curriculum for Students Specializing in Biological and Agricultural Chemistry

The curriculum in Biological and Agricultural Chemistry is designed to give the student an opportunity to specialize in chemistry of plant and animal life. With proper choice of electives under the direction of the major instructor students may also pursue special work in agricultural chemistry, particularly in chemistry of the soil and fertilizers.

SOPHOMORE YEAR

Fall Semester

No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3
Bc 1	Organic Chemistry, 2 †2	3
Ch 31	Qualitative Analysis, 2 †2, *6	5
Gm 1	1st Year German	5
	or	
Fr 3	Intermediate French	
Mt 3	Military, †3	2
Pt 3	Physical Education, 2	0
		18

Spring Semester

No.	Subject	Cr. Hours
Bc 2	Biochemistry, 3 †4	5
Ch 40	Quantitative Analysis, 1 †2, *6	4
Gm 2	1st Year German	5
	or	
Fr 4	Intermediate French	
Mt 4	Military, †3	2
Pt 4	Physical Education, 2	0
	Elective	3
		19

JUNIOR YEAR

No.	Subject	Cr. Hours
Bc 9	Animal Biochemistry	2
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Ch 71b	Physical Chemistry, 3 †4	5
Gm 3	2nd Year German	3
	or	
Fr 5	Advanced French	
	Elective	4
		19

No.	Subject	Cr. Hours
Bc 64	Biochemical Laboratory Methods, †6	3
By 52	Bacteriology, 1 †4	3
Ch 72b	Physical Chemistry, 3 †4	5
Gm 16	Scientific German....2	3
	Elective 1	
	or	
Fr 6	Advanced French.....3	
	Elective	4
		18

SENIOR YEAR

No.	Subject	Cr. Hours
Bc 57	Biological Colloids	3
Bc 101	Research, †8	4
	Elective 11	
		18

No.	Subject	Cr. Hours
Bc 102	Research, †8	4
	Elective 14	
		18

Curricula for Students Specializing in Botany and Entomology

These curricula are designed for those preparing themselves to engage in teaching or to enter the field of research in either the pure or applied science of botany or entomology. Students interested in botany or entomology as applied to agriculture will take the regular freshman curriculum in agriculture. Others will be guided by the freshman curriculum outlined below. Two years of German, or its equivalent, are required.

Botany or Entomology

FRESHMAN YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ch 5	Inorganic Chemistry, 2 †4.	4		Bt 2	General Botany, 2 †4....	4	
Eh 1	Composition	3		Ch 6	Inorganic Chemistry, 2 †4	4	
Md 1	Fund. of Drafting, †4.....	2		Eh 2	Composition	3	
Ms 3	Algebra	2		Md 2	Elementary Machine Drafting, †4.....	2	
Ms 9	Trigonometry	2		Mt 2	Military, †3.....	1½	
Mt 1	Military, †3.....	1½		Zo 4	Animal Biology, 2 †4....	4	
Zo 3	Animal Biology, 2 †4.....	4		Pt 2	Physical Education, 2...	0	
Pt 1	Physical Education, 2....	0					
		18½				18½	

SOPHOMORE YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Bt 33	Forest Botany, 2 †4.....	4		Bt 34	Forest Botany, 2 †4.....	4	
En 21	Gen'l Entomology, 2 †4...	4		En 24	Taxonomy of Insects I, 2 †4	4	
Gm 1	First Year German.....	5		Gm 2	First Year German.....	5	
Mt 3	Military, †3.....	2		Mt 4	Military, †3.....	2	
Pt 3	Physical Education, 2.....	0		Pt 4	Physical Education, 2...	0	
	Elective	3			Elective	3	
		18				18	

Botany

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bc 1	Organic Chemistry, 1 †2	3	Bc 2	Biochemistry, 3 †4	5
Bt 35	Plant Anatomy, 2 †4	4	Bt 32	Plant Physiology, 2 †4	4
By 3	Bacteriology	2	Eh 10	Modern Literature	2
By 5	Bacteriology, †2	1	Gm 16	Scientific German	2
Eh 5	Technical Composition	2	Pb 2	Public Speaking	2
Gm 3	Short Story	3		Elective	4
	Elective	4			
		19			19

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bt 45	General Genetics	3	Bt 30	Plant Ecology, 1 †2	2
Bt 57	Taxonomy, 2 †4	4	Bt 46	Genetics Laboratory	2
Es 1a	Prin. of Economics	3	Bt 56	Plant Pathology, 2 †4	4
	Elective	8	Fm 48	Agricultural Economics	3
				Elective	7
		18			18

Entomology

JUNIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bc 1	Organic Chemistry, 1 †2	3	Bc 2	Biochemistry, 2 †4	5
By 3	Bacteriology	2	Eh 10	Modern Literature	2
By 5	Bacteriology, †2	1	En 52	Taxonomy of Insects II, 1 †4	3
Eh 5	Technical Composition	2	Gm 16	Scientific German	2
En 51	Morphology of Insects, 2 †4	4	Pb 2	Public Speaking	2
Gm 3	Short Story	3		Elective	5
	Elective	4			
		19			19

SENIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bt 57	Taxonomy, 2 †4	4	Bt 56	Plant Pathology, 2 †4	4
En 47	Problem in Entomology	3	En 46	Advanced Forest Ento	2
En 49	Economic Entomology. 2 †4	4	En 48	Problem in Entomology	3
Es 1a	Prin. of Economics	3	Fm 48	Agricultural Economics	3
	Elective	4		Elective	6
		18			18

Curriculum for Students Specializing in Horticulture

The curriculum in Horticulture is intended, not only to provide a good preparation for engaging directly in fruit growing, vegetable gardening, ornamental horticulture, or other horticultural industry, but also to make possible to the graduate a reasonably easy entrance into several professional occupations which may require the additional preparation of a period of intensive graduate study. Prominent among the positions occupied by graduates in horticulture are those of investigators in experiment stations, teachers in colleges and secondary schools, extension agents, and state and Federal employees in the investigational, inspection, and regulatory services.

The department will attempt so to administer the prescribed part of the curriculum and to advise students in the selection of elective courses that their individual capabilities may be developed and their interests encouraged to the fullest degree consistent with the belief that a liberal education should accompany and even take precedence over specialization in horticulture.

SOPHOMORE YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 1	Soils, 2 *3	3		Bc 2	Biochemistry, 3 †4	5	
Bc 1	Organic Chemistry, 2 †2	3		Bc 8	Agr. Chemistry	2	
En 21	Gen'l Entomology, 2 †4	4		Fm 48	Agricultural Economics	3	
Fm 75	Agr. Statistics, 1 *3	2		Mt 4	Military, †3	2	
Ms 1	Trigonometry	2	4*	Pt 4	Physical Education, 2	0	
Ms 3	College Algebra	2			Elective	7	
Mt 3	Military, †3	2					
Pt 3	Physical Education, 2	0					
	Elective	3					
		19				19	

*Elect two of the three courses.

JUNIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ag 35	Land Drainage and Reclamation, 2 *3	3	Bt 56	Plant Pathology, 2 †4	4
Bt 53	Plant Physiology, 2 †4	4	By 2	Bacteriology, †6	3
By 3	Bacteriology	2		Horticulture	6
Eh 5	Technical Composition	2		Elective	6
	Horticulture	3			
	Elective	5			
		19			19

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bt 45	General Genetics	3	*Fm 74	Farm Management	4
	Horticulture	7		Horticulture	6
	Elective	7		Elective	7
		17			17

*In special cases some other course may be approved by the major instructor.

CURRICULUM IN FORESTRY

A four-year undergraduate curriculum in Forestry is offered and in addition four courses are open for graduate credit to students majoring in other curricula. The curriculum for this course follows. It is arranged to meet the requirements of the profession of forestry for forestry instruction in the United States. Completion of the curriculum leads to the degree of Bachelor of Science in Forestry. It will enable the graduate to qualify for technical and administrative positions in the profession, and will admit to advanced standing in postgraduate schools of forestry if further and more advanced work is desired. It will also render a student eligible for the Civil Service Examinations for the position of Junior Forester in the United States Forest Service, and other Federal bureaus employing foresters. Owing to the wide field covered by the curriculum it offers an excellent basis for a broad and liberal education.

The first two years are devoted very largely to fundamental and pretechnical subjects which are basic for a proper understanding of the more highly specialized work in technical subjects during the last two years. Instruction in the department consists of lectures, recitations, laboratory and field work, the latter consuming a considerable portion of the scheduled time.

A camp course of six weeks' practical experience is required of all men in the summer between the sophomore and junior years. This work is offered at a camp operated by the department, where students are able to observe large forest areas under permanent management and large private manufacturing plants specializing in the utilization of various kinds of forest products. A second camp course of eight weeks' practical experience is required of all seniors at camps owned and operated by the Forestry Department and located on Indian Township, near Princeton, Maine.

The forestry offices, classrooms, and drawing rooms are located in Winslow Hall with other departments of the College of Agriculture.

FRESHMAN YEAR

Fall Semester

No.	Subject	Cr. Hours
Ch 1	General Chemistry, 2 †4	4
Eh 1	Composition	3
Fy 1	Elements of Forestry	2
Md 1	Fund. of Drafting, †4	2
Ms 9	Trigonometry	2
Mt 1	Military, †3	1½
Zo 1	General Zoology, 2 †4	4
Fy 47a	Forestry Seminar, 1	0
Pt 1	Physical Education, 2	0
		18½

Spring Semester

No.	Subject	Cr. Hours
Bt 2	General Botany, 2 †4	4
Ch 2	General Chemistry, 2 †4	4
Eh 2	Composition	3
Fy 2	Elements of Forestry	2
Md 2a	Drafting, †4	2
Ms 10	Trigonometry and Its Application	2
Mt 2	Military, †3	1½
Fy 48a	Forestry Seminar, 1	0
Pt 2	Physical Education, 2	0
		18½

SOPHOMORE YEAR

No.	Subject	Cr. Hours
Ag 5	Soil Formation and Conservation	3
Bt 33	Forest Botany, 2 †4	4
Ce 1	Plane Surveying	3
Ce 3	Field Work, Plotting, *9	3
Es 1b	Principles of Economics	2
Fy 3	Logging	2
Mt 3	Military, †3	2
Fy 47b	Forestry Seminar, 1	0
Pt 3	Physical Education, 2	0
		19

No.	Subject	Cr. Hours
Bt 34	Forest Botany, 2 †4	4
Eh 10	Modern Literature	2
En 22	Forest Entomology, 2 †4	4
Es 2b	Principles of Economics	2
Fy 4	Administration and Protection	4
Mt 4	Military, †3	2
Fy 48b	Forestry Seminar, 1	0
Pt 4	Physical Education, 2	0
		18

SUMMER CAMP

No.	Subject	Cr. Hours
Ce 7s	R. R. and Highways	2
Fy 35s	Silviculture	2
Fy 37s	Forest Mensuration	1
Fy 39s	Forest Products	1
		6

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ag 3	Soils (Forest), 2 *3	3	Bt 32	Plant Physiology, 2 †4	4
Bt 35	Plant Anatomy, 2 †4	4	Fy 6	Forest Mensuration, 1 *3	3
Eh 5	Technical Composition	2	Fy 8	Silvics	2
Fm 65	Forest Accounting, 1 *3	3	Fy 10	Nursery Practice, last 9 weeks, *6	1
Fy 5	Forest Mensuration, 1 *3	3	Fy 12	Seeding and Planting	2
Fy 47c	Forestry Seminar, 1	0	Ce 6	Land Surveying, 1 †4, last 6 weeks	3
Ht 5	Landscape Gardening, *3	3	Fy 48c	Forestry Seminar, 1	0
				Elective	4
		18			19

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
	First 9 weeks		Bt 42	Forest Pathology, 2 †4	4
Fy 7	Lumber Manufacture	2	Fy 14	Forest Products	2
Fy 9	Wood Preservation	1	Fy 52	Policy and Economics	4
Fy 51	Regional Silviculture	2	Fy 16	Wood Technology, †2	2
Fy 53	Forest Finance, 3 †2	2	Fy 48d	Forestry Seminar, 1	0
Fy 55	Forest Management	2		Elective	6
Fy 47d	Forestry Seminar, 1	0			
	Last 9 weeks				
Fy 41	Practice of Forestry, *48	9			
		18			18

CURRICULA IN HOME ECONOMICS

The Department of Home Economics offers curricula based on a consideration of the problems of the contemporary home and responsibilities of the modern home maker. The basic curriculum requires foundation work in the physical and social sciences, and Home Economics courses applying these sciences to problems of the home. In addition the student is required to complete a sequence of fifteen or more hours based on interest in a specialized

subject-matter field or in a particular vocation. These sequences are listed below. As it is impossible in the limited time of classroom and laboratory to develop to a point of skill all the techniques necessary to success in a vocation, the student is expected to make provision during her vacations, or during the school year, for developing the kinds and degrees of skill essential to beginning the vocation she has selected.

Each curriculum includes in its total of 128 hours, 18 to 40 hours of electives in any department of the University for which the student is adequately prepared. These electives may be used to strengthen the individual's general education or her vocational preparation.

Basic Curriculum in Home Economics

Required of all students majoring in the department.

FRESHMAN YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ch 5	Inorganic Chemistry	4	Bc 4	Organic Chemistry	4
Eh 1	Composition	3	Eh 2	Composition	3
Gc 1	Intro. to Soc. Sci.	3	Gc 2	Intro. to Soc. Sci.	3
He 1	Intro. to Home Economics	3	He 2	Clothing Selection Problems	3
He 3	Design	3	He 4	House Furn. and Dec.	3
Pe 1	Physical Education, 2	0	Pe 2	Physical Education, 2	0
		16			16

SOPHOMORE YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 5	Foods, 2 †4	4	He 6	Foods, 2 †4	4
Py 1	General Psychology	3	Py 2	General Psychology	3
	Sequence and Electives	9	Zo 12	Human Physiology	5
Pe 3	Physical Education, 2	0		Sequence and Electives	4
		16	Pe 4	Physical Education, 2	0
					16

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
By 3	Bacteriology	2	He 10	Sanitation	2
By 5	Bacteriology	1	He 14	The Pre-School Child	3
Es 41	General Sociology	3		Sequence and Electives	11
	Sequence and Electives	10			
		16			16

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 11	Household Management	4	*He 22	Household Admin.	3
Ee 5	Household Equipment	3	*He 70	Survey Examination	1
	Sequence and Electives	9		Sequence and Electives	12
		16			16

*May be taken in the fall as He 21 and He 69.

Sequences

HOME ECONOMICS EDUCATION. 47 hours.

This sequence fulfills the requirements for the Maine Professional Secondary Certificate necessary for teaching in the high schools of the state, and qualifies the student for teaching home economics and certain science courses in Maine high schools. She also is eligible, after a year of teaching experience, for the vocational certificate which qualifies for teaching in the schools which offer vocational programs with Federal support.

Requirements are as follows:

Bc 5	Biochemistry	4
Ed 77	Methods	3
Ed —	Education	3
He 7, 8	Clothing Construction	4

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particular vocation. These sequences are listed
the limited time of classroom and laboratory to
the techniques necessary to success in a vocation.
ke provision during her vacations, or during the
e kinds and degrees of skill essential to beginning

n in its total of 128 hours, 18 to 40 hours of
of the University for which the student is ade-
tives may be used to strengthen the individual's
tional preparation.

iculum in Home Economics

students majoring in the department.

FRESHMAN YEAR

Cr. Hours	No.	Subject	Cr. Hours
..... 4	Bc	4 Organic Chemistry.....	4
..... 3	Eh	2 Composition	3
..... 3	Gc	2 Intro. to Soc. Sci.....	3
nomics 3	He	2 Clothing Selection Problems	3
..... 3			
2..... 0	He	4 House Furn. and Dec....	3
	Pe	2 Physical Education, 2....	0
16			16

Spring Semester

SOPHOMORE YEAR

Cr. Hours	No.	Subject	Cr. Hours
4	He	6 Foods, 2 f4.....	4
..... 3	Py	2 General Psychology.....	3
..... 9	Zo	12 Human Physiology.....	5
2..... 0		Sequence and Electives.....	4
	Pe	4 Physical Education, 2....	0
16			16

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
By 3	Bacteriology	2	He 10	Sanitation	2
By 5	Bacteriology	1	He 14	The Pre-School Child...	3
Es 41	General Sociology.....	3		Sequence and Electives 11	
	Sequence and Electives.....10				
		16			16

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 11	Household Management ..	4	*He 22	Household Admin.....	3
Ee 5	Household Equipment	3	*He 70	Survey Examination ...	1
	Sequence and Electives..... 9			Sequence and Electives.....12	
		16			16

*May be taken in the fall as He 21 and He 69.

Sequences

HOME ECONOMICS EDUCATION. 47 hours.

This sequence fulfills the requirements for the Maine Professional Secondary Certificate necessary for teaching in the high schools of the state, and qualifies the student for teaching home economics and certain science courses in Maine high schools. She also is eligible, after a year of teaching experience, for the vocational certificate which qualifies for teaching in the schools which offer vocational programs with Federal support.

Requirements are as follows:

Bc 5	Biochemistry	4
Ed 77	Methods	3
Ed —	Education	3
He 7, 8	Clothing Construction	4

subject-matter field or in a particular vocation. These sequences are listed below. As it is impossible in the limited time of classroom and laboratory to develop to a point of skill all the techniques necessary to success in a vocation the student is expected to make provision during her vacations, or during the school year, for developing the kinds and degrees of skill essential to beginning the vocation she has selected.

Each curriculum includes in its total of 128 hours, 18 to 40 hours of electives in any department of the University for which the student is adequately prepared. These electives may be used to strengthen the individual general education or her vocational preparation.

Basic Curriculum in Home Economics

Required of all students majoring in the department.

FRESHMAN YEAR

Fall Semester				*Spring Semester*			
No.		Subject	Cr. Hours	No.		Subject	Cr. Hou
Ch	5	Inorganic Chemistry	4	Bc	4	Organic Chemistry.....	4
Eh	1	Composition	3	Eh	2	Composition	3
Gc	1	Intro. to Soc. Sci.....	3	Gc	2	Intro. to Soc. Sci.....	3
He	1	Intro. to Home Economics	3	He	2	Clothing Selection Problems	3
He	3	Design	3	He	4	House Furn. and Dec....	3
Pe	1	Physical Education, 2.....	0	Pe	2	Physical Education, 2....	0
			16				16

SOPHOMORE YEAR

No.		Subject	Cr. Hours	No.		Subject	Cr. Ho
He	5	Foods, 2 †4.....	4	He	6	Foods, 2 †4.....	4
Py	1	General Psychology	3	Py	2	General Psychology	3

subject-matter field or in a particular vocation. These sequences are listed below. As it is impossible in the limited time of classroom and laboratory to develop to a point of skill all the techniques necessary to success in a vocation, the student is expected to make provision during her vacations, or during the school year, for developing the kinds and degrees of skill essential to beginning the vocation she has selected.

Each curriculum includes in its total of 128 hours, 18 to 40 hours of electives in any department of the University for which the student is adequately prepared. These electives may be used to strengthen the individual's general education or her vocational preparation.

Basic Curriculum in Home Economics

Required of all students majoring in the department.

FRESHMAN YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr.	Hours	No.	Subject	Cr.	Hours
Ch 5	Inorganic Chemistry		4	Bc 4	Organic Chemistry		4
Eh 1	Composition		3	Eh 2	Composition		3
Gc 1	Intro. to Soc. Sci.		3	Gc 2	Intro. to Soc. Sci.		3
He 1	Intro. to Home Economics		3	He 2	Clothing Selection Problems		3
He 3	Design		3	He 4	House Furn. and Dec.		3
Pe 1	Physical Education, 2		0	Pe 2	Physical Education, 2		0
			16				16

SOPHOMORE YEAR

No.	Subject	Cr.	Hours	No.	Subject	Cr.	Hours
He 5	Foods, 2 †4		4	He 6	Foods, 2 †4		4
Py 1	General Psychology		3	Py 2	General Psychology		3
Sequence and Electives			9	Zo 12	Human Physiology		5
Pe 3	Physical Education, 2		0	Sequence and Electives			4
				Pe 4	Physical Education, 2		0
			16				16

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
By 3	Bacteriology	2	He 10	Sanitation	2
By 5	Bacteriology	1	He 14	The Pre-School Child	3
Es 41	General Sociology	3		Sequence and Electives	11
	Sequence and Electives	10			
		16			16

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 11	Household Management	4	*He 22	Household Admin.	3
Ee 5	Household Equipment	3	*He 70	Survey Examination	1
	Sequence and Electives	9		Sequence and Electives	12
		16			16

*May be taken in the fall as He 21 and He 69.

Sequences

HOME ECONOMICS EDUCATION. 47 hours.

This sequence fulfills the requirements for the Maine Professional Secondary Certificate necessary for teaching in the high schools of the state, and qualifies the student for teaching home economics and certain science courses in Maine high schools. She also is eligible, after a year of teaching experience, for the vocational certificate which qualifies for teaching in the schools which offer vocational programs with Federal support.

Requirements are as follows:

Bc 5	Biochemistry	4
Ed 77	Methods	3
Ed —	Education	3
He 7, 8	Clothing Construction	4

He 51, 52	Advanced Clothing	6
He 56	Home Economics Education	3
He 59, (60)	Special Problems	2
He 63	Nutrition	2
He 66	Dietetics	2
He 71, (72)	Supervised Teaching	3
He 81, (82)	Institutional Management	3
Pb 1, (2)	Public Speaking	2

There is a demand for teachers prepared and certified to handle other high-school subjects in combination with Home Economics. Students who take this sequence are advised that it may be wise to choose their electives, in order to prepare themselves for certification in an additional subject. Pj 2, 4, Summer Project, is also recommended.

Extension Teaching. 28 hours.

This sequence prepares the student for work as a home demonstration agent or a 4-H Club agent.

Bc 5	Biochemistry	4
Ed 77	Methods	3
He 7, 8	Clothing Construction	4
He 51, 52	Advanced Clothing	6
He 59, (60)	Special Problems	2
He 63	Nutrition	2
He 65	Dietetics	2
He 81	Institutional Management	3
Pb 1, (2)	Public Speaking	2

Electives are recommended in journalism, horticulture, and additional home economics, education and social science. Since the sequence requirement is very similar to the Home Economics education sequence, a student may complete both.

Food and Nutrition. 19 hours.

This sequence is offered for students preparing for positions as hospital dietitians, Red Cross nutritionists, research workers in foods and nutrition, or home economists in commercial foods work. It meets the requirement of the American Dietetics Association for admission to student dietitianship in hospitals offering a Class A training course.

Bc 5	Biochemistry	4
He 63	Nutrition	2
He 65	Dietetics	2
*He 81, 83	Institutional Management	6
*He 67	Diet in Abnormal Conditions	2
*Ed 77, (78)	Methods	3

*For students preparing for commercial foods positions or for research, appropriate substitutes may be made for *starred courses.

Textile and Clothing Sequence. 16 hours.

For students interested in the clothing, textile, or decoration field, as stylists, designers, buyers, or advertising copy writers.

He 7, 8	Clothing Construction	4
He 17	Applied Design	2
He 51, 52	Advanced Clothing	6
He 61	History of Costume	1
At	Art Courses	3

Students who select this sequence are recommended to include as electives such subjects as projects and special problems in clothing, and courses in journalism, accounting, drafting, public speaking, psychology, and medieval history.

Child Development. 19 hours.

For students preparing for work in the rapidly expanding fields of nursery school and parental education.

Bc 5	Biochemistry	4
Ed 43, (44)	Character Education	3
He 59,(60)	Special Problems in Nursery School	2
He 63	Nutrition	2
He 65	Dietetics	2
Py 67, 71, 72, 81	(Six hours selected).	6

Students are advised to include courses in the appreciation of art and music, and additional zoology, English, and education and sociology. Arrangements are made for a selected student each year to do one semester's work in

this field at the Merrill-Palmer School, Detroit, Michigan. The work will be accepted as applying on basic and sequence requirements.

Other Sequences

For students whose needs are not met by these sequences, others may be arranged. They will consist of selected advanced Home Economics courses, and related work in other departments.

Special Students in Agriculture

Persons not candidates for a degree who desire to take special studies may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to pursue them. This privilege is intended only for students of unusual maturity (at least twenty-one years of age) or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course. If they subsequently desire to become candidates for a degree, they will be required to meet all the entrance requirements.

The annual expenses for courses of one year or more are the same as those for students in the four-year curricula.

TWO-YEAR COURSE IN AGRICULTURE

This is a course of training for young men who wish to become practical farmers, farm superintendents, dairymen, poultrymen, fruit-growers, or gardeners, but who cannot devote time to full high school or college training. Open to women.

The same equipment is used as in the four-year curricula, but the work is more elementary in nature. Most of the classes are separate and distinct from the four-year classes.

Students who have satisfactorily completed two years of high-school work are eligible for registration.

There are no entrance examinations required of those who desire to enter the Two-Year Course.

On completion of the course a certificate is awarded those who have satisfactorily met the requiremnts.

Curriculum for Two-Year Course in Agriculture

FIRST YEAR

Fall Semester

Subject	Hours
Animal Husbandry, 2 †2	3
Business Arithmetic	2
English	2
Farm Botany, 1 †2	2
Farm Crops, 2 †2	3
Forge Work, *3	1
Fruit Handling, 2 †2	3
Poultry Husbandry, 2 †2	3
	19

Spring Semester

Subject	Hours
Carpentry, †4	2
Dairy Husbandry, 2 †4	4
English	2
Farm Economics	2
Fruit Growing, 2 †2	3
Poultry Husbandry, 2 †2	3
Soils and Fertilizers, 3 *3	4
	20

SECOND YEAR

Subject	Hours
Animal Husbandry, 2 †2	3
Animal Husbandry (Common Diseases of Farm Animals)	3
English	2
Farm Engineering and Mechanics, 2 *3	3
Farm Insects, 1 †2	2
Farm Management, 2 *3	3
Poultry Husbandry	2
Vegetable Growing, 2 †2	3
	21

Subject	Hours
Animal Husbandry, 3 †2	4
English	2
Farm Crops, 2 †2	3
Farm Machinery, 2 *3	3
Forestry	2
Marketing Farm Products	3
Small Fruit Culture and Plant Propagation, 2 †2	3
	20

A description of subjects offered will be found on page 138.

SHORT COURSES IN AGRICULTURE

Short Courses in Agriculture are offered to the large number of young men and women and adults who are engaged or about to engage in agricultural or homemaking pursuits and who desire to devote a short time during the

winter months to the securing of definite instruction along the line of their special interests.

Courses of three weeks' duration are available in Dairy Production, Poultry Raising, Potato Production, and other subjects. Courses of shorter duration in other specialized agricultural subjects are also available.

Applicants for admission must be at least sixteen years of age and have had a good common school education. Information concerning short courses may be secured by addressing the Director of Short Courses, College of Agriculture.

FARM AND HOME WEEK

There are a large number of people who cannot come to the college for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these, "Farm and Home Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one or more sessions are given up to problems of rural betterment. Considerable emphasis is placed on agricultural marketing problems peculiar to Maine. The homemaking program includes the various phases of home management and is of interest to both rural and urban homemakers. Dates and programs may be secured each year by addressing the College of Agriculture.

THE EXTENSION SERVICE

The Extension Service is organized as a department of the College of Agriculture. It operates under the provisions of the Smith-Lever and Capper-Ketcham Acts, receiving its funds from State and Federal sources.

Its personnel is made up of two groups of agents. One group, the County Extension Agents, consists of agricultural agents, home demonstration agents, and club agents, having their headquarters within the counties in which they serve. The other group, the State Agent force, consists of a limited number of specialists and leaders having their headquarters at the University but working with and assisting the County Extension Agents.

The Extension Service through these men and women gives direct assistance to people living on the farms and in the rural and urban homes of this state. The Farm Bureau, an organization having a membership of more than 14,000 men and women, coöperates with the Extension Service in the determination and development of its county and community programs of work.

Extension Lecture Courses

Lectures in these courses are given under the auspices of granges, clubs, societies, and other gatherings by the members of the agricultural faculty.

A complete list of the lectures will be forwarded on request.

Correspondence Service

It is recognized that a letter is a poor substitute for a personal conference in dealing with perplexing problems with which people are constantly confronted in the vocations of agriculture, forestry, and home economics, but the teachers in all departments of the college are always ready to furnish information dealing with these problems and thus render the greatest possible service to the people of the State. The College of Agriculture, therefore, welcomes inquiries on practical agricultural, forestry, and home economics topics. Extension bulletins dealing with different phases of these subjects are published at frequent intervals throughout the year and will be sent without cost to persons applying for them. A list of bulletins and circulars available for distribution will be forwarded on request.

Departments of Instruction

NOTE.—A star (*) before the time designated for a course indicates that three or sometimes more hours of actual work are required to obtain credit for one hour; a dagger (†) indicates that two hours are required to obtain this credit.

Courses designated by an odd number are given in the fall semester; those designated by an even number, in the spring semester.

Courses numbered 1-50 are for undergraduates only; courses numbered 51-100 are for graduates and undergraduates; courses numbered above 100 are primarily for graduates.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

PROFESSOR MERCHANT; PROFESSOR JONES; ASSOCIATE PROFESSOR DOW

48. AGRICULTURAL ECONOMICS.—A general introductory course in the principles of economics as applied to agriculture. The following subjects are considered: Development of commercial agriculture, price making forces, production, land tenure, land policies, farm capital, credit, farm labor, marketing, foreign trade, tariff, taxation, and farm income. This course is intended to give a broad fundamental training in the subject, and for those majoring in the department a foundation for further study. *Three hours a week. Credit, three hours.* MR. JONES

52. FARM ACCOUNTING.—All forms of farm records; farm inventories, cash accounts, single-enterprise cost accounts, complete farm cost accounting system, and miscellaneous records. Special emphasis is given to the interpretation of results and their practical application in the management of farms. Classroom, *one hour a week;* laboratory, **six hours a week. Credit, three hours.* MR. JONES

62. AGRICULTURAL BUSINESS ACCOUNTING.—This course includes accounting methods for different types of farm business organizations such as coöperative marketing associations, creameries, cheese factories, Grange stores, and other similar organizations. Principles of accounting, problems of valuation, analysis of cost and income factors, and profit and loss statements of

various agricultural businesses are included. The accounts of several business organizations will be studied with special reference to the analysis of the business. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Jones

65. Forest Accounting.—This course includes accounting methods for the different types of logging and lumbering operations. It involves problems in cost and income factors, and profit and loss statements of various kinds of forest operations. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Jones

73. Advanced Agricultural Economics.—An advanced course in the more important economic problems in agriculture, such as, farm labor; farm machinery; land tenure; rent and systems of renting; risk; price fluctuations; speculation; insurance; protective tariff; foreign competition; county agent and farm bureau; and State and Federal aid. Prerequisite, Course 48. *Three hours a week. Credit, three hours.* Mr. Jones

74. Farm Management.—Types of farming; farming as a business; size of business; balance; production rates; labor efficiency; crop rotations; machinery; farm layout; building arrangement; farm credit and its uses; choosing and buying a farm; ways of starting to farm; and study of farm organization and management of specific farms in the vicinity. Classroom, *three hours a week;* laboratory, **three hours a week. Credit, four hours.* Mr. Jones

75. Agricultural Statistics.—A course in principles involved in collection, analysis, and interpretation of agricultural statistics. The laboratory work consists of practical problems in frequency distribution; averages; measurements of dispersion; measurements of trends; seasonal variations, and cyclical fluctuations; simple index numbers; simple linear and non-linear correlations; and standard and probable errors. Classroom, *one hour a week;* laboratory, **three hours a week. Credit, two hours.* Mr. Merchant

76. Agricultural Marketing.—Marketing of the more important agricultural products. The first part of the course deals with the economic principles of present marketing structure and its operation. The latter part involves the study of distribution and marketing of potatoes, apples, wheat, wool, hay, peaches, tobacco, truck crops, dairy products, poultry and poultry products, beef cattle, sheep, and hogs. The marketing of the more important agricultural products produced in Maine is emphasized. One week is devoted to a study of the principles of coöperative marketing. *Three hours a week. Credit, three hours.* Mr. Merchant

77. Agricultural Finance.—The farmers' credit needs including short term, intermediate, and long term credit are considered. Sources of

credit available to farmers and conditions under which loans are made. Special attention is given to the study of the Federal Reserve System, Farm Credit Administration (Land Banks, Intermediate Credit Banks, Banks for Coöperatives, Production Credit Corporations, and Emergency Credit), store credit, and the place of mortgage and insurance companies in furnishing farm credit. The material offered in the course is considered from the standpoint of Maine farmers and from a national basis. *Two hours a week. Credit, two hours.*

MR. MERCHANT

78. MARKETING POTATOES.—A specialized course in the marketing of potatoes giving special attention to practices in New England. Production, trends in production, regional competition, grades, containers, storage, transportation, finance, sales methods including coöperative marketing, trend in consumption, price relationships, and the cost of marketing of both table stock and seed potatoes are topics considered in this course. *Three hours a week. Credit, three hours.* MR. LIBBY

79. COOPERATIVE MARKETING.—Principles involved in coöperative organizations including the more important factors affecting the efficiency and success of coöperative organization, such as: volume of business, capital and finance, management and price policies. The history, organization, and management of coöperative associations marketing the more important agricultural products. *Two hours a week. Credit, two hours.* MR. DOW

81, 82. CURRENT ECONOMIC PROBLEMS.—Individual study of some of the more important current economic problems in agriculture. In the fall semester problems in marketing, agricultural credit, and agricultural statistics are considered. Problems in the field of agricultural economics and farm management are given attention in the spring semester. Open to senior students who have had considerable work in the department. *One hour a week. Credit, one hour.* MR. MERCHANT, MR. DOW

83, 84. THESIS.—All senior major students of the department are required to prepare a comprehensive thesis on a problem in agricultural economics, farm management, marketing, finance, and statistics or prices. **Six hours a week. Credit, three hours.* MR. MERCHANT

85. AGRICULTURAL MARKETING (DAIRY AND POULTRY PRODUCTS).—A specialized course in the economic factors involved in marketing dairy and poultry products in New England. Production; regional competition; grades; containers; storage; transportation; finance; sales methods; foreign trade; tariff; surplus; demand, price, and methods of price determination and the costs of marketing are considered. *Two hours a week. Credit, two hours.*

MR. DOW

86. Agricultural Marketing (Apples and Small Fruits).—A spcialized course in the economic factors involved in marketing apples and small fruits with special emphasis to New England. The topics considered are production, varieties, regional competition, grades, containers, storage, transportation, finance, sales methods and the costs of marketing. *Two hours a week. Credit, two hours.* Mr. Dow

87. Agricultural Prices.—Prices of agricultural commodities produced in Maine and competing areas. The underlying factors causing price changes, including long-time trends, seasonal variations, and cyclical fluctuations. Prerequisite, Course 75. *Two hours a week. Credit, two hours.* Mr. Jones

91. Land Utilization.—Utilization of the land area for various purposes such as for agriculture, forestry, recreation, and industry, giving primary attention to agriculture. Physical factors and economic conditions determining utilization of farm land, production areas for important farm commodities, shifts taking place in these areas, trends in population and consumption. Land problems of the United States and some foreign countries. Land utilization programs. *Two hours a week. Credit, two hours.* Mr. Jones

92. Rural Tax Problems.—National, state, and local problems connected with rural taxation. The effect of increased tax burdens on farmers. Growth of public expenditures; sources of public revenues; the general property tax and its administration. How income, inheritance, and gasoline taxes affect farmers. Tax reform proposals. Problems involved in an equitable distribution of the tax burden. *Two hours a week. Credit, two hours.* Mr. Jones

101. Production Costs.—Cost of producing important farm commodities in Maine and in competing areas; relation of cost of production to price; and efficiency of production under varying economic conditions. Prerequisite, Course 52. *Time and credit hours arranged.* Mr. Jones

102. Advanced Agricultural Statistics.—A continuation of Course 75 giving special attention to the methods and practical application of correlation analysis involving two or more variables; multiple correlation; and linear and curvilinear relationships. Prerequisite, Course 75. *Time and credit hours arranged.* Given in alternate years; given in 1936-37. Mr. Merchant

103. Advanced Farm Management.—A continuation of Course 74 with special emphasis on the organization and management of specified types of farms under certain economic conditions, farm prices, and labor efficiency. The student is given an opportunity for study along some line in which he has a special interest. Prerequisite, Course 74. *Time and credit hours arranged.* Mr. Jones

104. Advanced Agricultural Marketing.—Advanced work in the marketing of a specific agricultural commodity. Special emphasis is given to marketing potatoes, apples, poultry, eggs, milk, butter, and cheese. Problem method is followed. Prerequisite, permission to register. *Time and credit hours arranged.* Given in alternate years; given in 1935-36. Mr. Merchant

AGRICULTURAL EDUCATION

Professor Hill

1, 2. Practice Teaching.—Seniors who are taking a minor in agricultural education are expected to do some directed teaching in an approved school. This work may be done in either the fall or spring semester and either one or two hours credit may be earned. *Time and credit hours arranged.*

3. Special Methods in Teaching Agriculture.—The following topics are given consideration: Aims of vocational agricultural education; the Smith-Hughes and George-Reed Acts; the agricultural curriculum; program making; building the course of study; making teaching plans for the year; selecting teaching methods and devices; making lesson plans; teaching the lesson; room and equipment; texts and references; budgeting department needs; publicity, exhibits, community work; part-time and evening work; Future Farmers of America. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.*

4. Practice Teaching.—During the first six weeks of the spring semester the seniors are expected to do directed teaching in an approved school. They will hand in daily lesson plans and will report on how these work out. While engaged in this work, they are given an allowance to pay for their traveling expenses and board. *Credit, four hours.*

6. Special Methods in Teaching Agriculture.—Selection of projects; project plans; project records; project problems; project supervision; farm shop work; records and reports; work of the vocational agriculture teacher; current events in agricultural education; history of agricultural education. Classroom, *two hours a week. Credit, two hours.*

AGRONOMY AND AGRICULTURAL ENGINEERING

PROFESSOR CHUCKA; ASSISTANT PROFESSOR SWIFT; ASSISTANT PROFESSOR RALEIGH; ASSISTANT PROFESSOR LIBBY

Soils and Fertilizers

1. SOILS.—Origin, types, physical and chemical properties of soils and their relation to crop production. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. LIBBY

3. SOILS (FOREST).—Origin, types, physical and chemical properties of soils as related to forests. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. SWIFT

5. SOIL FORMATION, EROSION AND CONSERVATION.—Soil-forming rocks and minerals, agencies involved in soil formation; causes, types and extent of soil erosion; principles and methods of soil conservation. Classroom, *three hours a week. Credit, three hours.* MR. CHUCKA

6. SOILS AND FERTILIZERS.—Physical and chemical composition of soils and fertilizers as related to time and method of application, residual effects of fertilizers, fertilizer injury and fertilizer placement. Classroom, *two hours a week. Credit, two hours.* MR. CHUCKA

51. SOIL FERTILITY.—Principles involved in the improvement and maintenance of soil fertility through the use of lime, stable manures, green manures, and commercial fertilizers. Classroom, *two hours a week. Credit, two hours.* MR. CHUCKA

52. SOIL CLASSIFICATION, SURVEYING AND MAPPING.—Theories, methods, and uses of soil classification, surveying, and mapping. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. SWIFT

54. SOIL ANALYSIS.—Principles, methods, and practical value of the various field and laboratory methods of soil analysis. Prerequisites, Courses 1 and 6. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* MR. CHUCKA, MR. LIBBY

Crops

11. FIELD CROPS.—A course dealing with the principal field crops of the United States with special reference to crops important in New England. Consideration is given to general culture, use, and their adaptation. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RALEIGH

13. Weed Identification and Control.—Characteristics of weeds, their sources, method of reproduction, dissemination, migration, and methods of control. Laboratory, †*four hours a week. Credit, two hours.* Mr. Raleigh

14. Sweet Corn, Beans, and Peas.—The production of sweet corn, beans, and peas for canning purposes. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Raleigh

15. Potato Production.—A general study of all factors involved in the production of potatoes. Varieties, seed selection, preparation of land, planting, fertilization, spraying, harvesting, storing, grading, and marketing. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Libby

16. Forage and Pasture Crops.—Grasses, legumes, and root crops, their management and uses for forage and pasture. Prerequisite, Course 11. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Raleigh

60. Crop Improvement.—Principles and methods involved in field-crop improvement and methods of testing new varieties. Prerequisite, Botany 45. *Three hours a week. Credit, three hours.* Mr. Raleigh

62. Seed Potato Production.—A specialized study of the factors involved in seed potato production emphasizing selection of foundation seed stock, tuber unit planting, potato diseases, roguing, certification and development, and testing of new varieties. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Libby

*78. Marketing Potatoes.—A specialized course in the marketing of potatoes giving special attention to practices in New England. Production, trends in production, regional competition, grades, containers, storage, transportation, finance, sales methods including coöperative marketing, trend in consumption, price relationships, and the cost of marketing of both table stock and seed potatoes are topics considered in this course. *Three hours a week. Credit, three hours.* Mr. Libby

Agricultural Engineering

30. Agricultural Engineering.—A general course covering briefly all phases of agricultural engineering. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

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* The description of this course also appears under the Department of Agricultural Economics and Farm Management and should be registered for under the designation, Fm 78.

33. Farm Structures.—Planning, designing, and the construction of farm buildings; water systems; heating systems; sewage disposal; and the use of concrete on the farm. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

34. Farm Shop.—Training in the care and use of tools and equipment for ordinary construction and repair work found necessary on the farm. Laboratory, †*four hours a week. Credit, two hours.* Mr. Swift

35. Drainage and Land Reclamation.—A course covering the principles and practices of surveying, mapping, and leveling on the farm; improving and reclaiming farm lands. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

36. Farm Machinery and Power.—Simpler laws of mechanics as applied to farm machinery; the operation, adjustment, care, and efficiency of the more important farm machines; the application of power to farm operations and the operation, care, and repair of various forms of motors used for agricultural purposes. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

Agronomy and Agricultural Engineering (General)

81, 82. Seminar.—Study of recent literature, problems and experiments pertaining to soils, crops, and agricultural engineering. For juniors and seniors majoring in Agronomy. *One hour a week. Credit, one hour.*
Members of the Departmental Staff

83, 84. Special Problems in Agronomy and Agricultural Engineering.—*Credit arranged.* Members of the Departmental Staff

85, 86. Thesis.—*Credit arranged.*
Members of the Departmental Staff

ANIMAL INDUSTRY

Professor Corbett; Professor Dorsey; Associate Professor Smyth; Assistant Professor Gardner; Assistant Professor Hall; Assistant Professor Witter; Mr. Davis

Animal Husbandry

2. Types of Live Stock.—History, development, and characteristics of cattle, sheep, swine, and horses; correct types in the classes of farm animals

ganization, and economic aspects. Prerequisite, Course 1. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* Mr. Dorsey

6. Judging Milk and Milk Products.—Study and practice of methods employed in scoring and judging milk and milk products. Prerequisite, Course 1. Laboratory, †*two hours a week. Credit, one hour.* Mr. Davis

51. Dairy Technology.—Milk products and by-products, methods of manufacture and processing, and scrutiny of recent literature relating to advances in dairy technology. Lectures and assigned readings. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* Mr. Dorsey

53, 54. Problems in Dairy Husbandry.—*Credit arranged.* Mr. Dorsey

55. Dairy Refrigeration.—Principles of refrigeration, refrigeration machinery and equipment, and applications of refrigeration to milk and milk products. *Two hours a week. Credit, two hours.* Mr. Dorsey

58. Ice Cream Making.—Manufacture of ice cream and ices. Prerequisites, Courses 51 and 55. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dorsey

63, 64. Advanced Dairy Products Testing.—Various methods of testing dairy products and the practical application of such new tests as may be developed from time to time. Special attention is given to the Mojonnier test. Prerequisite, Course 51. Open to senior major students in the Department of Animal Industry and to graduate students. Laboratory, †*two or four hours a week. Credit, one or two hours.* Mr. Dorsey

66. Dairy Machinery.—Milk and milk products machinery, accessory machinery, and plant layout. Prerequisite, Course 51. Laboratory, †*two hours a week. Credit, one hour.* Mr. Dorsey

Poultry Husbandry

1. Types, Breeds, and Management of Poultry.—Origin and development of types, breeds, and varieties of fowl; general care, feed, and management of farm poultry; and marketing of poultry products. Laboratory exercises include practice in poultry management, poultry judging, and preparation of poultry products for market. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Smyth

3. Poultry Breeding.—Principles of breeding as applied to poultry inheritance of egg productivity; systems of breeding; and study of pedigrees and breeding results. Some time is given to a study of methods used by suc-

cessful poultry breeders. Prerequisite, Course 1. Classroom, *two hours a week. Credit, two hours.* MR. SMYTH

3. EXHIBITION AND PRODUCTION POULTRY JUDGING.—Selection and mating of fancy and utility poultry. Laboratory practice in judging fancy and utility poultry, and a study of the standard requirements of the breeds. Prerequisite, Course 1. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. GARDNER

4. INCUBATION AND BROODING.—Principles of incubation and brooding. Laboratory practice in incubator and brooder management. Prerequisite, Course 1. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. SMYTH

5. POULTRY FEEDING.—General principles of nutrition as applied to poultry; poultry feeds; calculating rations; estimating cost of feeds and feeding; and methods of feeding for economical production. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* MR. GARDNER

6. POULTRY FARM MANAGEMENT.—The business of poultry farming; systems and operations in use on large poultry farms; planning of specialized poultry farms. In so far as is practicable, visits will be made to poultry farms. Prerequisites, Courses 1, 2, 3, and 5. Classroom, *one hour a week;* laboratory, †*two hours a week.* MR. GARDNER

7. POULTRY LITERATURE.—A study of literature giving the results of experimental work with poultry. Prerequisites, Courses 1, 2, and 3. *Two hours a week.* MR. SMYTH

8. POULTRY DISEASES.—Principles of hygiene and sanitation applied to the prevention and control of the diseases of poultry, including a detailed consideration of the pathological processes involved in the common diseases. *Two hours a week. Credit, two hours.* MR. WITTER

51, 52. PROBLEMS IN POULTRY HUSBANDRY.—*Credit arranged.* MR. SMYTH

BACTERIOLOGY

PROFESSOR HITCHNER; MR. HOOK

1. BACTERIOLOGY.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and study of morphological and biological characteristics of typical bacteria. Some outside reading is required. Course 3 must be taken in conjunction. †*Six hours a week. Credit, three hours.* MR. HITCHNER, MR. HOOK

2. Bacteriology.—Similar to Course 1. Offered for students in the College of Technology and others who may elect it. Special emphasis is placed upon bacteriology of water and sewage. Prerequisite, Course 3. †*Six hours a week. Credit, three hours.* Mr. Hitchner, Mr. Hook

3. Bacteriology.—A lecture course open to all students. It must be elected by students taking Course 1. Subjects considered include the history of bacteriology; classification and biological characteristics of bacteria; bacteria in air, water, soil, and dairy products; relation of bacteria to health and disease; and immunity. *Two hours a week. Credit, two hours.*

Mr. Hitchner

5. Bacteriology.—An abbreviated laboratory course in general bacteriology. Demonstrations by the instructor and experiments conducted by the students in which many of the changes produced by bacteria in every day life are considered. Practical demonstrations of the relation of bacteria to disease, sanitation, food handling, and other economic phases are given. The aim is to develop appreciation of bacteriological technic. Course 3 must be taken in conjunction. †*Two hours a week. Credit, one hour.* Mr. Hitchner

52. Bacteriology.—Physiological, morphological, biochemical, and serological activities of bacteria; isolation and identification of pathogens together with animal inoculation and serological tests. Prerequisites, Courses 1 or 2, and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Hitchner

54. Bacteriology (Dairy).—Effect of pasteurization on milk bacteria; quantitative bacterial determination of butter and cheese; study of typical milk bacteria; use of special biochemic tests for quality of milk; and study of effect of separators, clarifiers, coolers, etc., on the bacterial content of milk and cream. Prerequisites, Courses 1 or 2, and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Hitchner

55. Bacteriology (Soil).—A theoretical and experimental consideration of the relationship of microörganisms and soil fertility. A study of the factors which influence the changes produced through microbial action. Prerequisites, Courses 1 or 2, and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Hitchner

61, 62. Seminar.—Preparation and presentation of papers dealing with current researches and developments in the fields of bacteriology. *One hour a week. Credit, one hour.* Mr. Hitchner

101, 102. Bacteriology.—A laboratory course for students desiring to pursue some particular line of bacteriological investigation. Open only to students who have done considerable work in bacteriology. The kind of work

and the time are arranged to suit individual students. *Credit arranged.*

Mr. Hitchner

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Smith; Assistant Professor Freeman

Biochemistry

1. Organic Chemistry.—For agricultural students. A study of the aliphatic compounds; hydrocarbons, alcohols, acids, amines, amides, etc., and brief resumé of the more important aromatic compounds. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.*

Mr. Smith

2. Biochemistry.—Plant biochemistry, including a study of the physico-chemical reactions of plants. A detailed study of carbohydrates, fats, and proteins; glucosides; and enzymes. Prerequisite, Course 1. Classroom, *three hours a week;* laboratory, †*four hours a week. Credit, five hours.*

Mr. Smith

4. Organic Chemistry.—The aliphatic hydrocarbons, alcohols, acids, amines, amides, etc.; important aromatic compounds; and carbohydrates, fats, and proteins. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* Mr. Freeman

5. Biochemistry.—Physico-chemical reactions of plants and animals; chemistry of digestion; respiration; and blood and lymph. Prerequisite, Course 4. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* Mr. Freeman

8. Agricultural Chemistry.—Chemistry of the soil elements; colloidal condition and its effect upon the soil; chemical relationship of fertilizing constituents; and synthetic methods of producing fertilizing ingredients. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* Mr. Smith

9. Biochemistry.—Animal biochemistry. Composition of the animal body; chemistry of digestion; assimilation and metabolism of foods; chemistry of blood and lymph; and elimination of waste product. Prerequisite, Course 2. *Two hours a week. Credit, two hours.* Mr. Smith

51. Biochemistry.—Detailed study of carbohydrates, fats and proteins; nature of enzymes and their effect upon food materials; chemical changes involved in digestion, assimilation, and absorption of foods; respiration; chemistry of the blood, including clinical methods of analysis; and elimination of waste material from the animal body. Prerequisite, Course 1 or 4. *Three hours a week. Credit, three hours.* Mr. Smith

53. Analysis of Agricultural and Related Products.—A course designed to familiarize the student with quantitative methods used in analysis of fertilizers, commercial feeds, and common foodstuffs such as bread, butter, milk, breakfast foods, etc. Alternative work will consist of qualitative and quantitative methods used in textile chemistry. The type of analytical work will be adapted to requirements of the student. Prerequisite, Course 1 or 4. Laboratory, †*four or* †*six hours a week. Credit, two or three hours.*

Mr. Freeman

57. Biological Colloids.—An introduction to colloidal chemistry with application and significance in biological systems. Open to junior, senior, and graduate students. Prerequisites, Courses 1 and 2 or 4 and 5. *Three hours a week. Credit, three hours.* Mr. Freeman

61. Advanced Biochemistry.—A complete consideration of the chemistry of carbohydrates, fats, and proteins with special reference to recent advances in these fields; methods used in biochemical research; special problems in plant and animal biochemistry. Prerequisite, Course 2 or 5. *Three hours a week. Credit, three hours.* Mr. Smith

62. Advanced Biochemistry.—A continuation of Course 61, with special reference to literature devoted to the subject matter. Prerequisite, Course 61. *Three hours a week. Credit, three hours.* Mr. Freeman

64. Biochemical Laboratory Methods.—Methods used in the biochemical laboratory for testing carbohydrates, fats, amino acids, proteins, enzymes; studies of the colloidal properties of biochemical material; H-Ion concentration measurement methods; and individual problems dealing with various phases of biochemical investigations. Prerequisite, Course 53. Laboratory, †*six hours a week. Credit, three hours.* Mr. Freeman

101, 102. Biochemical Research.—Problems dealing with various phases of biological or agricultural chemistry. Special problems may be selected by the student under direction and advice of the department. A comprehensive written summary is required. Open only to senior and graduate students. *Time and credit arranged.* Mr. Smith, Mr. Freeman

BOTANY AND ENTOMOLOGY

Professor Steinmetz; Assistant Professor Dirks; Assistant Professor Steinbauer; Assistant Professor Hyland; Mr. Lloyd

Botany

2. General Botany.—Fundamental principles of plant life, with special emphasis on life processes. Required of all students in the College

of Agriculture excepting those registered in Home Economics. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

MR. STEINMETZ and ASSISTANTS

29. GENERAL CRYPTOGAMIC BOTANY.—Orders of spore bearing plants, their structure, development, and economic importance. Given in alternate years. Prerequisites, Course 2 and the consent of the instructor. Classroom, *one hour a week;* laboratory and field, †*four hours a week. Credit, three hours.*

MR. STEINBAUER

30. PLANT ECOLOGY.—A study of the environmental factors determining adaptations and distribution of plant life. Prerequisite, Course 2. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.*

MR. STEINBAUER

32. PLANT PHYSIOLOGY.—For students in Forestry. Prerequisites, Course 2 and one year of chemistry. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

MR. STEINBAUER

33. FOREST BOTANY (DENDROLOGY).—Lectures, laboratory, and field work on characteristics, habits, classification, and relationships of trees and native shrubs of North America. Prerequisite, Course 2. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

MR. HYLAND

34. FOREST BOTANY (PHYSIOGRAPHY).—A systematic study of the trees of North America; a comprehensive study of range, distribution, soil requirements, and commercial importance of timber trees of the United States; and survey of forest areas of the world. Prerequisite, Course 33. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

MR. HYLAND

35. PLANT ANATOMY.—Tissues of leaves, roots, and stems of herbaceous and woody plants. Prerequisite, Course 2. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

MR. STEINMETZ, MR. HYLAND

42. FOREST PATHOLOGY.—Principles of plant diseases, as applied to seedlings, nursery stock, and forest trees; destruction of timber by fungi; and methods of combating plant diseases and preserving wood products. Required of seniors in Forestry. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

MR. STEINMETZ

43. WOOD IDENTIFICATION.—Identification of commercial woods with the unaided eye, lens, and microscope. Open to students in chemical engineering, and to others by permission. Laboratory, **three hours a week. Credit, one hour.*

MR. HYLAND

45. General Genetics.—Principles of genetics. Prerequisites, Zoology 1 and Course 2. Open to juniors and seniors. *Three hours a week. Credit, three hours.* Mr. Steinmetz

46. Genetics Laboratory.—Experiments and problems on kinds, causes, measurements, and inheritance of variations in plants and animals. Prerequisite, Course 45. Laboratory, †*four hours a week. Credit, two hours.* Mr. Steinmetz

53. Plant Physiology.—Classroom and laboratory work on the physiology of plants. Prerequisites, Course 2 and one year of chemistry. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Steinbauer

56. Plant Pathology.—Principles of plant diseases; their nature and causes; basis for control. Prerequisite, Course 2. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Steinmetz

57. Taxonomy of Vascular Plants.—Characteristics, identification, classification, and systematic position of representative species of flowering plants. Given in alternate years. Prerequisites, Course 2 and the consent of the instructor. Classroom, *two hours a week;* laboratory and field, †*four hours a week.* Mr. Steinmetz

59. General Mycology.—Morphology, identification, and classification of representative species of fungi. Given in alternate years. Prerequisites, Course 2 and consent of the instructor. Classroom, *two hours a week;* laboratory and field, †*four hours a week.* Mr. Steinmetz

Entomology

21. General Entomology.—Fundamental facts and principles of insect life, particularly in relation to agriculture; principles of insect control; characteristics of the orders and families of insects, with a study of their habits, life histories, and relations to plants and animals. An insect collection is required. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

22. Forest Entomology.—Principles of insect life with special reference to shade and forest trees. Structure, metamorphosis, life histories, injuries, classification, and methods of control are considered. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

40. Apiculture.—A practical course in the care of bees in relation to horticulture and general farming. The honeybee, its activities and habits; races of bees, diseases and enemies, and the production and marketing of

honey. Laboratory exercises include manipulations of bees and the making of hive equipment. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Dirks

46. Advanced Forest Entomology.—An intensive study of the important shade trees, forest and forest products; insects, their life histories and habits, injuries and methods of control. Prerequisite, Course 21 or 22. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Given in 1933-34. Mr. Dirks

49. Economic Entomology.—An intensive study of the important insects of the orchard, garden, and farm; their life histories and habits, injuries, and methods of control. Prerequisite, Course 21 or 22. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

50. Morphology of Insects.—An introduction to the principles of insect morphology. The factors determining form and adaptations of typical insects. Prerequisite, Course 21 or 22. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

51. Taxonomy of Insects, I.—Methods of collecting, preparing, and mounting insects; principles of insect classification; practice in use of keys for the identification of common insects. Prerequisite, Course 21 or 22. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Dirks

52. Taxonomy of Insects, II.—Principles of wing venation; classification of the lepidoptera, diptera, and hymenoptera. Prerequisite, Course 51. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.*

Problem Courses

47, 48. Problems in Botany or Entomology.—Open to juniors and seniors who have special interest and qualification in botany or entomology. The approval of the head of the department and the written consent of the instructor concerned must be obtained before registering for this work. *Credit arranged.* Members of the Departmental Staff

103, 104. Problems in Genetics.—*Credit arranged.* Mr. Steinmetz

105, 106. Problems in Entomology.—*Credit arranged.* Mr. Dirks

107, 108. Problems in Botany.—*Credit arranged.* Mr. Steinmetz

FORESTRY

PROFESSOR DEMERITT; ASSOCIATE PROFESSOR GOODSPEED; ASSISTANT PROFESSOR CHAPMAN; ASSISTANT PROFESSOR ASHMAN

1. ELEMENTS OF FORESTRY.—Importance and scope of the field of forestry, general methods of cutting and reforestation applicable in different regions in the United States. Designed as a beginning course for foresters and a cultural course for others. Required of freshmen majoring in Forestry, and open to other students. *Two hours a week. Credit, two hours.*
MR. DEMERITT

2. ELEMENTS OF FORESTRY.—A continuation of Course 1, required of freshmen majoring in Forestry and open to other students. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* MR. DEMERITT

3. LOGGING.—The lumber industry in the United States considered from an economic standpoint; an account of logging methods in different forest regions. Textbook and lectures. Forestry sophomores only. *Two hours a week. Credit, two hours.* MR. CHAPMAN

4. ADMINISTRATION AND PROTECTION.—Problems in the administration of national, state and private forest enterprises. Forest improvements, including trails, telephone lines, and look-out towers. Forest fire control. *Four hours a week. Credit, four hours.* MR. DEMERITT

5. FOREST MENSURATION.—Theory and application of measurements of logs, trees, and stands of timber. Classroom, *two hours a week.* Field work, **three hours a week. Credit, three hours.* MR. DEMERITT, MR. CHAPMAN

6. FOREST MENSURATION.—A continuation of Course 5. Theory and application of measurements of growth and yield. Classroom, *two hours a week;* field work, **three hours a week. Credit, three hours.*
MR. DEMERITT, MR. CHAPMAN

7. LUMBER MANUFACTURE.—Milling and marketing problems of the lumber industry in America. For Forestry seniors only. First half of semester. *Four hours a week. Credit, two hours.* MR. CHAPMAN

8. SILVICS.—The life factors determining the character and form of forest vegetation. The development of forest types and the silvical characteristics of stands. Prerequisites, Botany 33, 34. For Forestry juniors only. *Two hours a week. Credit, two hours.* MR. ASHMAN

9. WOOD PRESERVATION.—Durability and seasoning of native woods; preservatives in commercial use; and methods of operation and equipment of preserving plants. Special attention given to posts, ties, poles, paving-blocks,

and structural timbers. Prerequisites, Botany 33, 34, and 35. First half of semester. *Two hours a week. Credit, one hour.* MR. CHAPMAN

10. NURSERY PRACTICE.—To be taken in connection with Course 12. The study of forest-tree seed and seedlings; planting and transplanting in the State Forest Nursery; practice in field planting. Nursery management. Last nine weeks. **Six hours a week. Credit, one hour.*

MR. ASHMAN, MR. GOODSPEED

11. FOREST RECREATION.—Recreation from the viewpoint of the forester. Recreation planning in state and national forests and parks and on private estates. Brief consideration of game management in forestry. Summer camp administration. Forestry juniors and seniors only. *One hour a week. Credit, one hour.* MR. ASHMAN

12. SEEDING AND PLANTING.—Artificial regeneration and afforestation, in the practice of forestry. Forest nursery management. *Two hours a week. Credit, two hours.* MR. ASHMAN

14. FOREST PRODUCTS.—Forest products other than logs and lumber, such as pulp-wood, veneers, shingles, lath, tight and slack cooperage, hoops and headings, excelsior, vehicle woods, spool stock, turpentine, tannin, gums, syrups, dye-woods, and charcoal. Methods of utilization, markets, and values. *Two hours a week. Credit, two hours.* MR. CHAPMAN

16. WOOD TECHNOLOGY.—Identification and classification of the commercial woods of the United States based on simple lens inspection; the technical qualities of various species and their uses in the arts and trades. Prerequisite, Botany 33, 34, and 35. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. GOODSPEED

18. PREPARATION AND DRAFTING OF MAPS.—Instruction in the correct drafting, preparation, and coloring of maps. The use of accepted conventional signs and symbols in mapping, and preparation of maps for reports and summaries of field surveys. Prerequisite, Drafting 1, 2. **Three hours a week. Credit, one hour.* MR. CHAPMAN

20. WOODLOT FORESTRY.—General principles of forestry, with special reference and application to farm woodlands, particularly in this region. Lectures and textbook work in elementary systems of cutting, estimating, protection, and reforestation. Especially for agricultural students. Open to all students. *Two hours a week. Credit, two hours.* MR. CHAPMAN

43, 44. SPECIAL PROBLEMS.—Original investigation in advanced forestry work, the subject to be chosen after consultation with the departmental staff. Open to high ranking juniors and seniors. *Credit arranged.*

MEMBERS OF THE DEPARTMENTAL STAFF

47, 48, a-d. Forestry Seminar.—Forestry students only. Discussion of forestry conditions and developments. Oral reports from upper classmen on practical experience. Lectures by forestry staff and professional foresters in the field. *One hour a week. No credit.*

Members of the Departmental Staff

51. Regional Silviculture.—Applied systems of silviculture and management considered in relation to commercially important timber species and forest types in the United States; the application of thinnings; methods of natural reproduction; silvicultural methods. First half semester. *Four hours a week. Credit, two hours.* Mr. Ashman

52. Policy and Economics.—Character, extent, and distribution of forest resources, national, state, private and foreign. Relation of government, corporations, and individuals to forest resources and applied forest management. Brief discussion of State and Federal forest laws. *Four hours a week. Credit, four hours.* Mr. Demeritt

53. Forest Finance.—Forest valuation and statics. The appraisal of values of stands of timber. Determination of returns from forests under management. Damage appraisal. First half semester. Classroom, *three hours a week.* Laboratory, †*two hours a week. Credit, two hours.*

Mr. Goodspeed

55. Forest Management.—Theory of the normal forest; forest organization and regulation for a sustained yield. Forest management plan calculations and preparation. First half semester. *Four hours a week. Credit, two hours.* Mr. Goodspeed

Courses in Camp

35s. Silviculture.—Sophomore year only. Character and form of forest vegetation and recommended cutting operations for different kinds of forest types. To secure high quality natural regeneration. Studies to be conducted on areas now operated by Government and private owners. **Sixteen hours a week. Credit, two hours.*

Members of the Departmental Staff

37s. Forest Mensuration.—Sophomore year only. Practical field work in the measurement of logs, individual trees and large stands of timber. Forestry instruments. **Eight hours a week. Credit, one hour.*

Members of the Departmental Staff

39s. Forest Products.—Sophomore year only. Study of forest products other than logs and lumber with particular reference to their manufacture. **Eight hours a week. Credit, one hour.*

Members of the Departmental Staff

41. Practice of Forestry.—Forestry seniors only. Business principles involved in the management of a forest area including the preparation of a complete working plan. Topographic maps and detailed estimate of stands are included in the plan. Second half semester. **Forty-eight hours a week. Credit, nine hours.* Mr. Ashman, Mr. Goodspeed

HOME ECONOMICS

Professor Greene; Professor Sweetman; Assistant Professor Musgrave; Assistant Professor Heye; Miss Osgood; Mrs. Stewart; Miss Gould

1. Survey.—A survey of the subject matter field of home economics, and the problems involved in preparation for professional work in the field. Classroom, *three hours a week. Credit, three hours.*
Miss Greene, Mrs. Stewart

2. Clothing Selection Problems.—A study of the economic, social, and health problems involved in the selection of clothing, including a detailed study of fabrics and fibers. Classroom, *three hours a week. Credit, three hours.* Miss Musgrave

3. Design.—A first course in art expression. The principles of design as they may be applied to house decoration, costume design, advertising and related subjects. Some technique in the use of color, line, balance, rhythm, emphasis, and proportion is acquired in the laboratory. Classroom, *one hour a week;* laboratory, *†four hours a week. Credit, three hours.*
Miss Musgrave

4. The House.—The importance of the house as a contributing factor in satisfying home life for the group and the individual. Standards for physical well-being, aesthetic satisfaction, social enjoyment, convenience, privacy and comfort, in relation to income. Selection of designs, materials, and finishes for houses and their furnishings. Field trips required. Classroom, *two hours a week;* laboratory, *†two hours a week. Credit, three hours.*
Miss Musgrave

5. Foods.—Nutritive value, principles of preparation, and buying of foods. Laboratory work in preparation of various types of foods. Prerequisite, Biochemistry 4. Classroom, *two hours a week;* laboratory, *†four hours a week. Credit, four hours.* Mrs. Sweetman, Miss Osgood

6. Foods.—A continuation of Course 5, including marketing studies, with field trips, and the planning and serving of meals. Classroom, *one hour*

a week; laboratory, †*six hours a week. Credit, four hours.*
Mrs. Sweetman, Miss Osgood

7, 8. Clothing Construction Problems.—A laboratory course combining the principles of clothing selection with the techniques of construction in the making of garments. Simple drafting, the use of patterns, fitting and finishes are included. Laboratory, †*four hours a week. Credit, two hours.* Mrs. Stewart, Miss Osgood

10. Sanitation and Public Health.—Health of the individual in relation to family and community responsibility. Includes housing problems such as ventilation, plumbing, water supply, and sewage disposal; school health problems; industrial hygiene; and a study of communicable diseases with emphasis on methods of control. *Two hours a week. Credit, two hours.*
Miss Greene

11. Household Management.—Homemaking as a profession. Standards and objectives for household management in the provision of health, financial solvency, contentment, and development of family members. Techniques of management of time, energy, and money to contribute to securing the values of family life. *Four hours a week. Credit, four hours.*
Miss Greene, Miss Heye

14. The Pre-School Child.—A study of conditions most favorable to optimum growth and development of children. Influence of physical environment and home relationships upon the physical, social, and mental development of children. Existing tendencies and problems. Effects of new social adjustments reflected in the home upon the welfare of children. Opportunity for observing and guiding activities of pre-school children is provided in a play school conducted the second half of the semester. Classroom and laboratory *as arranged. Credit, three hours.* Miss Heye

15. Millinery.—Principles of design and color are applied to millinery. A consideration of materials suitable to various purposes and the making of frames, coverings, and hats in the prevailing fashion. Open only to juniors and seniors. Laboratory, †*two hours a week. Credit, one hour.*
Miss Musgrave

17, (18) Applied Design.—Application of design principles to problems in textiles including batik, tie dyeing, applique, embroidery, and hand weaving. Prerequisite, Course 3. Laboratory, †*four hours a week. Credit, two hours.* Miss Musgrave

21, (22). Household Administration.—A senior laboratory course aiming to develop managerial ability by coördinating technical and laboratory training in conditions approximating home life. Students organize and execute activities of the Home Management House in which they live. Activi-

ties include marketing, the planning, preparing, and serving of meals, care of a young child, budgeting and accounting of finances, care of the house, and social management. *Credit, two or three hours.* MISS HEYE

25. ECONOMICS OF THE HOUSEHOLD.—The family as a unit for consumption including principles of food selection; clothing; shelter; and the use of the budget. Open to Arts and Sciences students, above freshman rank, only. *Three hours a week. Credit, three hours.* MISS GREENE, MISS HEYE

26. THE CONTEMPORARY HOME.—Functions of the home as an environment for human development; factors involved in successful homemaking; and the child in the home, his development and welfare. Open to Arts and Sciences students, above freshman rank, only. *Three hours a week. Credit, three hours.* MISS HEYE

51. ADVANCED CLOTHING.—Clothing economics including study fashion, retailing, and standards for consumer buying of clothing. Laboratory problems in selecting and constructing tailored coats and children's clothing. Prerequisites, Courses 2 and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* MISS MUSGRAVE

52a. ADVANCED CLOTHING AND COSTUME DESIGN.—A continuation of Course 51. Application of design principles in line, color, dark and light, and texture to costumes for the individual. Draping on the dress form and constructing informal and formal silk dresses. Laboratory, †*six hours a week. Credit, three hours.* MISS MUSGRAVE

52b. ADVANCED CLOTHING AND COSTUME DESIGN.—Design same as Course 52a. Laboratory problems in the study of commercial patterns, pattern construction, problems of fitting abnormal figures. Construction of a silk dress offers opportunity for practical application of this material and for details of finishes. Laboratory, †*six hours a week. Credit, three hours.* MISS OSGOOD

53. ADVANCED FOODS.—Application of biochemical methods in development of principles of food preparation. Prerequisites, Course 5, 6, and Biochemistry 4. *Credit as arranged, two or three hours.* MRS. SWEETMAN

56. HOME ECONOMICS EDUCATION.—Principles of teaching as applied to junior and senior high school home economics. Aims: selection of subject matter, and choice of method as exemplified in current literature, courses of study, and textbooks. Organization problems, equipment, budget, and classroom management are included. *Three hours a week. Credit, three hours.* MISS GREENE

57, 58. THESIS.—Undergraduate thesis in any one of the fields of home economics. *Credit arranged.* MEMBERS OF THE DEPARTMENTAL STAFF

59, 60, a-j. Special Problems.—Individual problems in the various fields of home economics, arranged to enable students to extend their command of subject matter, or develop techniques according to individual interests and needs. A student may register more than once for the course, but for no more than three hours in any one subdivision. *Credit, one to three hours,* in each subdivision.

59, 60a. Nutrition
59, 60b. Foods
59, 60c. Clothing and Textiles
59, 60d. Design
59, 60e. History of Costume
59, 60f. House Planning and Decoration
59, 60g. Child Development
59, 60h. Household Management
59, 60i. Home Economics Education
59, 60j. Institutional Management

Members of the Departmental Staff

61. History of Costume.—A survey of the development of costume of men and women from the peoples of antiquity, through the various periods of European history to the present time. Lectures, readings, written reports, and collection and classifying of illustrations. *One hour a week. Credit, one hour.* Miss Musgrave

63. Nutrition.—Principles involved in normal human nutrition at all ages. Prerequisite, Biochemistry 3 or Chemistry 51. *Two hours a week. Credit, two hours.* Mrs. Sweetman

65, (66). Dietetics.—Calculation and preparation of dietaries. Parallel or prerequisite, Course 63. Laboratory, †*four hours a week. Credit, two hours.* Miss Osgood

67, (68). Nutrition in Abnormal Conditions.—A study of the principles involved in adjusting diets in such diseases or other abnormal conditions as are benefited by variations from diets recommended for the normal person. Laboratory consists of demonstration of nutritional deficiences in animals. *Credit, two or three hours.* Mrs. Sweetman

69, (70). Survey Examination.—The student organizes and outlines the material in her basic curriculum and her sequence around its value to the individual, the homemaker, or the professional woman, reads as widely as possible to round out her comprehension, and is examined both orally and in writing on her grasp of the field as a whole, her command of details, and her ability to organize and present material effectively. *Credit, one or two hours.* Members of the Departmental Staff

71, (72). Supervised Teaching.—Directed teaching in home economics. Students teach classes in the junior and senior high school at Brewer. *Credit, three hours.* Miss Gould

81, (82). Institutional Management (Foods).—A study of the problems involved in the feeding of groups on a commercial basis, such as menu planning, time budgeting, the application of food preparation principles to large quantity cookery, use of power equipment, quality standards. A faculty lunchroom in Merrill Hall is operated as a laboratory for the course. Prerequisites, Course 5, 6, and Economics 1b. Classroom, *one hour a week;* laboratory, **six hours. Credit, three hours.* Mrs. Stewart

83, (84). Advanced Institutional Management (Foods).—A continuation of Course 81, 82, with emphasis on management and administrative problems such as selection of equipment, cost studies, and personnel. Laboratory may be taken without lecture. Prerequisite, Course 81, 82. Classroom, *two hours a week;* laboratory, **six hours. Credit, four hours.* Mrs. Stewart

102. Advanced Nutrition.—Methods of research in human nutrition and recent advances in the field. Prerequisite, Course 54. *Credit as arranged, two or three hours.* Mrs. Sweetman

HORTICULTURE

Professor Waring; Assistant Professor Clapp;
Assistant Professor Riley

Pomology

1. Commercial Fruit Handling.—The commercial apple industry and its methods in Maine and competing regions, with minor attention to other tree fruits. Laboratory exercises include grading and packing and visits to commercial-scale orchards, packing houses, and storage plants. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Waring

2. Tree Fruit Production.—Underlying principles and practical methods involved in planting and subsequent care of hardy orchard fruits, leading to the production of profitable crops. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Waring

3. Systematic Pomology.—Important groups of tree and small fruits, together with practice in identification and judging of varieties. A trip to

important orchard districts or to the state fruit show may be arranged. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. WARING

10. SMALL FRUIT PRODUCTION.—Selection of varieties, and methods recommended for commercial production and handling of such fruits as strawberries, grapes, raspberries, blackberries, and blueberries. *Three hours a week. Credit, three hours.* MR. RILEY

56. ADVANCED POMOLOGY.—A course supplementary to Course 2, with emphasis on modern methods of orchard management, including disease and insect control. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. WARING

Vegetable Gardening

20. VEGETABLE GARDENING.—The best commercial practices; and the results of recent experimentation as applied to vegetable gardening. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

21. VEGETABLE CROPS.—Includes harvesting, marketing, and systematic study of types and varieties of vegetables; also storage and care of vegetables for seed production. Prerequisite, Course 20. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

55. VEGETABLE FORCING.—Culture of vegetables under glass, types of greenhouses, soil sterilization, fumigation, special fertility problems, and marketing. Prerequisite, Course 20. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. RILEY

Floriculture and Ornamental Horticulture

5. LANDSCAPE GARDENING.—Principles of landscape design and materials used in executing landscape plans. Special attention is given to the improvement of home grounds. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. CLAPP

7. COMMERCIAL FLORICULTURE.—Principles underlying the production of flowers under glass; special consideration of methods for important cut-flower crops. One or more half-day trips in the Bangor area may be arranged. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. CLAPP

8. GENERAL FLORICULTURE.—The culture and care of garden flowers and house plants, and the use of flowers in the home. Open to any student.

Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. CLAPP

54. LANDSCAPE GARDENING.—A continuation of Course 5 treating the development of irregular-surfaced areas, the farmstead, and large tracts; the design of recreational areas; and the professional phases of landscape architecture. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. CLAPP

General Courses

4. PLANT PROPAGATION.—Methods of propagating plants. Current literature on propagation is reviewed. A report on methods applicable to a particular branch of horticulture is required. Laboratory, †*four hours a week. Credit, two hours.* MR. CLAPP

11, 12. PROBLEMS IN HORTICULTURE.—Open to students who manifest special interest and the capacity for individual effort. The consent of the instructor under whom problem work is desired must be obtained in each case before registration. *Credit arranged.* These courses may be repeated for credit. MEMBERS OF THE DEPARTMENTAL STAFF

51, 52. SEMINAR.—Preparation of papers, followed by classroom presentation and discussion, dealing with a wide range of topics related to horticulture. *One hour a week. Credit, one hour.*

MR. WARING, MR. RILEY, MR. CLAPP

Graduate Courses

101, 102. HORTICULTURAL INVESTIGATIONS.—*Credit and hours arranged.* MEMBERS OF THE DEPARTMENTAL STAFF

103, 104. RESEARCH METHODS.—Application of scientific method and equipment to the attack and solution of horticultural problems, and preparation of manuscript for publication. *Credit and hours arranged.* MR. WARING

ALL DEPARTMENTS

SUMMER PROJECTS.—A student in the College of Agriculture desiring to carry out a field project during the summer recess under faculty direction may obtain credit for such work providing arrangement is properly made with the major department concerned and the project is successfully carried through to completion. Project work may be conducted during the summer

recesses between the sophomore and junior years, and junior and senior years. Sophomore-Junior Project is designated Pj 2 and limited to one hour credit. Junior-Senior Project is designated Pj 4 and may be one, two, or three hours credit. Complete details concerning project work may be obtained from heads of departments in which major curricula are offered.

TWO-YEAR COURSE IN AGRICULTURE

The significance of a star (*) or a dagger (†) in the description of a course is explained on page 110.

First Year—Fall Semester

ANIMAL HUSBANDRY—DAIRY PRODUCTION.—A general survey of the field of dairy production and economic reasons for growth of the dairy industry. Breeds of dairy cattle, and their care, feed, and management. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. HALL

BUSINESS ARITHMETIC.—A course in arithmetic based on the problems confronting the farmer in his business. *Two hours a week. Credit, two hours.* MR. LORING

ENGLISH.—Part of the time is devoted to a review of grammar and to the principles of effective writing, with attention also to spelling and punctuation. Weekly papers, chiefly expository, are required. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM BOTANY.—Plant structure and tissues in their relation to plant growth and development and to agricultural practices. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. STEINBAUER

FARM CROPS.—Practices in growing crops under field conditions. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RALEIGH

FORGE WORK.—Forging; welding; tool steel work. Laboratory, **three hours a week. Credit, one hour.* MR. DAVEE

FRUIT HANDLING.—Picking, packing, grading, storing, shipping, and marketing of fruit, particularly the apple. A survey is made of the principal apple producing regions and of the general status of the industry. A small amount of systematic study of fruits and some fruit judging are included. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

POULTRY HUSBANDRY.—Origin and development of types, breeds, and varieties of poultry; care, feed, and management; housing and house construction; breeding, incubation, and brooding; and marketing poultry products. Laboratory practice in judging poultry for exhibition and egg production. Judging, candling, grading, and packing eggs. Killing, picking, and packing poultry. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. GARDNER

First Year—Spring Semester

CARPENTRY.—Graded exercises in woodworking designed to familiarize the student with tools used in modern woodworking practice and to give him experience in working from dimensioned drawings. Laboratory, †*four hours a week. Credit, two hours.* MR. SWIFT

DAIRY HUSBANDRY—GENERAL DAIRYING.—Milk secretion and composition; testing of milk and milk products; sanitary production and handling of milk from farm to consumer; cream separation; and buttermaking. Classroom, *three hours a week;* laboratory, **three hours a week. Credit, four hours.* MR. DAVIS

ENGLISH.—A continuation of the work of the fall. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM ECONOMICS.—An elementary course in the principles of economics as applied to agriculture. The following subjects are considered: development of commercial agriculture, price making forces, production, land policies, farm credit, tariff, taxation, and agricultural organization. *Two hours a week. Credit, two hours.* MR. MERCHANT

FRUIT GROWING.—Principles and practices which should be followed in choosing an orchard site, and in the subsequent planting and culture, pest control, and other care leading to the production of profitable crops. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

POULTRY HUSBANDRY.—A continuation of the course given in the fall semester. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. GARDNER

SOILS AND FERTILIZERS.—Properties, management, and fertilization of soils in relation to fitting them for production of crops. Classroom, *three hours a week;* laboratory, **three hours a week. Credit, four hours.* MR. CHUCKA

Second Year—Fall Semester

ANIMAL HUSBANDRY—GENERAL ANIMAL HUSBANDRY.—Breeds, and care, feed, and management of horses, beef cattle, sheep, and swine. Labo-

ratory work in judging horses, sheep, and swine. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. HALL

ANIMAL HUSBANDRY—COMMON DISEASES OF FARM ANIMALS.—A general course including anatomy, physiology, hygiene, and sanitation. Methods for the prevention and control of the common diseases of domestic animals are given special attention. *Three hours a week. Credit, three hours.* MR. WITTER

ENGLISH.—Instruction in practical uses of English, including business correspondence, with as much review of grammar as seems necessary. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM ENGINEERING AND MECHANICS.—Running farm lines, laying out drainage systems, and planning farm buildings and conveniences. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. SWIFT

FARM INSECTS.—A practical study of insects in their economic relationships to farm plants and farm animals. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. DIRKS

FARM MANAGEMENT.—Factors that affect the profitable operation of the farm as a business unit including size of business; labor efficiency; crop rotation; farm layout; and production costs. Individual farming systems are studied. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. JONES

POULTRY HUSBANDRY—POULTRY MANAGEMENT.—A general consideration of poultry management with especial reference to sanitation and disease. *Two hours a week. Credit, two hours.* MR. GARDNER

VEGETABLE GROWING.—Production of vegetables for home use. Important commercial vegetables of New England. Handling of forcers, growing of seedlings, marketing, and other topics are included in as much detail as time will permit. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

Second Year—Spring Semester

ANIMAL HUSBANDRY—FEEDING LIVESTOCK.—General principles underlying feeding of livestock; composition and characteristics of feed stuffs; calculating rations; and the best practices in feeding farm animals. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* MR. HALL

ENGLISH.—A continuation, including reports, abstracts, and oral composition based on agricultural material. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM CROPS.—Grass and forage plants, their culture and uses. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. RALEIGH

FARM MACHINERY.—A course given to acquaint the student with the machinery adapted to farm use. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. SWIFT

MARKETING FARM PRODUCTS.—A course dealing with the economic problems in marketing farm products, with particular attention given to marketing Maine products, such as dairy and poultry products, apples, and potatoes. Time is also given to a study of the principles and methods of coöperative marketing. *Three hours a week. Credit, three hours.* MR. MERCHANT

FORESTRY.—The general principles of forestry with special reference and application to the farm woodlands, particularly in this region. Lectures and textbook work in elementary systems of cutting, estimating, protection, and reforestation. *Two hours a week. Credit, two hours.* MR. CHAPMAN

SMALL FRUIT CULTURE AND PLANT PROPAGATION.—Strawberries, raspberries, blackberries, blueberries, cranberries, grapes, and some other fruits of minor importance in the State. Production and disposal of the crops are considered. Instruction is given in general propagation of plants. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

HONORS COURSE

Attention is called to the tutorial honors course which is open to superior students in agriculture and forestry who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section General Courses.

College of Arts and Sciences

FACULTY OF INSTRUCTION

JAMES MUILENBURG, Ph.D., *Dean*
JAMES NORRIS HART, C.E., Sc.D., Ph.D., *Professor of Mathematics and Astronomy*
JOHN HOMER HUDDILSTON, Ph.D., *Professor of Ancient Civilization and Lecturer on Art History*
GEORGE DAVIS CHASE, Ph.D., LL.D., *Professor of Classics*
ROY MERLE PETERSON, Ph.D., *Professor of Romance Languages*
ROBERT RUTHERFORD DRUMMOND, Ph.D., *Professor of German*
HARLEY RICHARD WILLARD, Ph.D., *Professor of Mathematics and Astronomy*
JOHN H ASHWORTH, Ph.D., *Professor of Economics and Sociology*
*CHARLES ANDREW BRAUTLECHT, Ph.D., *Professor of Chemistry and Chemical Engineering*
MILTON ELLIS, Ph.D., *Professor of English*
ALBERT LEWIS FITCH, Ph.D., *Professor of Physics*
FRANÇOIS JOSEPH KUENY, L. ès L., *Professor of Romance Languages*
MARK BAILEY, A.M., *Professor of Public Speaking*
CHARLES ALEXIUS DICKINSON, Ph.D., *Professor of Psychology*
†OLIN SILAS LUTES, Ph.D., *Professor of Education*
RONALD BARTLETT LEVINSON, Ph.D., *Professor of Philosophy*
ADELBERT WELLS SPRAGUE, A.M., *Professor of Music*
JOSEPH MAGEE MURRAY, Ph.D., *Professor of Zoology*
*BERTRAND FRENCH BRANN, S.M., *Associate Professor of Chemistry*
†AVA HARRIET CHADBOURNE, Ph.D., *Associate Professor of Education*
ALBERT AMES WHITMORE, M.A., *Associate Professor of History and Government*
NOAH ROSENBERGER BRYAN, Ph.D., *Associate Professor of Mathematics*
ALBERT MORTON TURNER, Ph.D., *Associate Professor of English and Comparative Literature*
MAYNARD FRED JORDAN, M.A., *Associate Professor of Mathematics and Astronomy*
CHARLES BURTON CROFUTT, Ph.D., *Associate Professor of Physics*

*Member of the faculty of the College of Technology.
†Member of the faculty of the School of Education.

George William Small, Ph.D., *Associate Professor of English*
Edward French Dow, Ph.D., *Associate Professor of History and Government*
Stanley Royal Ashby, Ph.D., *Associate Professor of English*
Walter Whitmore Chadbourne, M.B.A., *Associate Professor of Economics and Sociology*
Edward Newcomb Brush, Ph.D., *Associate Professor of Psychology*
George Baer Fundenburg, Ph.D., *Associate Professor of Romance Languages*
Warren Stanhope Lucas, M.A., *Assistant Professor of Mathematics*
Frances Elizabeth Arnold, M.A., *Assistant Professor of Romance Languages*
Marion Stephanie Buzzell, M.A., *Assistant Professor of Romance Languages*
Richard George Wood, Ph.D., *Assistant Professor of History and Government*
William Francis Scamman, M.A., *Assistant Professor of English*
Himy Benjamin Kirshen, A.M., *Assistant Professor of Economics and Sociology*
Ruth Crosby, Ph.D., *Assistant Professor of English*
Alfred Carleton Andrews, Ph.D., *Assistant Professor of Classics*
John Henry Magee, M.A., M.S., *Assistant Professor of Economics and Sociology*
Howard Lloyd Flewelling, Ph.D., *Assistant Professor of English*
Evelyn Faye Wilson, Ph.D., *Assistant Professor of History and Government*
Edith Elizabeth Mortensen, M.A., *Assistant Professor of Zoology*
John Frederick Klein, Ph.D., *Assistant Professor of German*
Charles Earl Packard, S.M., *Assistant Professor of Zoology*
Clarence Edwin Bennett, Ph.D., *Assistant Professor of Physics*
Donald MacLean Purdy, Ph.D., *Assistant Professor of Psychology*
Frederick Eugene Melder, M.A., *Assistant Professor of Economics and Sociology*
Percie Hopkins Turner, Ph.D., *Lecturer in English*
Herman Samuel Silverman, M.A., *Instructor in Mathematics*
Herschel Leonard Bricker, A.B., *Instructor in Public Speaking*
John Emmons Stewart, M.A., *Instructor in Mathematics*
Fred Lincoln Lamoreau, B.A., *Instructor in Mathematics and Astronomy*
James Moreland, M.A., *Instructor in English*
Delyte Wesley Morris, M.A., *Instructor in Public Speaking*
Henry Gruber Stetler, A.M., *Instructor in Economics and Sociology*
Carl Munro Flynn, M.A., *Instructor in Zoology*

ARTHUR EUGENE JENSEN, Ph.D., *Instructor in English*
RICHARD WILDER MERRILL, M.A., *Instructor in German*
EDWIN KENNETH MILES, Ph.D., *Instructor in German*
CLIFFORD NELSON, Sc.D., *Instructor in Zoology*
MARTHA JANE GIBSON, Ph.D., *Instructor in English*
KARL DAVIS LARSON, Ph.D., *Instructor in Physics*
GAYLORD CLARK LEROY, M.A., *Instructor in English*
HAROLD WAVE WHICKER, B.A., *Instructor in English*
RISING LAKE MORROW, Ph.D., *Part-Time Instructor in History and Government*
HOWARD LEWIS MENDALL, B.A., *Graduate Fellow in Zoology*
ROGER AYLMER ALLEN, B.A., *Graduate Fellow in Physics*

PURPOSE

The situation in which our contemporary society finds itself defines in great measure the character and purpose of the College of Arts and Sciences. Our time, with its overwhelming social, economic, and intellectual stress, calls preëminently for men and women of critical intelligence, broad and sympathetic understanding of human needs, and determination of purpose. The College of Arts and Sciences seeks, therefore, to train and inspire loyal and competent citizens to meet the demands of the present crisis in history, and to enrich, within the limits of their ability and opportunity, the life of their respective communities.

In addition to the obvious value of the social sciences in meeting contemporary needs the college recognizes as indispensable the disinterested pursuit of knowledge and the free play of the mind in the region of literature and the other arts. It believes that no adequate and enduring human progress can be achieved if any essential part of human nature remains undeveloped.

Specifically, the College of Arts and Sciences conceives its task in terms of the particular needs of the various classes of students whose interest it seeks to serve. It offers, for example, a specific curriculum to those who contemplate entering the professional schools of medicine, dentistry, law, government, business, social work, and the arts. In collaboration with the School of Education, it offers specific training to prospective teachers.

In all cases, however, the College is aiming not merely at the production of useful skills and techniques but at the training of men and women who may be able and willing to turn their training toward socially desirable ends.

ADMISSION

The requirements for admission are given in full elsewhere in the catalog. They are practically the same as for other New England colleges and may

be met by a four-year preparatory course in a good high school or academy. Graduates of Maine normal schools who are also graduates of an approved high school will receive sophomore standing.

The regular admission requirements will be applied to all students who enter with advanced standing. Students must make up all entrance requirements before registering as juniors. Those who transfer from other colleges must make them up within a year.

GRADUATION REQUIREMENTS

Every candidate for the Bachelor of Arts degree is required to complete the following work: (a) Freshman English; (b) a basic course in Group II (see below); (c) a basic course in Group III; (d) a basic course in Group IV; (e) seven hours in Group V (for men students); (f) two years' work without credit in Group VI.

Eighteen to twenty-four hours must be completed in the major subject during the last two years, and 125 hours for graduation. Ninety-five of the hours required and three-fourths of the work in the major subject must be completed with a grade of C or above. If a student transfers from another institution three-fourths of all work done after transferring must be passed with a grade of C or better. Grades below C are not accepted from other institutions. Students who transfer to this college from other colleges of the University are required to complete 95 hours of C grade or better for graduation.

I. English Group.—This comprises the courses offered in the Departments of English and Public Speaking.

II. Foreign Language Group.—This comprises the courses in language and literature offered in the Departments of Classics, German, and Romance Languages.

III. Science and Mathematics Group.—This comprises the courses offered in mathematics and the biological and physical sciences, and includes those given by the Departments of Botany, Chemistry, Mathematics, Physics, and Zoology. These requirements may be satisfied by electing Zoology 1 and Botany 2, or Zoology 3, 4; Chemistry 1, 2; Mathematics 1, 3, 6, or 1, 2, 3, or 17, 18, 19, 20, or Course 1 in Mathematics, and Courses 15, 16 in Astronomy; Physics 1, 2.

IV. Social Science Group.—This comprises the courses offered in the Departments of Economics and Sociology, History and Government, Philosophy, and Psychology, and the courses in history, archeology, fine arts, Biblical literature, and music offered in other departments and not included in Group I.

V. Military Science and Tactics (for men), two years' work giving seven semester hours' credit.

VI. Physical Training, two years' work without credit. Women students also take Zoology 5 in the freshman year, for which two credits are given. These courses may not be counted toward the science requirements.

Students are expected to complete all the required work listed above by the end of their sophomore year.

No credit is given for less than one year's work in a beginning language. This rule applies to German 1, 2; Greek 5, 6; Italian 1, 2; Latin 1, 2; Spanish 1, 2; 1a, 2a.

FOREIGN LANGUAGE

If education is to be in any true sense liberal, it is necessary that a student should have living contact with some culture other than his own. He can in no better way gain a sympathetic understanding of another culture than through the medium of the language used by its best writers. For this reason every student in the College of Arts and Sciences is required before graduating to demonstrate that he has mastered one foreign language well enough to be able to read and understand it with some ease. It is recommended that the student, unless he has special reasons, continue with a language which he has already studied in high school. If he has settled upon his major subject when he enters the university, he should ascertain the specific language preference in that field. Students entering with three years of French or four years of Latin normally meet the requirement by completing an additional year in either of these languages. In general, whatever the choice, it is expected that the requirement will be met before the beginning of the third year. Courses in language should be taken continuously until the examination has been passed.

THE FIRST TWO YEARS

The first two years of the student's college course constitute a definite unity. On the one hand, they are in a very real sense a continuation of his preparatory school training and have the same general purpose of providing him some familiarity with the general streams of human knowledge, a broad and firm foundation of culture, and an adequate background for an understanding and appreciation of the needs of his community as well as competence to participate intelligently in its varied life. On the other hand, the first two years reach out toward the period of concentration with which the last two years are primarily occupied. They are designed to help the student to see

his chosen field in perspective, but they also seek to give him the necessary preparation for undertaking the studies of a distinctly advanced nature. In brief the first two years are definitely exploratory. Their objective is dispersion rather than concentration, intelligence over an extended area of knowledge rather than proficiency in one particular region.

With these general principles in mind, freshmen are expected to elect courses from each of the following groups:

I. English. English 1 and English 2 or 18 are definitely required unless the student is admitted by the department to a more advanced course.

II. Foreign Language: Greek, Latin, French, Spanish, Italian, German. Students who pass a reading test in a modern foreign language may be excused from this requirement.

III. Social Studies: American History, Orientation, Ancient Civilization, Masterpieces of Art, and Introduction to the Social Sciences.

IV. Natural Science and Mathematics: Chemistry, Physics, Zoology, Mathematics.

Military Science and Physical Training are required of all men unless they are physically disqualified. Physical Education and Hygiene must be taken by all women. For those students taking Military Science or Hygiene the maximum registration is fifteen hours *exclusive* of these two subjects; for others the maximum registration is sixteen hours. Individual guidance is given to all freshmen in the selection of their courses.

During the sophomore year the student continues his general interest in exploration, but he naturally becomes more definitely concerned over the selection of his major subject. He should, therefore, add at least two new major fields of learning to those taken during the freshman year. This should insure for him some likelihood of a wise decision regarding the area of his concentration because he will have had some experience in at least four different fields. Not more than six hours may normally be taken in one subject in either semester of the sophomore year. At the same time it is frequently wise to take more than one course in a prospective major subject, in order both to test one's actual interest and to satisfy preliminary requirements for advanced work.

Throughout the freshman and sophomore years the student is under the general supervision of the Dean of the College.

MAJOR SUBJECT

At some time in the second semester of the sophomore year, the student, in conference with the Dean, selects his major subject or field of chief academic interest, and outlines with his major adviser a tentative curriculum for his

two remaining years. This special field is chosen without reference to departmental boundaries, though it may coincide with some department or special curriculum in the College. The department in which the major subject chiefly falls becomes for administrative purposes the student's major department, and the head of that department is his major instructor. The latter is responsible for the student before the faculty and must approve the student's registration.

At the same time the student selects his major adviser. This is regularly either the major instructor or another member of the department whom he and the student agree upon, subject to the approval of the Dean. Besides assisting the student in outlining his curriculum, the major adviser also directs his pursuit of it, recommends or approves all changes made in it, and acts as the student's registering officer.

The major curriculum is the nucleus of related courses selected by the student as representing his chief field of interest or major subject. It is restricted to a maximum of twenty-four and a minimum of eighteen hours in the junior and senior years, but it is expected that the remaining courses will be chosen with reference to their affinity with it, except as certain otherwise unrelated courses are recognized as desirable for all students on account of their cultural or practical value. No elementary or introductory courses may be included in the major curriculum, though such exploratory courses may be taken, with the major adviser's approval. In general it is assumed that upperclass students will be engaging themselves with courses of an advanced nature which will toughen their intellectual fibre and furnish a real test of their abilities.

Students transferring from the Colleges of Technology and Agriculture to the College of Arts and Sciences will be required to do two full years' work in the College of Arts and Sciences before receiving the bachelor's degree, with the exception that students from the College of Technology may transfer after the junior year and be graduated in Arts after one year's work as major students in the Departments of Physics, Chemistry, or Mathematics; and students from the College of Agriculture may similarly transfer and be graduated as majors in the Department of Zoology.

Seniors shall be required to continue work in their major subject through their senior year.

COMPREHENSIVE EXAMINATIONS

In the spring semester of the senior year major students in many of the departments take a comprehensive examination in their major subject. The purpose of this examination is to provide the student with an opportunity to

demonstrate his knowledge of the salient features of his general field of study. It aims to make clear the unity of the field as a whole. It seeks definitely to counteract the easy tendency to separate courses from one another. It is, therefore, designed in such a way as to develop perspective and to encourage organization of materials as well as accuracy and range of knowledge. The student is thus able to evaluate his ability in the field of his major interest and to make a smooth transition to his professional and graduate work.

PROGRAM FOR SECONDARY SCHOOL TEACHERS LEADING TO A STATE CERTIFICATE

The College of Arts and Sciences has arranged a program for the professional training of secondary school teachers, which will entitle those who complete it to a Professional State Certificate for Secondary School Teachers. The program has been arranged in conference with the State Commissioner of Education and has his endorsement.

In addition to fulfilling the general requirements leading to the degree of Bachelor of Arts, the student is expected to complete six hours in Psychology 1, 2, twelve hours in Education in the junior and senior years, thirty approved hours in a major subject, and from fifteen to twenty approved hours in a minor field. The work in the minor field must have the approval of the heads of the departments in which this work falls as well as the head of the School of Education before the student will be recommended for certification in this field.

The prescribed work in Education includes three hours in the History of Education, three hours in Methods of Teaching, two hours in Educational Measurements, and four hours to be elected. As much as three hours in special methods courses given by other departments may be counted as part of the twelve hours required in Education.

The selection of major and minor subjects is designed to equip the student for teaching two or more subjects which are commonly taught together in the high school. Usual combinations are mathematics and science, French and Latin, English and history, English and French, history and Latin, English and Latin, and French and history. For the completion of this program a high standard of scholarship is required. All the prescribed work including major and minor subjects, must be of C grade or above. Upon completing this work the student will be recommended to the State Department of Education for a Professional Secondary Certificate, which will designate the major and minor subjects which he has pursued.

BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B.A.) The curricula demand 125 hours and are regularly completed in four years.

No outlines of the curricula in the College of Arts and Sciences are given in the catalog, but students may secure suggestive pre-professional and other curricula (e.g., law, medicine, dentistry, nursing, business, social work, government, teaching, theology) by applying to the Dean of the College or to the professor in charge of the department in which they are interested.

BANGOR THEOLOGICAL SEMINARY

Students in the College of Arts and Sciences have the privilege of registering for courses in Bangor Theological Seminary not to exceed five credit hours per semester, without payment of tuition charges, and a like privilege is extended by the College to students in the Seminary. The courses for which students may register must be approved by the Dean of the College, the President of the Seminary, and the instructors in the subjects concerned in both institutions. Such work may be counted toward graduation; but in order to avoid duplication of credits it is understood that all courses at the University of Maine which have been used by Seminary students for graduation credit at the Seminary, shall be cancelled at the University in case the student is admitted to junior standing as a candidate for the Bachelor of Arts degree.

TUTORIAL HONORS

A course in Tutorial Honors is open to superior students who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section General Courses.

Courses of Instruction

Courses designated by an odd number are given in the fall semester; those designated by an even number, in the spring semester.

Courses numbered 1-50 are for undergraduates only; courses numbered 51-100 are primarily for upperclassmen and graduates; courses numbered above 100 are primarily for graduates.

When a course is offered in the first semester and also repeated in the second, it is designated by two numbers, the second of which is in parenthesis.

INTRODUCTION TO THE CURRICULUM

The tabular arrangement of courses given on the following page serves to give the student a general view of the academic organization of the College of Arts and Sciences. At a glance the reader may observe the general outline of academic interests in the College as well as the affinity which the various subjects bear to one another. It is obvious at once, for example, that languages and literature belong in one group, but one gains something of the scope and meaning and use of language by noting how the ancient languages are followed by the modern foreign languages, these by Comparative Literature, and these in turn by English Literature, Dramatics, Speech, Composition, and Journalism. The importance of arrangement is equally great, if not so readily apparent, as one proceeds to examine the other divisions. Growing familiarity with these fields will make it increasingly clear that one subject by its very nature passes irresistibly and inevitably into another. The entering student will do well to study this table for its own sake as well as for purposes of convenience. The upperclassman will occasionally wish to view his education in a perspective beyond that of his own previous academic experience. It is hoped that this table will sometimes act as a corrective for too specialized training, sometimes as a visual demonstration of the essential unity of all knowledge, sometimes as a device for calling attention to intimate cultural and intellectual relationships. Of course, its most obvious use is to direct the student to where courses and subjects may be found.

ARRANGEMENT OF SUBJECTS ACCORDING TO DIVISION

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II. Social Sciences

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DIVISION I. LANGUAGES AND LITERATURE

BIBLICAL LITERATURE

DEAN MUILENBURG

51, 52. THE LITERATURE AND RELIGION OF THE ANCIENT HEBREWS.—A study of the development of Hebrew literature and religion in the light of its historical background, social environment, and literary form. The work is based upon a direct examination of the Bible itself. *Three hours a week.*

CLASSICS

PROFESSOR CHASE; PROFESSOR HUDDILSTON; ASSISTANT PROFESSOR ANDREWS

Greek

The work in Greek is arranged with the idea of presenting several phases of ancient culture. Such courses are offered as will prove serviceable to the student of average interests, who, not having studied the ancient languages in the fitting school, may desire to include in his college course some work bearing on the permanent contributions of early peoples to the civilization of ancient and modern times.

At present only one year of Greek language is offered, but more will be given if there is sufficient demand. Content and instruction aim at close correlation with the major fields of interest of individual students.

1, 2. BEGINNING GREEK.—Progressive development of the ability to read and understand classical Greek. Comprehension of selected and graded passages of Greek is emphasized from the start. The reading of the second semester is determined by the needs and desires of the students. Both semesters must be taken for credit. *Four hours a week.* MR. ANDREWS

3. GREEK LIFE AND CULTURE.—A brief study of important features of the Greek legacy in art, literature, religion, and philosophy. Textbook and lectures. *Two hours a week.* MR. HUDDILSTON

3a. GREEK LIFE AND CULTURE.—The same material is covered as in the preceding course but more stress is laid on the art and literature. Not open to those who have had Course 3. *Three hours a week.* MR. HUDDILSTON

4. Greek Religion.—The development of religious thought among the Greeks from Homer down to the period of the Hellenistic philosophies. Lectures and assigned topics and discussions intended to provide an introduction to comparative religions. *Two hours a week.* Mr. Huddilston

51. Greek Literature.—A general survey which does not presuppose any knowledge of the Greek Language. While the course includes prose literature as well as poetry, the main attention is given to Homer and writers of the drama; considerable reading is done in English translation. Given in 1934-35. *Three hours a week.* Mr. Huddilston

Latin

The courses in Latin are planned with a double purpose—to give some understanding of the best that Rome achieved and to train students for high-school positions as teachers of Latin.

The first purpose is cultural. It introduces students to the forms of classic literature as exemplified by Cicero, Livy, Tacitus, and Pliny in prose, by Terence and Plautus in dramatic art, and by a selection from the masters of lyric poetry. In addition, the courses are planned to give an introduction to the thought of the leading minds at Rome with some appreciation of its permanent value, and a comprehension of the Roman Empire as a milestone in the advance of European civilization.

The courses also are designed to give such knowledge of the Latin language and methods of teaching as would be required of a well-trained secondary teacher.

Courses 1, 2, 3, 4 cover the regular high-school curriculum and are given only in case of sufficient demand.

1, 2. Beginning Latin.—Students in Arts and Sciences must take both semesters for credit. *Four hours a week.* Mr. Andrews

3. Cicero.—Selected orations from the greatest of the Roman orators. *Four hours a week.* Mr. Andrews

4. Vergil.—Selections from the *Aeneid,* the supreme poetic achievement of the Romans. *Four hours a week.* Mr. Andrews

5. Livy.—Selections from the *History of Rome.* Reading, with discussion of language and Roman history. *Three hours a week.* Mr. Chase

6. Cicero and Horace.—Reading of *De Senectute* of Cicero with some attention to his religious thought; study of the lyric poetry of Horace. *Three hours a week.* Mr. Chase

7, 8. Latin Composition.—Development of more accurate understanding of Latin through practice in writing. Functional grasp of forms and constructions is stressed. *One hour a week.* Mr. Andrews

9. Tacitus.—Reading and discussion of the *Agricola* and *Germania.* This course involves an introduction to the history of the Roman Empire. *Three hours a week.* Mr. Chase

10. Terence and Plautus.—A study of the development and characteristics of Roman comedy as seen in the *Phormio* of Terence and the *Captivi* and *Trinummus* of Plautus. *Three hours a week.* Mr. Chase

21, 22. Latin Composition.—Accurate knowledge of syntax is stressed in the first semester and Latin rhetoric in the second. Either semester is open to students who have completed Latin 7, 8. Essential for prospective teachers. *One hour a week.* Mr. Chase

23. The Younger Pliny.—Life and conditions in the Roman Empire as revealed by the letters of a Roman of the first century. *Three hours a week.* Mr. Andrews

24. Horace and Juvenal.—Roman satire and social life as disclosed by the writings of the great satirists. *Three hours a week.* Mr. Andrews

41, 42. Roman Private Life.—The manners, customs, social usages, and everyday life of the Romans. This course deals with their essentially human qualities. Discussion, reading, and reports. No knowledge of Latin is required, and either semester may be taken for credit. Open to members of the three upper classes. *Three hours a week.* Mr. Andrews

51, 52. Teachers' Course.—The objectives, content, and methods of the secondary school Latin curriculum. Discussion of principles, solution of problems, outside reading, and investigation of special topics. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Andrews

53, 54. Latin Literature.—A study of the development of the literature of the Romans through selected readings in prose and poetry with discussion of the style, technique, and characteristics of various writers and periods. Given in 1935-36 and alternate years.

57, 58. Roman Philosophy.—Readings from the *De Rerum Natura* of Lucretius and the philosophical writings of Cicero and Seneca. Discussion of the leading schools of ancient philosophy. *Three hours a week.* Mr. Chase

59, 60. Roman Rhetoric and Oratory.—Tacitus, *Dialogus de Oratoribus;* Cicero, selections from the *Brutus* and *De Oratore.* Given occasionally. *Three hours a week.* Mr. Chase

62. The Latin Language.—A historical study of Latin forms and inflections with a study of early inscriptions. Given in case of adequate demand. *Three hours a week.* Mr. Chase

107. Sanskrit.—Given in case of adequate demand. Mr. Chase

ROMANCE LANGUAGES

Professor Kueny, Chairman (1935-36); Professor Peterson; Associate Professor Fundenburg; Assistant Professor Arnold; Assistant Professor Buzzell

The Department of Romance Languages offers in its language courses the opportunity to perfect one's self in writing and speaking French, Italian, and Spanish. The structure and development of each language is set forth in the linguistic courses, while the customs and manners of the people are discussed in the classes in conversation. The chief literary works of each language are carefully read and interpreted and the student is encouraged to develop independence of critical judgment. The student is thus given an opportunity through first-hand acquaintance with the language and literature of a people to establish direct relationship with its culture.

Students concentrating in a single language are required to elect 22 hours in the junior and senior years. Students concentrating in the general field of Romance Languages may combine two or more of these languages, electing in the junior and senior years a total of 22 hours. In all cases 12 of these 22 hours must be in literature. French courses 21, 22, 25, 26 may not be included in the concentration work of the last two years, being primarily intended for sophomores.

Students not concentrating in Romance Languages, but expecting to teach them, will be recommended for the teacher's certificate if they elect 17 hours in this field, 8 in language and 9 in literature.

French

BASIC COURSES

These courses, intended for freshmen, are designed to teach the student to read at sight the French of representative authors. The material is chosen from outstanding French writers of the nineteenth century. Complete novels and stories of the romantic and realistic schools, including Hugo, Balzac, and Maupassant are read and discussed.

3, 4. INTERMEDIATE FRENCH.—Open to students who have offered two units of French as entrance requirements, and to those who have offered three units whose preparation proves inadequate for successful work in French 5, 6. In the latter case only two hours of credit are allowed. Regularly five hours credit. *Five hours a week* MR. KUENY, MR. FUNDENBURG, MISS BUZZELL

5, 6. ADVANCED FRENCH.—Open to students offering three units of French as entrance requirements, and to exceptional students offering two units only. With less emphasis upon formal grammar, this course is meant to develop a habit of discriminating translation. *Three hours a week.*
MR. KUENY, MR. FUNDENBERG, MISS BUZZELL

GENERAL LANGUAGE AND LITERATURE COURSES

7, 8. ELEMENTARY CONVERSATION AND COMPOSITION.—Open to students who have offered two units of French as entrance requirements. Grammar review, together with constant drill in spoken French in order to achieve correct and fluent speech. *Two hours a week.* MR. KUENY, MISS BUZZELL

8a. ELEMENTARY CONVERSATION AND COMPOSITION.—A second-semester course for exceptional students, covering by intensive study the same ground as French 7, 8. Admission by arrangement only. *Two hours a week.*
MR. KUENY

9, 10. ADVANCED CONVERSATION AND COMPOSITION.—Through discussion of the customs and interests of every-day French life, the student is taught to speak fluently in colloquial French. *Two hours a week.* MR. KUENY

17, 18. READINGS IN CONTEMPORARY FRENCH.—Open only to students who after completing Course 3, 4 or 5, 6 need additional preparation in order to pass the reading test. *Three hours a week.* MISS BUZZELL

21. THE ROMANTIC NOVEL.—In this course is studied the renewal of French literary inspiration by Chateaubriand and Victor Hugo in the nineteenth century. *Three hours a week.* MISS BUZZELL

22. THE REALISTIC NOVEL.—Continuing French 53, this course traces the successive forms of art illustrated by Balzac, Flaubert, Maupassant, and more recent writers. *Three hours a week.* MISS BUZZELL

25, 26. THE FRENCH THEATER OF THE NINETEENTH CENTURY.—This course seeks to enable the student to understand the works of the great dramatic artists of modern France from the point of view of the French public. An effort is made to develop independent criticism of both style and technique. *Three hours a week.* MR. FUNDENBURG

57, 58. Advanced French Grammar.—A review of the fundamentals of grammar especially important in secondary-school instruction. Through practical exercises the student is taught to recognize and explain common difficulties confronting the teacher of elementary French. *Three hours a week.* Mr. Kueny

59, 60. French Essay Writing.—The student is taught to organize original material and to express himself clearly and logically in living French. *Three hours a week.* Mr. Kueny

Prerequisite for French 61, 63, 64 is one of the literary courses listed above, namely, 21, 22; or 25, 26. French 63, 64 is a prerequisite for Courses 73, 74 and 101, 102.

61. Modern French Poetry.—The poems of Victor Hugo and his contemporaries are studied in relation to the general Romantic Movement and the particular background of the times. The student is led to appreciate the beauty of poetic language and to read aloud with an adequate sense of the special character of French poetic rhythm. *Three hours a week.* Mr. Kueny

63, 64. French Classicism.—A study of the seventeenth century, the age which established the standards of perfection in form and in language ever since the characteristic of French literary production. *Three hours a week.* Mr. Fundenburg

73, 74. The Age of Voltaire.—A study of the appearance of modern critical thought and attitude in the literature of the eighteenth century. *Two hours a week.* Mr. Kueny

101. The Middle Ages.—The historical development of the French language and literature from the origins to the Renaissance. The text of the *Chanson de Roland* and extracts from the chroniclers are studied in detail, and a survey is made of the other medieval types. *Three hours a week.* Mr. Kueny

102. The Sixteenth Century.—A survey of the French Renaissance, emphasizing selections from Marot, Rabelais, Ronsard, and Montaigne. The introduction of ancient ideas into the French mind shown as a starting point for modern thought. *Three hours a week.* Mr. Kueny

Italian

1, 2. Elementary Italian.—A course for beginners, which includes a study of the basic principles of Italian grammar, pronunciation exercises, dictation, oral practice, and composition, with especial attention to the mastery of verb forms and pronouns. Reading is begun at an early date, and emphasis is laid upon the acquirement of an adequate vocabulary and facility in reading. *Three hours a week.* Mr. Peterson

3, 4. Modern Italian Prose.—Selections from representative authors of the nineteenth and twentieth centuries are studied in an endeavor to acquire a larger vocabulary and increased facility in reading. Review of the grammar, composition, and oral practice. Designed for second-year students. *Two hours a week.* Mr. Peterson

Course 52, Dante, may also be given when there is a sufficient demand for it.

Spanish

BASIC COURSES

1, 2. Elementary Spanish.—A course for beginners, which includes a study of the basic principles of Spanish grammar, pronunciation exercises, dictation, oral practice, and composition, with especial attention to the mastery of verb forms and pronouns. Reading is begun at an early date, and emphasis is laid upon the acquirement of an adequate vocabulary and facility in reading. *Four hours a week.* Miss Arnold

1a, 2a, 2b. Elementary Spanish.—This is similar in content to Course 1, 2 but extends through three semesters and includes a larger amount of reading. The class begins in the second semester and is continued through the following year. *Three hours a week.* Mr. Peterson

3, 4. Modern Spanish Prose.—The principal aim of this course is to secure facility in the reading and comprehension of ordinary Spanish prose of the modern period. Certain books—novels, short stories, and plays—are studied intensively while others are read more rapidly. Review of grammar, study of idioms, and oral practice. Designed for second-year students. *Three hours a week.* Mr. Peterson

5, 6. Elementary Conversation and Composition.—Stress is laid upon the acquisition of a practical vocabulary by means of exercises based upon Spanish newspapers. Study of the grammar and translation into Spanish. Designed for third-year students or for second-year students who are pursuing at the same time Course 3, 4. *Two hours a week.*

Miss Arnold, Mr. Peterson

9, 10. Rapid Reading Course.—A continuation of Course 3, 4 designed especially to promote facility in reading. The material read, consisting largely of narratives, will be limited to the modern period. *Two hours a week.*

Miss Arnold

23, 24. Advanced Conversation and Composition.—A continuation of Course 5, 6. Translation from English to Spanish, original compositions,

and oral work of different kinds to secure facility in expression, form the basis of this course. *Two hours a week.* Mr. Peterson

MORE ADVANCED COURSES

For courses numbered above 50, Courses 1, 2, 3, 4, and 9, 10 or the equivalent are prerequisite.

51, 52. The Novel and Drama.—Examples of the work of representative novelists and dramatists from the "Golden Age" of Spanish letters to the nineteenth century are read and discussed in class while others are assigned for outside reading. Lectures and reports on the development of the literary types studied. Given in 1934-35 and alternate years. *Three hours a week.* Miss Arnold

57, 58. History of Spanish Literature.—A study of the development of literature in Spain and Spanish America, and the reading of brief selections from the most important authors especially of the earlier periods. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Peterson

61, 62. Modern Literature.—Examples of the work of the most important writers of the nineteenth and twentieth centuries in Spain and Spanish America are studied in this course. Given in 1935-36 and alternate years. *Three hours a week.* Miss Arnold

The following courses for special reasons are occasionally substituted for some of those listed above: 7, Commercial Spanish; 67, Spanish-American Literature; 71, Old Spanish.

Attention is called to Course 65, 66, Latin-American History, listed under the Department of History and Government.

GERMAN

Professor Drummond; Assistant Professor Klein; Mr. Merrill; Dr. Miles

1, 2. First-Year German.—A course for beginners. Grammar, composition, translation, conversation. Credit is not given for less than a year's work to students registered in the College of Arts and Sciences. *Five hours a week.* Mr. Drummond, Mr. Klein, Mr. Merrill, Mr. Miles

3, 4. Short Story.—For students who have had Course 1, 2 or the equivalent. Translation, composition, grammar review. *Three hours a week.* Mr. Drummond, Mr. Merrill, Mr. Miles

5, 6. The Drama.—For students who have had Course 3, 4 or the equivalent. A study of the German drama including selections from such eighteenth and nineteenth century writers as Lessing, Schiller, Hebbel, Kleist, Hauptmann. Lectures and discussion. *Three hours a week.* Mr. Drummond

7, 8. The Novel.—For students who have had Course 5, 6 or the equivalent. Critical reading of novels by such authors as Goethe, Meyer, Ludwig, and Sudermann. Lectures and essays. *Three hours a week.* Mr. Klein

9. Teachers' Course.—For those who intend to teach German. Discussion of methods of teaching, the value of different texts, preparation of the lesson, classroom work, pronunciation, word-derivation, historical grammar. *Two hours a week.* Mr. Klein

11, 12. Rapid Reading Course.—For students who have had Course 3, 4, and have not passed the reading test. *Two hours a week.* Mr. Miles

13, 14. Elementary German Composition and Conversation.—For students who have had Course 1, 2 or the equivalent. *Two hours a week.* Mr. Merrill

15, 16. Scientific German.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week.* Mr. Klein

17, 18. Advanced German Conversation and Composition.—For students who have had Course 13, 14. *Two hours a week.* Mr. Klein

The following courses are given when there is sufficient demand.

51, 52. Studies in Eighteenth Century Literature.—Special attention is given to the life and works of Klopstock, Lessing, Wieland, Goethe, and Schiller. Critical study of assigned works, lectures, and discussions. *Two hours a week.* Mr. Drummond

53, 54. Goethe.—Lectures on the life and work of Goethe, with a critical study of Faust. *Two hours a week.* Mr. Drummond

55, 56. Studies in Nineteenth Century Literature.—The various literary movements of the nineteenth century; lectures, discussions, outside reading. *Two hours a week.* Mr. Klein

57, 58. Seminar.—A study of some special topic in German literature. *Two hours a week.* Mr. Drummond, Mr. Klein

59 (60). History of German Literature.—Lectures in German outlining the history of German literature. Recitations, outside reading. *Two hours a week,* fall or spring semester. Mr. Klein

The department is also prepared to give, when there is a demand, the following courses: 61, 62. Early New High German; 101, 102. Gothic: Introduction to the Study of Germanic Philology; 103, 104. Old High German; 105, 106. Middle High German.

ENGLISH LITERATURE AND COMPOSITION

Professor Ellis; Associate Professors Turner, Small, and Ashby; Assistant Professors Scamman, Crosby, and Flewelling; Mr. Moreland; Mr. Heilman; Dr. Jensen; Mr. Whicker; Miss Gibson; Mr. Leroy

The Department of English, through its courses in composition and rhetoric, assists the student in acquiring such mastery of written English as will enable him to communicate his ideas adequately for the needs of his curriculum and profession and of his various social relationships throughout life. The courses in literature offer him an opportunity of enlarging his intellectual horizon through an acquaintance with the best thought and expression of representative writers of the English-speaking people. For particular groups or individual students in the College of Arts and Sciences, the Department further provides teacher-training in secondary school English, an introduction to journalism or to creative writing, a general cultural background for the professions and business life, and a foundation for graduate study in English language and literature. For graduate students it furnishes curricula leading to the degree of Master of Arts in English.

Major Students

English major students may elect as their major subject any one of the following fields:

English Literature (including English History)
American Literature and History
Journalism
Composition and Rhetoric
The English Language
Comparative Literature

Dramatic Literature may be pursued as a major subject in English, in conjunction with the Department of Public Speaking. Other combinations may be selected with the approval of the head of the Department and the Dean.

All students planning to pursue major programs in English should have completed the prerequisite courses Eh 3, 4 and Eh 7, 8 or their equivalent, before the close of their sophomore year. The history of England, Public

Speaking, History of Philosophy, and an elementary knowledge of German are strongly recommended for all students planning to major in any subject in the general field of English. A grade of C or better is expected in Eh 3, 4, and in eighteen hours of the major curriculum.

The curriculum most commonly recommended for the student majoring in English Literature includes Eh 57, 58; Eh 43 or 44; Eh 53; Eh 67; a semester's advanced work in nineteenth century English literature; and a year's work in one of the advanced period or type courses in English or in Comparative Literature. Other courses in English or in other departments may be substituted on the recommendation of the major adviser.

The Department conducts a comprehensive major examination, oral and written, early in the final semester of the senior year, covering the student's courses in his major subject. An earlier written examination held near the end of the junior year tests the student's knowledge of rhetoric and the mechanics of writing and serves as a basis for the selection of approved senior tutors in connection with the Freshman Composition course.

Service Courses

Service courses offered by the Department for the Colleges of Agriculture and Technology include Eh 5 (6), Technical Composition, required of all students in Technology and in the Forestry and Agriculture curricula; and Eh 9 (10), Modern Literature, required of students in the Chemistry curricula, of Forestry sophomores, and Agricultural juniors in the Botany curriculum, and elective for all other Technology and Agriculture students.

Teacher Training

Students pursuing major curricula in other departments who intend to offer English as a second teaching subject in secondary schools should prepare themselves by taking courses Eh 3, 4; 7, 8; 57 or 58; 43 or 44; and 21 (22) when offered.

Freshman Year

All freshman students in the University, unless excused by the Department, are required to take Eh 1, Freshman Composition, in the fall semester, and Eh 22a or Eh 18 in the spring semester. Students who show special proficiency in the Freshman Week English tests are excused from taking the usual freshman courses and admitted to the honors course, Eh 11, 12.

Journalism Curriculum

A special program of courses for students interested in journalism or creative writing as a profession may be obtained on application to the Dean or the head of the Department.

1. Freshman Composition.—An intensive course in expository writing, for students in all colleges. Stress is placed upon correctness, clarity, and ease of expression and upon the organization of material. Frequent themes and conferences. Required of all freshmen not excused by the Department. *Three hours a week.*

Note: Freshmen who are particularly deficient in the fundamentals of grammar, sentence structure, and spelling are required to attend special tutoring groups in addition to the regular work of the course.

Mr. Turner (Chairman) and Members of the Department

2. Freshman Composition: Description and Narration.—Study and practice in writing chiefly of description and narrative, with some further study of exposition. Several works of literature are likewise read. *Three hours a week.*

Mr. Turner (Chairman) and Members of the Department

3, 4. History of English Literature.—A study of English literature from Chaucer's time to the present, tracing its historical development and acquainting the student with the chief writers and their work. Readings, recitations, and illustrated lectures. English 3, 4 or 11, 12 is prerequisite for all advanced courses in English literature. *Three hours a week.*

Mr. Jensen (Chairman), Mr. Flewelling, Mr. Heilman, Miss Gibson, Mr. Leroy

5 (6). Technical Composition.—A study of the forms of writing of greatest professional usefulness to engineers, agriculturists, and foresters. The forms of business correspondence, the construction of reports, and preparation of technical papers. *Not open to students in the College of Arts and Sciences. Two hours a week,* fall or spring semester. Mr. Scamman

7, 8. Second-Year Composition.—In the fall semester, weekly themes of the formal and informal essay types, with a study of the informal essay in English and American literature; in the spring, descriptive and narrative themes, with a study of the short story in America and England. Recommended for sophomores, especially for those who expect to select a major in the English field. *Three hours a week.*

Mr. Ellis (Chairman), Mr. Ashby, Mr. Flewelling, Mr. Whicker

9 (10). Modern Literature.—A study of specimens of literature of contemporary interest, with the design of cultivating the appreciation and enjoyment of good reading. *Not open to students in Arts and Sciences. Two hours a week,* fall or spring semester.

Mr. Scamman (Chairman), Mr. Moreland, Mr. Heilman

11, 12. Freshman Literature and Composition (Honors Course).—A survey of English literature to the end of the nineteenth century. Practice in theme writing of expository, descriptive, and narrative types. Open only to freshmen excused from English 1. *Three hours a week.*

Miss Crosby, Mr. Jensen

18. Literature for Freshmen.—The reading and study of works of literature representing the chief literary types: fiction, essays, poetry, and drama, with several exercises in composition. This course may be elected instead of or in addition to English 2 by freshmen who have completed English 1 with a grade better than C. *Three hours a week.*

Miss Crosby (Chairman), Mr. Whicker, Miss Gibson

21 (22). Teaching of English in the High School.—A consideration of the chief problems confronting the teacher of high-school English composition and literature. The presentation of the different literary types; essentials and methods in composition; choice of texts, sequence of literary readings, and other topics. Not given in 1934-35. *Two hours a week.*

23. News Writing and Reporting.—Training in the fundamentals of newspaper work through theory and practice. Open only to juniors and seniors who have completed with satisfactory grades freshman English and English 7. *Three hours a week.* Mr. Moreland

26. Newspapers in the Twentieth Century.—An intensive study of present-day American journalism, with emphasis on the forces which build newspapers and the power of such journals on the thinking of the nation. A brief study of the historical backgrounds of American journalism will be included in the course. Prerequisite, English 23 or consent of the instructor. *Three hours a week.* Mr. Moreland

28. Mechanics of Editing.—Copy reading, headline writing, and page make-up, with a study of news values. Textbook and lectures. Prerequisite, English 23. Given in 1934-35 and alternate years. *Three hours a week.*

Mr. Moreland

29. Journalistic Writing.—A practical writing course for students, which covers departmental writing in newspapers, editorial planning, critical writing, and specialty writing. Prerequisite, English 23. *Three hours a week.* Mr. Moreland

30. The Country Newspaper.—A study of country journalism with a view to its improvement. Actual writing for weekly and semi-weekly papers of the State is required in the course. Prerequisite, English 23. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Moreland

43, 44. American Literature.—A survey course, based upon the study of the chief works of American poets and prose writers. Lectures, recitations, and assigned readings. *Three hours a week*, fall or spring semester,

Mr. Ellis

45, 46. Contemporary Literature.—A study of present-day tendencies and production in the different fields of literature. The fall semester is devoted to contemporary American literature, the spring to British. *Three hours a week.* Mr. Flewelling

47, 48. Nineteenth Century British Prose.—A course dealing with the chief prose writers, mainly non-fiction, of the nineteenth century, with especial attention to the ideas conveyed. The authors chiefly emphasized are Lamb, Hazlitt, De Quincey, Carlyle, Macaulay, Arnold, Ruskin, Newman, Huxley, and Stevenson. *Three hours a week.* Given for the first time in 1935-36.

For courses numbered above fifty, Eh 3, 4 (or 11, 12) is prerequisite, except that Dean's List students whose grades in English have been satisfactory may, with the instructor's permission, enroll for any course which follows. These courses, excepting Eh 77, 78, may, with the approval of the Graduate Faculty, be accepted for graduate credit for any qualified student who has already completed satisfactorily a full advanced course with the Department.

52. Anglo-Saxon.—A study of Anglo-Saxon grammar and reading of easy prose and poetry. Lectures on the literature of the Anglo-Saxon period. Given in 1936. *Three hours a week.* Mr. Small

53. Chaucer.—A study of selections from the *Canterbury Tales* and the chief minor poems, stressing the reading of Chaucer as poetry, his literary range and qualities, and the picture of his time given in his works. *Three hours a week.* Miss Crosby

55, 56. Nineteenth Century Poetry.—In the first half the poets of the English Romantic Movement—Wordsworth, Coleridge, Byron, Shelley, and Keats—are considered; in the second, those of the Victorian Age, especially Tennyson, Browning, Arnold, and the Pre-Raphaelites. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Turner, Mr. Flewelling

57, 58. Shakespeare.—A brief consideration of the English drama prior to Shakespeare, followed by a careful study of several of his most important plays and the reading of others. Attention is given to Elizabethan stage conditions and the dramatic work of Shakespeare's contemporaries. *Three hours a week.* Mr. Ellis, Mr. Small

61, 62. History of the English Drama.—The development of the drama in England from the miracle and mystery plays through the Elizabethan period. Subsequent tendencies in the Restoration and the eighteenth century, the nineteenth century closet drama, and the revival of the acting play in England and Ireland. Given in 1934-35. *Three hours a week.*
Mr. Ashby

63. Elizabethan Literature.—Non-dramatic poetry and prose of the sixteenth century, with particular attention to the poetry of Spenser. Not given in 1934-35. *Three hours a week.* Mr. Ashby

64. Milton and His Time.—Chief emphasis is laid upon the life and work of John Milton, studied against the background of the literature of the seventeenth century to the Restoration of the Stuarts. Not given in 1934-35. *Three hours a week.* Mr. Ashby

65, 66. Restoration and Eighteenth Century Literature.—A study of the evolution of neo-classicism and its transition into the early Romantic Movement, as shown in the poetry, fiction, and drama of the period. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Ashby

67. History of the English Language.—The origins of the language; its relation to other languages; the sources and development of the English vocabulary. *Two hours a week.* Mr. Small

71 (72). Advanced American Literature.—A study of some special field or period of American literature, conducted as a pro-seminar course. English 43, 44 or its equivalent is prerequisite. For the spring semester, 1935, the topic is American Literature, 1790-1850. *Three hours a week.* Mr. Ellis

73, 74. Literary Criticism (Comparative Literature).—A study of literary practices and standards from Aristotle to the present, including American criticism. The reading not only of works of criticism, but also of some of the recognized masterpieces of Continental literature to which critical principles have been most frequently applied. *Three hours a week.* Given in 1934-35. Mr. Ashby

75, 76. European Literature (Comparative Literature).—A survey of Continental European literature from Homer to the present, showing the relationship among the literatures of different epochs and countries. The first semester treats ancient and medieval literature and the Renaissance in Italy and Spain; the second, the literature from the Renaissance in France to modern times. No knowledge of foreign languages is required. Except by permission, students may not take English 76 without English 75. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Turner

77, 78. Creative Writing.—An advanced course for students who have shown exceptional interest and ability in some field of writing. The

types selected will vary in different years. Not accepted for graduate credit, unless by special permission from the Graduate Faculty. Prerequisite, completion of English 7 or 8 with honor grade. *Three hours a week.*

77 (78)a. The Short Story—Fall semester, 1934-35. Mr. Whicker

77 (78)b. The Familiar Essay.—Spring semester, 1935. Mr. Whicker

77 (78)c. Verse Writing. Mr. Ellis

77 (78)d. The One-Act Play.

77 (78)e. Feature Writing.

81, 82. The English Novel.—This course traces in the first semester the history of the English novel from the medieval prose romances to the death of Scott. Beginning with Dickens and Thackeray, the second semester treats the Victorian novel in considerable detail and makes some study of recent British Novelists. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Turner, Mr. Jenness

The following courses are offered only when there is sufficient demand: 59. The Romantic Movement; 60. Victorian Literature; 83. Middle English; 101, 102. Graduate Seminar; 103. Beowulf.

PUBLIC SPEAKING

Professor Bailey; Mr. Bricker; Mr. Morris

The primary function of the Department of Public Speaking is to assist the student in the art of formal and informal speech-making and to develop voice, poise, and aesthetic appreciation through courses in expression and dramatic art. Courses in Public Speaking and Debating offer a student exercise in the practical use of logical and effective expression, while courses in Expression and Dramatic Art develop the artistic side of speech and acquaint the student with the fundamentals of acting and stagecraft. Students are encouraged to express orally the best of literature and drama.

Students interested in public speaking as a practical art may major in Speech; those interested in public speaking as a fine art may major in Drama.

The necessary hours for a major are made up in Speech by the coöperation of the Departments of English, Philosophy, and Psychology; and in Drama by the coöperation of the Department of English.

Students who major in Speech are expected to write and deliver a forty-minute address before some civic organization.

Students who major in Drama may either give a recital of approved standard, or direct a dramatic production.

Speech Correction

0. Speech Correction.—Open to students with speech defects. The method of instruction is largely individual. *No credit.* Mr. Morris

Courses in Speaking

1 (2). Public Speaking.—This is a basic course in public speaking. The student is taught to organize material and to deliver short extemporaneous speeches. Sections are organized chiefly according to the college in which the student is enrolled, and each section is conducted according to the needs of the group. *Two hours a week.* Mr. Bailey, Mr. Bricker, Mr. Morris

3. Extempore Speaking.—Differs from Course 1 (2) primarily in its emphasis upon extemporaneous speaking. Course 3 is recommended to all students who can devote three hours to a speech course. *Three hours a week.* Mr. Bailey, Mr. Bricker, Mr. Morris

4. Debating.—Questions of state, national, and international importance as well as technological problems are debated in class. This course is designed primarily for Technology students, but one section is reserved as a foundation course for students in any college who wish to take advanced debating later. Students expecting to continue debating are advised to take this course as early in their college course as possible. Prerequisite, Course 1 (2) or 3. *Two hours a week.* Mr. Bricker, Mr. Morris

5 (6), 5a (6a). Persuasive Speech.—Methods of influencing audiences, the problem of vividness, and the psychology of speech. The meetings are conducted according to the rules of parliamentary law. Several original speeches are prepared and delivered by the members of the class. Prerequisite, Course 1 (2), or 3. *Two or three hours a week.* Mr. Bailey, Mr. Bricker, Mr. Morris

12. Business and Professional Speaking.—A course designed to help the student who plans to enter business or professional life. Attention is given to the sales talk, the after-dinner speech, the speech of explanation and demonstration, the conference discussion, and radio and telephone speaking. Opportunity is provided for the exceptional student to appear before business groups in neighboring towns. Prerequisite, four hours of speech courses. *Three hours a week.* Mr. Morris

19 (20). Advanced Debating.—A course designed to meet the need of the student who desires advanced work in debate or who wishes to direct or teach debating or take part in intercollegiate debate. An individual program

is worked out for each student enrolled. Prerequisite, four hours in speech courses and permission of the instructor. *Three hours a week.*

MR. BRICKER, MR. MORRIS

45 (46). ADVANCED PUBLIC SPEAKING.—A study of representative orators in both England and America, an analysis of the structures of the oration and the rhetoric of oratory, a review of several historic debates and lyceum lectures, and the preparation and delivery of an original address. Prerequisite, four hours in speech courses. *Three hours a week.* MR. BAILEY

Courses in Expression

7, 7a. INTERPRETATIVE READING.—The oral interpretation of many selections from the best in English prose, poetry, and drama is carefully studied, and several readings are rendered from memory. The principles of effective reading and the correct use of the voice are especially emphasized. *Two or three hours a week.* MR. BAILEY

14, 14a. ADVANCED READING.—A continuation of the principles of reading taken up in Course 7. More difficult readings are undertaken, including several of the great scenes from Shakespeare. Prerequisite, Course 7. *Two or three hours a week* (two hours class, one hour conference). MR. BAILEY

43 (44). PLATFORM READING.—The interpretation of an entire play. Open only to advanced students who have shown marked ability in expression and desire to do serious platform work. The consent of the head of the department is necessary for enrollment. Prerequisite, Course 7. *Two hours a week.* MR. BAILEY

48. VOCAL DEVELOPMENT.—The aims of this course are to improve the voice, and to give training in distinguishing correct and defective sounds. The approach is by breathing and vocal exercises, and nonsense dictation tests (the phonetic symbols of the International Phonetic Association are used). Prerequisite, Course 7. *Three hours a week.* MR. BRICKER

Theatre

25, 25a (26, 26a). THEATRE.—The class is organized as a "producing" unit. Each phase of production including directing, acting, scene designing, costuming, stage lighting and make-up is emphasized to meet the need and to complete the study of the individual student. Lectures on both the history of the theatre and present-day movements, conferences, papers, and laboratory work constitute the fundamental requirements. As special individual programs are worked out and new plays are studied and produced each semester,

Theatre may be taken for two or three hours and may be repeated several times. The course has no prerequisite, and for purposes of registration is called 25 if taken for three hours in the fall semester and 25a if taken for two hours. In the spring semester the three-hour course is called 26 and the two-hour course 26a. MR. BAILEY, MR. BRICKER

DIVISION II. THE SOCIAL SCIENCES

PHILOSOPHY

PROFESSOR LEVINSON

Philosophy is the systematic attempt to think our way to the solution of those problems that arise when we ask such general questions as those concerning the meaning of the world, the origin and destiny of human life, its standards and values, the sources and limits of our genuine knowledge, the principles that underlie valid reasoning, and the sources and significance of the sense of beauty. While philosophy is ordinarily approached directly by way of the history of man's attempt to solve these problems (see Pl. 3, 4), or through a study of the principal problems or types of philosophy (see Pl. 5, 6), opportunity is offered to various classes of students to approach it from the standpoint of their work in other fields (see Pl. 1, 2; 51, 52).

1, 2. ORIENTATION.—An introduction to liberal education restricted to Arts freshmen. This course aims at assisting the student in making an intelligent choice of his major subject and electives by presenting an elementary account of the history and present conditions of the subjects treated by the various departments in the College of Arts and Sciences. Given in collaboration with other departments of the college. *Three hours a week.*

3. HISTORY OF ANCIENT PHILOSOPHY.—Greek thought from the beginning to the Christian era, with especial reference to the philosophy of Plato and Aristotle. *Three hours a week.*

4. HISTORY OF MEDIEVAL AND MODERN PHILOSOPHY.—The philosophy of the Christian church as expounded by St. Thomas Aquinas; the rise of experimental science and the major philosophical schools from Bacon to Whitehead. *Three hours a week.*

5, 6. PERSONAL PHILOSOPHY.—A constructive criticism of the student's body of beliefs in the light of an analytical survey of the principal types of philosophy, with a view to the tentative formulation by the student of his own philosophic creed. Designed as an alternative to Courses 3 and 4, but open by consent of the instructor to students who have taken either of these courses. Given in 1934-35 and alternate years. *Three hours a week.*

8. LOGIC.—Part one of the course analyzes the principles that govern the passage of the mind from premises to conclusions; following the recent trend, this analysis is developed in a language of symbols analogous to those employed in algebra. Part two deals with the methods of reasoning char-

acteristic of modern natural and social science. Given in 1935-36 and alternate years. *Two hours a week.*

10. Ethics.—An historical survey of various conceptions of the ends of life: tribal morality, the Greek view of life, Christianity, the ethics of evolution. The course concludes with a discussion of some of the ethical problems of our contemporary social order. Given in 1934-35 and alternate years. *Two hours a week.*

11, 12. Topics in Philosophy.—This course is restricted to a limited number of properly qualified upperclassmen, whose needs in philosophy are not satisfied by any of the other courses offered by the Department. Topics associated with the student's major subject will be studied through tutorial conferences, assigned readings, and reports. No work in philosophy is prerequisite. *Two or three hours a week.*

101, 102. Seminar.—An individually arranged program of tutorial instruction for students offering twelve hours of work in the Department, or the equivalent.

PSYCHOLOGY

Professor Dickinson; Associate Professor Brush; Assistant Professor Purdy

Psychology includes a study of mind and of modes of behavior. It offers the student an opportunity to acquaint himself at first hand with the fundamental laws of the psychophysical organism. Through a study of the child, the normal adult, and the abnormal individual, it enables him to gain an insight into personality development and the problems of human adjustment. Through experience with psychological tests and the techniques of testing he comes to a more practical understanding of intelligence.

In its ramifications Psychology borders upon the natural as well as the social sciences. It is most closely allied, however, with Education, Zoology, Economics, Sociology, and Philosophy.

1, 2. General Psychology.—A basic course designed to give a general introduction to the field of psychology. A brief treatment of the structure and functioning of the nervous system, followed by a systematic survey of such topics as sensation, perception, behavior, motivation, learning and memory, thinking, imagination, intelligence, and personality. Some of the special fields of psychology—animal, child, social, abnormal, applied, etc.—are briefly outlined. An eclectic point of view is maintained with respect to the current

psychological "schools." A weekly period in the laboratory emphasizes the experimental aspects of the subject. *Three hours a week.*

MR. DICKINSON, MR. BRUSH, MR. PURDY

3. APPLIED PSYCHOLOGY.—Psychology applied to business, industry, advertising, salesmanship, and other fields. The application of psychological methods and tests in the selection and training of workers. For Technology students in Mechanical Engineering. *Three hours a week.* MR. BRUSH

5, 6. APPLIED PSYCHOLOGY.—An introduction to general psychology followed by a consideration of the various factors influencing human efficiency: the psychology of vision and audition with emphasis on their relations to technological problems; the application of psychological methods and tests to the selection and training of workers; further applications of psychology to industry, business, advertising, salesmanship, and other fields. For Technology students in Electrical Engineering. *Three hours a week.* MR. PURDY

12. ADVERTISING.—A course designed to acquaint the student with the psychological principles involved in advertising. Practical application of these principles in rewriting advertisements appearing in newspaper and magazine advertising, and the developing of an advertising campaign in relation to an actual product. Prerequisite, Psychology 1, or permission of the instructor. *Three hours a week.* MR. DICKINSON

66. EDUCATIONAL PSYCHOLOGY.—In this course certain phases of psychology which are particularly important for educational theory and practice are selected for detailed consideration. Among the topics treated are mental inheritance, learning, memory, study methods, transfer of training, individual differences and their measurement. Prerequisite, Psychology 1, 2. *Three hours a week.* MR. BRUSH

67. PSYCHOLOGY OF CHILDHOOD.—A study of the mental growth of the child to six years of age. Native equipment, environmental influences, the development of motor and behavior patterns, speech, inference, judgment, and the like are given consideration. Modern experimental techniques of child study are discussed. To illustrate the development of motor and behavior patterns, 8000 feet of motion pictures, filmed by the instructor, are available. These films depict development in three children from six hours of age through the periods of creeping and walking. Prerequisite, Psychology 1, 2, with a grade of C or better. *Three hours a week.* MR. DICKINSON

69, 70. EXPERIMENTAL PSYCHOLOGY.—For majors and others interested in the subject of psychology. The first semester aims to acquaint the student with methods in the qualitative study of experimental problems and orient him in the objective approach to problems. In the second semester emphasis is placed upon quantitative methods and the statistical treatment of social-

psychological data. Prerequisite, Psychology 1, 2. *Three hours a week.*
MR. PURDY

71, 72. ABNORMAL PSYCHOLOGY AND MENTAL HYGIENE.—A study of mental abnormalities and of the normal mentality, with a view to a better understanding of educational practice and the problems of human adjustment. Through the courtesy and coöperation of Dr. C. J. Hedin, superintendent, five clinics are conducted at the Bangor State Hospital. These clinics are scheduled on Tuesday afternoons from two to four. The exact dates are set at the beginning of the semester. Attendance at the clinics is required. In the first semester various phases of the abnormal are studied, while in the second semester the emphasis is placed upon a consideration of the normal individual. Prerequisite, Psychology 1, 2, with a grade of C or better. *Three hours a week.* MR. DICKINSON

75. SOCIAL PSYCHOLOGY.—In this course an attempt is made to familiarize the student with the three general trends in the study of social psychology: (1) the relations of the individual to social institutions; (2) the innate constitution of the individual as the basis of social phenomena; and (3) the present experimental methodology and its results in the study of the development of social responses in the individual. Such topics as instinct, emotions, development of personality, development of language, custom, mores, legends, and propaganda are studied. Prerequisite, Psychology 1, 2, with a grade of C or better. *Three hours a week.* MR. BRUSH

81, 82. MENTAL MEASUREMENT.—Training in the use of the more commonly used psychometric methods, with opportunity for their application to practical or research problems. During the first semester the emphasis is upon the technical training, during the second upon the application to problems. The technical training is supplemented by readings, discussions, and lectures. Open only to a limited number of qualified students. Primarily for seniors and graduate students who plan to enter the teaching profession, social service, or personnel work. Prerequisite, Psychology 1, 2. *Three hours a week.* MR. BRUSH

91, 92. PROBLEMS IN PSYCHOLOGY.—Primarily for graduate students and seniors with a rank of B or better. The self-active student has here an opportunity to select and attack particular psychological problems with the benefit of criticism and suggestions from the instructor at stated intervals. Admission by consent of the instructor. *Hours arranged.* MR. DICKINSON

93, 94. SEMINAR IN PSYCHOLOGY.—Advanced work for graduate students and psychology majors and others who are interested in and fitted for it. In successive semesters the subject matter includes: History of Psychology; Systems and Schools of Psychology; Current Psychological Experi-

mental Literature; etc. Required of all Psychology majors; prerequisite for others, permission of the instructor. *Two hours a week.* Mr. Dickinson

96. Survey Seminar.—To enable senior majors in the Department of Psychology to prepare themselves for the Department's comprehensive written and oral examinations. *Two hours a week.*

Mr. Dickinson, Mr. Brush, Mr. Purdy

101, 102. Graduate Thesis. Mr. Dickinson, Mr. Brush, Mr. Purdy

ECONOMICS AND SOCIOLOGY

Professor Ashworth; Associate Professor Chadbourne; Assistant Professor Kirshen; Assistant Professor Melder; Assistant Professor Magee; Mr. Stetler

Economics

It is the purpose of this department to assist the student to an understanding of the way in which society produces and regulates its wealth. The function of money, the relation between capital and labor, questions of public finance, these are representative of the sort of problems that distinguish the social science of economics, but its scope includes all that facilitates a broad human understanding of the control of wealth. It should thus be clear that the study of economics provides a foundation for good citizenship and not merely a technique for business success.

1a, 2a. Principles of Economics.—From the viewpoint of subject matter this course may be divided into two parts: (1) a study of the fundamental characteristics and institutions of modern economic society, including such topics as specialization, large scale production, machine industry, competition, monopoly, prices, credit, foreign trade, foreign exchange, and distribution of wealth; (2) the application of principles to such economic problems as population, capital and labor, labor legislation, transportation, public expenditures, and taxation. *Three hours a week.* Mr. Ashworth

1b, 2b. Principles of Economics.—Similar to Course 1a, 2a. This is a short course for students in Technology and Agriculture. *Two hours a week.* Mr. Melder, Mr. Kirshen

9, 10. Accounting.—This course aims to give the student that general knowledge of the principles of accounting which every business person should possess. Since it does not presume any knowledge of double-entry

bookkeeping, a considerable part of the first semester's work is devoted to fundamental principles. Balance sheets and income statements, depreciation, reserves, sinking funds, partnership, and corporation problems are the principal topics of the second semester. *Three hours a week.* MR. CHADBOURNE

16. BUSINESS LAW.—This course aims to give the student knowledge and appreciation of the basic legal principles guiding, expanding, and limiting business transactions. The nature and theories of law, the enforcement of law, contracts, agency, and bailments are given special consideration. For juniors and seniors in Technology and Agriculture only. *Three hours a week.* MR. KIRSHEN

51. CORPORATION FINANCE.—This course treats the corporation in a possible life-cycle of organization, operation, failure, or reorganization. Forms of business organization, corporate securities, intercorporate relations, management and control are considered. Special emphasis is given to the use of securities in distributing both corporate funds and control to stockholders, bondholders, and the corporate managers. Juniors and seniors only. *Three hours a week.* MR. KIRSHEN

52. SOCIAL CONTROL OF INDUSTRY.—This course deals with the extension of government control over business activities for the purpose of (1) social welfare, (2) economic reform, (3) business recovery. *Three hours a week.* MR. ASHWORTH

53. MONEY AND BANKING.—The monetary and banking systems of the United States and other countries; special emphasis on the relation of banking to business. Juniors and seniors only. *Three hours a week.* MR. CHADBOURNE

54. INVESTMENTS AND INVESTMENT BANKING.—The course deals with the methods of selection of investments. The different types of securities and their relative merits are analyzed. The proper types of investments for dependents, the business and professional classes, and institutions are studied. An investigation is also made of the social and practical aspects of the investment banking business. Suggested preparation, Courses 1a, 2a; 51, and 53. *Three hours a week.* MR. CHADBOURNE

55, 56. BUSINESS LAW.—This course aims to give the student knowledge and appreciation of the basic legal principles guiding, expanding, and limiting business transactions. The nature and theories of law, the enforcement of law, contracts, agency, damages, negotiable instruments, guaranty, and suretyship are considered in cases. Lectures and class discussions. More detailed and advanced than Course 16. Juniors and seniors only. *Three hours a week.* MR. MAGEE

57, 58. Insurance.—Problems of risk are considered with the purpose of indicating the contribution of insurance to their solution. A study of the theory of insurance and the fundamental doctrines of insurance law precedes a detailed examination of the principal coverages in the fields of life, fire, casualty, and marine insurance, and corporate bonding. The course has for its purpose the equipping of the student with such knowledge as will enable him to weigh and compare economic risks and make correct insurance decisions. It is designed entirely to assist the purchaser of insurance, and does not undertake to train the individual for the insurance business. *Three hours a week.*

Mr. Magee

71. Public Finance.—The following topics will be considered: government activities and government expenditures; taxation and tax systems; budgets and other means of regulating and controlling government spending; current problems of taxation. Juniors and seniors only. *Three hours a week.*

Mr. Ashworth

72. Labor Problems.—This course begins with the Industrial Revolution but is essentially a study of (1) organized labor and its policies, such as collective bargaining, the closed shop, the strike, the boycott, picketing, restriction of work, short work-day, and restriction of entrance to a trade; (2) labor legislation dealing with child labor, women in industry, the long work day, low wages, unemployment, and working conditions; (3) employer attempts to solve the problem of employer and employee relationship, employee representation, profit sharing, employee stock ownership and gain sharing; (4) the settlement of industrial disputes—arbitration, mediation, compulsory investigation, and judicial settlement. Juniors and seniors only. *Three hours a week.*

Mr. Melder

73. Labor Problems.—Similar to Course 72. For Technology students. *Three hours a week.*

Mr. Melder

101, 102. Seminar. The Departmental Staff

Sociology

The sociology curriculum focuses the student's attention upon social relationships as phenomena capable of objective, critical analysis. This is achieved through study of (1) the structure and function of society—of which the family, social stratification, and social codes are typical; (2) social disorganization—of which crime, poverty and war are typical; and (3) the dynamics of social change, or how society adjusts itself to natural, technological, and social changes. Sociology is bounded on the one hand by zoology, psychology, and anthropology; on the other hand by economics, history, and philosophy.

1, 2. Principles of Sociology.—An introductory course designed to equip the student with a basic, systematic knowledge of the structure and functioning of human society. The community, social stratification, unorganized, unspecialized and specialized groups, social codes, relation of the environment to the social order, and the processes of social change are considered. Prerequisite for other courses in sociology. *Three hours a week.* Mr. Stetler

61. Social Pathology: Poverty and Dependency.—A study of typical varieties of social maladjustment other than crime and juvenile delinquency. Widowhood, desertion, divorce, illegitimacy, prostitution, maldistribution of wealth, poverty, public and private methods of poor-relief, unemployment, child labor, old age insecurity, and war are considered. *Three hours a week.* Prerequisite, Course 1, 2 or permission of instructor. Mr. Stetler

62. Social Pathology: Criminology.—A study of the characteristics, causes, and relief of crime, including mental, physical, economic and social factors; case studies of juvenile delinquents and criminals; the relation of race, nationality, age, and sex to crime; police systems; socialized court procedure; theories and forms of punishment and rehabilitation; modern methods of crime prevention. Field trips for scientific observation of these phenomena. Prerequisite, Course 1, 2 or permission of the instructor. *Three hours a week.* Mr. Stetler

81, 82. The Family.—A study of the family as a unit of social organization in its primitive, historical, and modern aspects. Consideration of the patriarchal unit, and of the influence of Christianity and the Industrial Revolution upon marriage and the family is followed by an analysis of the modern family including size, basic social and economic conditions, interaction, family tensions, the companionate marriage, and family disorganization. Prerequisite, Course 1, 2. Given in 1934-35 and alternate years. *Two hours a week.* Mr. Stetler

87. Social Evolution and Social Change.—Analysis of the evolutionary aspects of associations, institutions, and mores in human society. Consideration of progress, civilization, culture, and theories of social change. Special emphasis upon the fundamental problems of social causation. Given in 1935-36 and alternate years. Prerquisite, Course 1, 2. *Two hours a week.* Mr. Stetler

88. Population and Race.—A study of the factors involved in the composition, growth, and control of population; analysis of birth and death rates, influence of standards of living, qualitative and quantitative aspects, and theories of population; special consideration of racial theories and fundamental racial problems. Prerequisite, Course 1, 2 or permission of the instructor. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Stetler

91. Development of Economic Thought.—The course considers the development of economic ideas from early times to the middle of the nineteenth century, at which time the subject became a comparatively clearly defined set of principles and doctrines. Special attention is given to the development of the mercantilist, physiocratic, classical, nationalist, historical, and socialist schools of political economy. Seniors only. *Two hours a week.*

Mr. Melder

92. Development of Economic Thought.—The evolution of economic theory from the middle of the nineteenth century to the present. The new approach of the Austrian school is used as a background for the development of the neo-classical school. Contemporary developments in theory by European and American economists are investigated in their relation to certain movements of the times such as the growth of corporations, and the rise of political and economic dictatorships. Seniors only. *Two hours a week.*

Mr. Melder

HISTORY AND GOVERNMENT

Associate Professor Dow; Associate Professor Whitmore; Assistant Professor Wood; Assistant Professor Wilson; Dr. Morrow

Coöperating members of the Department:

Dr. Huddilston, Professor of Ancient Civilization

Dr. Peterson, Lecturer in Latin-American History

History

History includes in one continuous narrative the story of mankind so far as it is known. Courses offered by the Department of History and Government are limited to selected periods which seem significant for the present generation. History is more than "past politics"—it includes economic, social, intellectual, artistic, and scientific events. It deals with ages, races, and social movements, attempting to interpret its materials in such a way as to throw light on our present complex civilization and the future course of events.

Students may elect a major in history, or in government. They may combine history and government courses, or include work in related fields, such as economics, sociology, English, philosophy, and psychology. Courses numbered above fifty are not open to freshmen or sophomores. Major students are given a comprehensive examination near the end of their senior year, after completing Courses 97 and 98.

Teacher Training

Students majoring in other departments who intend to teach history, civics, or social science, should follow a program approved by the Department. The following courses comprise a satisfactory minor: 3, 4, or 31, 32; 11, 12, or 17, 18; 97; four credit hours chosen from courses numbered above fifty.

1, 2. Ancient Civilization.—This course has to do with the achievements of the Greeks and Romans in laying the foundations of Western life and thought. Some examination is made of Egyptian and Eastern civilization as the background of classical life and action. An important part of the course lies in the emphasis that is given to the Greek thought and Roman rule in the midst of which Christianity sprang up. Textbook, lectures, and notebook. *Three hours a week.* Mr. Huddilston

3, 4. United States History.—From the organization of the new government in 1789 to recent years. The work will cover such topics as the development of democracy, growth of the West, slavery and sectionalism, the Civil War, reconstruction, social status of the negro, the making of modern America, industrialization, imperialism, Theodore Roosevelt, Woodrow Wilson. Open only to freshmen except by consent of the instructor. *Three hours a week.* Mr. Whitmore, Mr. Morrow

11, 12. European History.—A survey of Europe from the decline of Rome to the present time, designed to show how modern Europe came into existence in its political, social, and economic aspects. Brief attention is also given to the most important cultural developments. The work of the first semester will include such subjects as the rise of the Christian church, the medieval empire, the origins and growth of national states, the rise of towns and the beginnings of capitalism, and the Protestant and Catholic reformations. In the second semester the evolution of the Western State System, the "revolutions" which lie at the basis of modern social and economic life, the unification of Germany and Italy, the genesis of the World War, and the problems of the post-war period will be studied. *Three hours a week.* Miss Wilson

17, 18. History of England.—From earliest times to the present. The political aspects are emphasized, with some attention to social and economic factors. Stress is placed upon the development of parliamentary government and the evolution of modern England and the British Commonwealth of Nations. *Three hours a week.* Mr. Wood

21 (22). Current World Problems.—A course designed for those who wish to be intelligently informed on world affairs, but do not make history their major subject. Lectures and discussions on outstanding problems of history, government, and politics. Open to all students in the University except freshmen. *Two hours a week.* Members of the Department

53. The French Revolution.—This course is a study of a revolutionary epoch. An analysis of the "Age of Enlightenment" forms an introduction to the destruction of the Old Regime, the achievements of the Constituent Assembly, the conflicts of the Convention, the Terror, and the reaction of Thermidor. The rise of Napoleon, the founding of the Empire and its collapse are studied with a view to their permanent effect upon the modern world. Prerequisite, Course 11, 12. *Three hours a week.* Miss Wilson

54. Europe Since 1870.—The causes of the World War are sought in a study of nationalism, imperialism, and the international anarchy which these engendered. The peace treaties are studied as the origin of current problems. The revolutions following the war, especially the Russian Revolution, the rise of fascism and Hitlerism are analyzed with a view to determining new trends in Europe. Prerequisite, Course 11, 12. *Three hours a week.*
Miss Wilson

55, 56. Ancient History.—The work of the first semester centers on the nations of the Near East whose civilization culminated before 500 B.C., such as Assyria and Babylonia. Special attention is given to the contributions of Egyptian, Babylonian, Hittite, and Cretan cultures. The second semester follows the Mediterranean, passing in review important factors in Phoenician, Greek, and Roman history. Only students majoring in history may take this course except on arrangement with the instructor. Investigation of assigned topics, special reports, and discussions. *Three hours a week.*
Mr. Huddilston

57. American Colonial History, 1607-1688.—The founding and the political, social, and economic development of the colonies in the seventeenth century. English colonial policy of the Commonwealth and the Restoration periods. Permission of the instructor required. *Two hours a week.*
Mr. Whitmore

59. Social and Industrial History of England.—This course begins with the manorial system and comes down to the present, with emphasis on the economic revolution and the nineteenth century. The breakdown of the feudal system, rise of the guilds, overseas expansion, the agrarian revolution, free trade, chartism, the rise of the labor party, etc. Prerequisite, six hours of history or economics. *Two hours a week.* Mr. Wood

60. Social and Industrial History of the United States.—A study of economic and social movements in the United States from the colonial period to the present. Included are such topics as colonial production and commerce; agricultural development in the South and West; commerce, labor, and the farmer in the machine age. Prerequisite, same as for Course 59. *Two hours a week.* Mr. Wood

62. Maritime History of the United States.—Ships and trade from Colonial days to the present, with emphasis on shipbuilding and shipping in New England, New York, and Maryland. The following topics are illustrative: ships and great ship builders; evolution from wood to iron and steel ships; California and the clippers; the effect of the Civil War and the World War on our merchant marine. Permission of the instructor required. *Two hours a week.* Mr. Whitmore

64. Canadian History.—Beginning with the period of early French colonization, and stressing the French background in Canadian life, the political and economic development of Canada is traced to the present. Prerequisite, one course in American history, or permission of the instructor. *Two hours a week.* Mr. Wood

65, 66. Latin-American History.—The colonization, formation, and development of the Latin-American republics with special attention to Mexico and the Argentine Republic. Emphasis on the salient features of their civilization, problems and possibilities, and relations with foreign nations. Prerequisites, a year each of United States and European history, or other work which may be considered an equivalent. Not given in 1935-36. *Two hours a week.* Mr. Peterson

79, 80. The Cultural and Intellectual History of Europe from the Fourth to the Sixteenth Century.—This course follows the declines and advances of civilization from the end of the Roman period to the beginning of modern times. Such subjects will be considered as the science, religion, and philosophy of the transition period; contacts with Mohammedan civilization; the scientific renaissance; the rise of the universities; art and architecture; the Italian renaissance. Each student will select one subject for special study. Prerequisite, Course 11, or permission of the instructor. Not given in 1935-36. *Three hours a week.* Miss Wilson

81, 82. The Far East.—An account of the history, politics, and international relations of the leading nations of Asia, leading to an appraisal of the present situation in the Far East. Special attention is given to China, Japan, and Russia in Asia. Prerequisite, six hours of history. *Three hours a week.*

97. Historical Material.—A course designed to aid the student in research and historical writing, through a study of the theory and the mechanics of original investigation. Primarily intended for history majors, it also offers practical training for seniors in English and the social sciences. The student's ability to make an original study of some subject will be tested by a term paper. *Three hours a week.* Mr. Wood

98. Seminar.—This course is designed to round out the work of students majoring or concentrating in history and government, and also to aid them in developing one or more special interests to carry with them in after life. Individual and group conferences are held and special work assigned to fit the needs of each student. *Three hours a week.*

Members of the Department

Government

The study of government covers the making and enforcing of laws and the administration of public affairs. It is concerned with the origin of government, with its development and functioning and with the possibilities for improvement. The student devotes more time to the effects of an all-pervading social enterprise than he does to the mechanism of state machinery. He observes and evaluates facts and attempts to form objective opinions, to the end that government may become, in the words of Emerson, "the greatest science and service of mankind."

31. The National Government of the United States.—The organization, powers, and activities of the Federal government. The primary purpose of this course is to aid the student to understand the working of his government and some of its vital problems. *Three hours a week.* Mr. Dow

32. State and Local Government.—The first half-semester is devoted to state and local governments; this is followed by a study of national political parties. Party growth and functions, public opinion and propaganda, machines and bosses, voting, conventions and elections, these are illustrative topics. Special attention will be paid to present-day problems facing the major parties. A continuation of Course 31. *Three hours a week.* Mr. Dow

34. Municipal Government and Administration.—The relation of urban government to modern civilization. Lectures and discussions on such topics as mayor and city-manager forms of government, elections, graft and bosses, city planning, zoning, law enforcement, traffic, fire protection, parks, schools. Spring semester. *Three hours a week.* Mr. Dow

35. Comparative Government.—A study of governments, political parties, and current problems in the leading nations of the world, with the emphasis on Europe, England, and the Dominions. Fall semester. *Three hours a week.* Mr. Dow

73. International Relations.—A survey of the problems of international life arising out of nationalism, imperialism, race conflicts, etc. How these problems are met by treaties, conferences, and such agencies as the

Permanent Court and the League of Nations. Prerequisite, six hours of history. *Three hours a week.* Mr. Morrow

74. American Foreign Relations.—The relations of the United States to the outside world. Such policies will be examined as the Monroe Doctrine, Pan-Americanism, and the "Open Door." Attention will be paid to our attitude on the acquisition of territory, arbitration, limitation of armaments, the League of Nations. Prerequisite, Course 3, 4, or 31, or 73. *Three hours a week.* Mr. Morrow

77, 78. The Middle Ages.—This course provides a more advanced study of the period from 500 to 1500 than can be undertaken in Course 11, 12. Emphasis will be given to a study of medieval institutions: feudalism, the Church, the Empire, and medieval monarchy. Special attention will be paid to social and economic matters and their relation to cultural developments. The eastward expansion of the German people, Slavic Europe and its connections with the West, and the westward advance of Asiatic peoples will be studied as an introduction to modern problems in the Near East. Prerequisite, Course 11, 12. *Three hours a week.* Miss Wilson

83, 84. The American Constitution.—The origin and development of our constitution and courts, from the framing of the historic document to the latest amendment. The lives of famous judges; court organization and procedure; regulation of commerce; protection of life, liberty and property—these are some of the subjects studied. Non-technical and intended for the general student as well as those who are preparing for law schools. Open to students who have had Courses 3, 4, or 31, 32. Not given in 1935-36. *Three hours a week.* Mr. Dow

87, 88. International Law.—Historical and non-technical treatment of such matters as the development of international law, discovery and occupation of territory, recognition of governments, maritime law, arbitration, land and sea warfare. For general and pre-legal students who have had six hours of history. *Three hours a week.* Mr. Dow

99, 100. Political Theory.—A survey of the classics of political theory from Plato to the present day. Reading, lectures, and discussion of Aristotle, Machiavelli, Paine, Rousseau, Jefferson, Mill, Spencer, Laski, and others. Given in case of sufficient demand. *Three hours a week.* Mr. Dow

ART HISTORY

Professor Huddilston

1, 2. Masterpieces of Art.—A general course covering the most distinctive values of art in the great periods, with special regard to architec-

ture as a key to the spirit of the ages. Lectures and interpretations from photographs. Not open to students who have taken Courses 3 or 4. *Two hours a week.*

3. Renaissance Art.—Mainly a study of the Florentine and Venetian painters. Given in 1935-36. *Three hours a week.*

4. Art in America.—A course of lectures on the relation of the fine arts to national culture and spirit. Designed to throw light on the history of the United States and to stimulate a broader interest in art appreciation particularly as affecting the public mind and reflecting national spirit. Open to all students except freshmen. *Three hours a week.*

5. Greek Art.—A course on the understanding and enjoyment of architecture and sculpture as developed by the ancient Greeks. Fundamental for art appreciation. Textbook, lectures, and photographs. Given in 1934-35 and alternate years. *Three hours a week.*

MUSIC

Professor Sprague

The objective of the music curriculum is two-fold. Certain subjects offered are aesthetic and cultural in character, designed as music's contribution toward a well-rounded college education, the aim being to make understanding and discriminative listeners. Other subjects are designed to broaden the knowledge and technique of active musicians, both professional and avocational, as a cultural influence upon modern life.

3, 4. Music Appreciation.—A study of the masterpieces of music from the standpoint of the listener, analytical rather than historical. The vital forces and personalities in the development of the art are noted briefly, but the chief stress is laid upon the music itself. The evolution of form traced from the folk-song to the symphony. Lectures, illustrations, prescribed readings, reports. *Two hours a week.*

5, 6. Introductory Harmony.—The grammar of music, basic to an understanding of music structure, the foundation of the art of composition; a study of the conditions under which tones sound together and progress in combination; the invention and harmonization of melodies. A knowledge of notation is required. *Two hours a week.*

7, 8. Advanced Harmony.—Supplementary to Course 5, 6 and designed to apply to the more advanced problems of tone combination the training already obtained. Emphasis placed upon harmonic analysis, melody writ-

ing, and composition in the simpler forms. Assigned problems. Given in 1935-36 and alternate years. *Two hours a week.*

9, 10. Counterpoint.—The art of combining melodies, a correlative with Harmony as the material of composition. Freedom and facility of expression in all the forms of music writing is developed through its study and practice. Original work is the chief aim of the course. Course 5, 6 a prerequisite. Given in 1934-35 and alternate years. *Two hours a week.*

11, 12. Music in the Nineteenth Century.—A survey of the rise of Romanticism, including the evolution of the modern orchestra and its attendant art products, the symphonic poem and the music drama. Analysis of master works; prescribed readings and reports. Given in 1935-36 and alternate years. *Two hours a week.*

13, 14. Orchestration.—A study of the modern symphony orchestra, its instrumental individualities and groupings; analysis of representative works through score-reading, phonographic records, and attendance at concerts. Assigned readings in history and theory; practical scoring, with performance of successful class work. Candidates must satisfy the instructor of the proper degree of musicianship. Given in 1934-35 and alternate years. *Two hours a week.*

25, 26. University Chorus.—The history, development, and interpretation of choral music, with application to the ensemble study and public performance of representative compositions. A satisfactory test of musical aptitude and permission of the director of music a prerequisite. *Two hours a week. One credit hour.*

51. Interpretation and Conducting.—A consideration of the problems of organizing bodies of singers and players, of time-beating, of program building, and of interpretation as applied to the rehearsal and performance of choral and orchestral music. Membership in the University chorus, orchestra, or band a prerequisite. Open to juniors and seniors of sufficient talent. *Two hours a week.*

Applied Music Study

Students desiring further applied music study may obtain both instrumental and vocal instruction at the Northern Conservatory of Music in Bangor. The University approves and encourages the aim of students to develop talent in musical performance as an adjunct of a college education and an asset in life.

DIVISION III. MATHEMATICS AND THE NATURAL SCIENCES

MATHEMATICS

Professor Hart; Professor Willard; Associate Professor Bryan; Associate Professor Jordan; Assistant Professor Lucas; Mr. Silverman; Mr. Stewart; Mr. Lamoreau

In general, the function of the Department of Mathematics is two-fold. On the one hand it acts as a service department for the College of Technology and to a lesser extent for the College of Agriculture. In this capacity it strives to give the students of those colleges training in mathematics sufficient to enable them to carry forward successfully their technical studies.

On the other hand the department offers courses to students who are interested in mathematics as a preparation for the profession of teaching. It gives training to this class of students so that they are prepared to do graduate work in mathematics or to teach the subject in any preparatory or high school. The department also supplies adequate mathematical foundation for students in the College of Arts and Sciences who are interested in the application of mathematics to the study of the physical, biological, and social sciences.

Students whose major subject is mathematics are required to take Courses 1, 2 (unless offered for admission), 3, 5, 6, 7, 8, and to elect other courses to a total of forty hours. At least twelve hours must be chosen from Courses 51, 52, 53, 54, 56, 61, 63, 64, and Astronomy 15, 16, 59, and 60. Mechanics 51 and 52 may be substituted for ten hours of the above group. Astronomy 11 may be taken as a mathematics elective. Students majoring in mathematics who intend to teach are advised to elect Courses 26, 63, and 64 as well as several courses in physics.

1. Trigonometry.—The trigonometric functions, radian measure, functions of two or more angles, logarithms, trigonometric equations, inverse functions, solution of right and oblique triangles. *Two hours a week.*

Mr. Willard, Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Silverman, Mr. Stewart, Mr. Lamoreau

2 (21). Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. Open to all freshmen who did not offer solid geometry for admission. *Three hours a week.* Mr. Silverman

3. College Algebra.—A brief review of radicals, the theory of exponents, logarithms, quadratic equations, the binomial theorem, determinants, theory of equations. *Two hours a week.*

Mr. Willard, Mr. Bryan, Mr. Silverman, Mr. Stewart, Mr. Lamoreau

5. Advanced Algebra.—Topics in college algebra not covered in Course 3. Open to students who have taken Courses 1, 2, and 3, and to freshmen with especially good high-school preparation. *Three hours a week.*

Mr. Lucas

6. Analytic Geometry.—The point, line, circle, and conic sections; higher plane curves; elements of solid analytic geometry. Open to students who have had Courses 1 and 3; the equivalent of Course 2 is desirable. *Four hours a week.*

Mr. Willard, Mr. Bryan, Mr. Silverman, Mr. Stewart, Mr. Lamoreau

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions, successive differentiation, differentials, rates, maxima and minima, expansion of functions, series. Open to students who have taken Courses 1, 3, and 6. *Five hours a week.*

Mr. Willard, Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Stewart, Mr. Lamoreau

8. Calculus.—A continuation of Course 7. Integration of the elementary forms; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.*

Mr. Willard, Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Stewart, Mr. Lamoreau

9, 10. Trigonometry and Its Applications.—A course in trigonometry given to freshmen in Forestry. This course is similar to Course 1 but is considerably more extensive and contains more applications. *Two hours a week.* Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Lamoreau

13. Spherical Trigonometry.—An elementary course with problems and applications to spherical astronomy. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Silverman

17. Mathematical Theory of Investment.—A study of interest, both simple and compound, present value, discount, and annuities. Throughout the course numerous problems are solved to illustrate the theory and to fix the principles involved. *Two hours a week.*

Mr. Silverman, Mr. Stewart

18. Mathematical Theory of Investment.—A continuation of Course 17. A study of amortization, the valuation of bonds, sinking funds and depreciation, building and loan associations; also the theory of probability and its application to life annuities and certain problems connected with life insurance. *Two hours a week.* Mr. Stewart

19, 20. The Theory of Statistics.—The mathematical part of elementary statistics covering the following topics: tabulation and graphic representation of data; averages and variability; the normal probability distribution; simple and multiple correlation, correlation ratio, intraclass correlation, measuring relationship of qualitative data; chi-square test; index numbers. Prerequisite, Courses 1, 3 and 6. Given in 1934-35 and alternate years. *Two hours a week.* Mr. Bryan

26. College Geometry.—An elementary course in modern synthetic geometry. The nine-point circle, harmonic section, poles and polars, Ceva's theorem, Menelaus's theorem are among the topics considered. Emphasis is placed on the solution of original exercises. *Three hours a week.* Mr. Lucas

51. Advanced Analytic Geometry.—Review of the fundamentals of Course 6; advanced theory of the conic sections; the general equation of the second degree in two variables; transformation of coördinates; polar coördinates; higher plane curves. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Hart

52. Solid Analytic Geometry.—An introductory course. Among the topics considered are coördinates in three-dimensional space; lines and planes; types, classification, and properties of quadric surfaces; transformation of coördinates. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Hart

53, 54. Advanced Calculus.—Continuation of Course 7, 8. Partial differentiation and its applications; application of calculus to solid geometry; series, including power series and Fourier series; double and triple integration, line integrals; complex numbers, hyperbolic functions. *Three hours a week.* Mr. Lucas

56. Differential Equations.—A course in the solution of ordinary differential equations and their applications. Emphasis is laid on the methods used in solving equations of the common types. Open to students who have taken Course 7, 8. *Three hours a week.* Mr. Willard

61. History of Mathematics.—This course covers the important developments in mathematics from the beginnings of the subject to the present time. In addition to the factual content of the course, special attention is given to the development of various branches of mathematics; such as geometry,

trigonometry, algebra, analytic geometry, and the calculus. Certain topics of general interest are considered; such as the number concept, theory of numbers, and the establishing of graduate mathematics in America. Lectures, reference studies, and recitations. Prerequisites, Courses 1, 3, 6, 7. Courses 2, 26, 8 and a reading knowledge of French and German are desirable. Certain of the above prerequisites may be waived in the case of an experienced teacher who desires to take this course. Such students should consult with the head of the department. Given in 1934-35 and alternate years. *Two hours a week.*

MR. BRYAN

63, 64. TEACHERS COURSE IN MATHEMATICS.—This course is designed to give opportunity for the study of the kind of mathematics suitable for the secondary school from the point of view of modern mathematics. It includes a consideration of the continuity of the subject matter of secondary school mathematics, and of the selection of topics for the curriculum and their arrangement and presentation. Current topics also are discussed; such topics include professionalized subject matter, reports of important committees, and the teaching of secondary school mathematics in other countries. Through conferences, students who so desire may make a study of the teaching of college mathematics. Lectures, recitations, and individual studies. Prerequisites, Courses 1, 3, 6, 7. Certain of the above prerequisites may be waived in the case of an experienced teacher who desires to take this course. Such students should consult with the head of the department. Given in 1935-36 and alternate years. *Three hours a week.* MR. BRYAN

68. THEORY OF NUMBERS.—A study of the elements of the theory of algebraic numbers. The discussions will consider the divisibility of integers, congruences, and quadratic residues in the rational realm. Given in 1934-35. *Three hours a week.* MR. BRYAN

73, 74. ADVANCED STATISTICS.—Derivations of formulas, proofs of propositions, discussions of preferential methods of correlation and of procedure, investigations by individuals and by groups. Prerequisite, Course 19, 20. Not given in 1934-35. *Three hours a week.* MR. BRYAN

The department is also prepared to give the following courses, which may be offered when there is sufficient demand: 65. THEORY OF EQUATIONS; 66. MODERN PROJECTIVE GEOMETRY; 71, 72. MODERN HIGHER ALGEBRA; 101. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE; 102. ELLIPTIC FUNCTIONS; 105. VECTOR ANALYSIS; 109. CELESTIAL MECHANICS; 110. HYDRODYNAMICS; 115. THEORY OF FUNCTIONS OF REAL VARIABLES; 116. FOURIER'S SERIES; 117. THEORY OF SUBSTITUTION GROUPS AND OF ALGEBRAIC FIELDS; 118. THEORY OF TRANSFORMATION GROUPS (LIE THEORY); 119, 120. DIFFERENTIAL GEOMETRY.

ASTRONOMY

Professor Willard; Associate Professor Jordan; Mr. Lamoreau

The courses in astronomy aim to meet the demands of students seeking a knowledge of the subject for purposes of general culture, and for technical or professional uses. Opportunity is offered for students to acquire such information as will enable them to appreciate more fully the universe in which they live. Courses may be selected which provide instruction in instrumental astronomy and observatory practice.

10. Descriptive Astronomy. An elementary course. The textbook is supplemented by informal lectures, illustrated by lantern slides, drawings of celestial objects, and work in the observatory. Open to all students. *Three hours a week.* Mr. Jordan

11. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes, and the establishment of meridian lines. Open to students who have taken Mathematics 1 and 3. *Two hours a week* with additional hours for observation.

Mr. Jordan, Mr. Lamoreau

15, 16. General Astronomy.—Designed for students in mathematics and physics and others wishing a more complete treatment of the subject than is possible in Course 10. Recitations, lectures, solution of problems, observations with instruments in the observatory. Open to sophomores, juniors, and seniors who have had Mathematics 1. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Jordan

59, 60. Practical Astronomy.—The theory and use of the astronomical transit, zenith telescope, and equatorial; accurate determination of time and latitude. Open to students who have taken Mathematics 6, 7, 8, and Astronomy 10 or 15. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Jordan

PHYSICS

Professor Fitch; Associate Professor Crofutt; Assistant Professor Bennett; Dr. Larsen; Mr. Allen

Physics is concerned primarily with energy and its transformations. The courses in this department are designed to lead the student to a clearer un-

derstanding of these transformations as they affect our modern life. They seek to explain the basis upon which our highly mechanized contemporary civilization rests.

1, 2. General Physics.—This course covers the fundamental relations in mechanics, sound, heat, electricity, magnetism, and light. It is required for all advanced work in the department and meets the requirement for entrance to engineering, medical, and dental schools. It is recommended to all students who wish a working knowledge of the subject of physics. There are no prerequisites except a knowledge of algebra and geometry. *Two lectures, three recitations, and one two-hour laboratory period a week. Five credit hours.* Mr. Bennett, Mr. Fitch, Mr. Crofutt, Mr. Larsen, Mr. Allen

10. Meteorology.—This is a study of the earth's atmosphere, its composition and movements. It includes a study of the atmospheric conditions accompanying changes in weather, a knowledge of which is essential for making weather predictions. A knowledge of high-school physics is assumed. *Three hours a week. Three credit hours.* Mr. Allen

15. History of Physics.—A study of the lives and theories of those men who have contributed most to the advancement of physics. Given in 1934-35 and alternate years. *Three hours a week. Three credit hours.* Mr. Fitch

21 (22). Mechanics and Heat Laboratory.—A laboratory course including problems in acceleration, moments of inertia, elasticity, viscosity, heat of combustion, thermal constants of materials, and pyrometry. The physical principles are stressed. Course 1, 2 is a prerequisite. *Four hours a week. Two credit hours.* Mr. Larsen

23, 24. Electrical Measurements.—A course in the theories and practices in the measurement of electrical and magnetic quantities. It includes a study of current, resistance, difference of potential, capacitance, magnetic flux, self and mutual inductances, impedance, and frequency of alternating currents. Open to those who have completed Course 1, 2 and who have a working knowledge of the calculus. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Crofutt

55, 56. Electricity and Magnetism.—The physical and mathematical relations involved in dealing with problems in electrostatics and direct-current phenomena are considered the first semester. The second semester is devoted to a study of magnetism and alternating currents. Course 1, 2 and a working knowledge of the calculus are required. Given in 1934-35 and alternate years. *Two hours a week. Two credit hours.* Mr. Bennett

58. Mathematical Physics.—An advanced course in which experimental data are examined and their mathematical relations deduced. The complex quantity will be used in problem solution in alternating currents. Some attention will be given to high-frequency phenomena. Open to students who have completed Course 1, 2 and who have a working knowledge of the calculus. Given in 1935-36 and alternate years. *Three hours a week. Three credit hours.* Mr. Fitch

59. Sound.—A course dealing with vibrating systems, sources of sound, transmission of sound, its reception and transformations. Attention is given to speech and hearing, sound ranging, architectural acoustics, reproduction of sound, noise reduction, and musical instruments. Open to those who have completed Course 1, 2 and have a working knowledge of the calculus. Given in 1934-35 and in alternate years. *Three hours a week. Three credit hours.* Mr. Crofutt

61. Heat.—A course dealing with the measurement of temperature, specific heat, thermal expansion, conduction, convection, radiation, change of state, and the production of high and low temperatures. Open to students who have completed Course 1, 2 and who have a working knowledge of the calculus. Given in 1935-36 and in alternate years. *Three hours a week. Three credit hours.* Mr. Crofutt

65. Vacuum Tubes.—A course treating the physics of vacuum tubes. This covers their use as rectifiers, amplifiers, modulators, detectors as well as their construction. Open to advanced students who are familiar with the calculus. Given in 1935-36 and in alternate years. *Two hours a week. Two credit hours.* Mr. Fitch

66. Vacuum Tube Laboratory.—This covers in the laboratory the same material as was covered in the classroom in the preceding course. Open to those who have completed Course 65 or its equivalent. *Laboratory, two hours a week. One credit hour.* Mr. Fitch

69. Modern Physical Theories.—This deals with electrical phenomena in gases, spectra, X-rays, thermionic emission, photo-electric effects, radioactivity, atomic structure, and electrical phenomena in solids. Some attention is given to quantum and wave mechanics. Open to students who have completed Course 1, 2 and can use the calculus. Given in 1935-36 and alternate years. *Three hours a week. Three credit hours.* Mr. Crofutt

73. Light.—An advanced course in the study of light covering its velocity of propagation, reflection, refraction, diffraction, and polarization. It also includes a study of optical instruments. Open to advanced students who can use the calculus. Given in 1934-35 and alternate years. *Three hours a week. Three credit hours.* Mr. Fitch

74. Light Laboratory.—This is a laboratory course covering the same field as Course 73 which is prerequisite to it. Given in 1934-35 and alternate years. *Laboratory, four hours a week. Two credit hours.*

Mr. Larsen

81, 82. Advanced Laboratory.—The experimental solution of some problem chosen by the student and a member of the department. In this course the student gets an idea of research by actually taking data on an original problem. All seniors in the department are expected to take this course for one semester. Laboratory, *two or more hours a week. One or more credit hours.* Mr. Fitch, Mr. Crofutt, Mr. Bennett

101, 102. Special Laboratory.—An original investigation, open only to graduate students. It is not expected in this course that the student will confine his work to a minimum number of hours a week. *Five or more credit hours.* Mr. Fitch, Mr. Crofutt, Mr. Bennett

CHEMISTRY

Professor Brautlecht; Professor Bray; Associate Professor Brann; Associate Professor Jenness; Assistant Professor Otto; Assistant Professor Gilliland; Mr. Caulfield; Mr. Osborn; Mr. Bogan; Mr. Tomlin; Mr. Martin

Chemistry is a natural physical science which has to do with substances and their changes. It is an experimental science and is closely associated with our modern civilization and our economic life. Educationally, its objective is to furnish some understanding of the substances which make up the earth, air, and animal and plant products, and of the changes associated with such substances. It is applied to industry, agriculture, food, clothing, shelter, and health and disease. An adequate knowledge of chemistry is required in the study of modern medicine, and analytical chemistry is frequently recommended in the preparation for the study of law. Thus the fundamentals of chemistry are applicable to many spheres of human interest and, in general, aid in providing some foundation for the enrichment of life.

The science and mathematics group requirement in the College of Arts and Sciences may be met by completing Course 1, 2.

Students taking chemistry as a major subject in the College of Arts and Sciences must complete satisfactorily Courses 1, 2, 31, 40, 51, 52, 71 and 72. Some biological science is required, also some mathematics and physics.

1, 2. General Chemistry.—This course deals with the general principles of the science and the elements of qualitative analysis. Lecture, *one*

hour a week; recitation, *one hour a week;* laboratory, *four hours a week.* One breakage card. *Four credit hours.*

Mr. Jenness and Members of the Departmental Staff

1a, 2a. General Chemistry.—A course similar to Course 1, 2, but for students who have not submitted units in chemistry for entrance requirements. Lecture and recitation, *three hours a week* (the second recitation period is optional for those students doing satisfactory work) ; laboratory, *four hours a week.* One breakage card. *Four credit hours.* Equivalent to 1, 2.

Mr. Jenness and Members of the Departmental Staff

31. Qualitative Analysis.—This course includes a thorough and extended study of the general reactions of substances with their qualitative separation and identification and the examination of industrial and commercial products. Prerequisite, Course 1, 2. Lectures and recitations, *two hours a week;* laboratory, *eight hours a week.* Two breakage cards. *Five credit hours.* Mr. Otto

37. History of Chemistry.—Recitation, *one hour a week. One credit hour.* Mr. Gilliland

40. Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric, volumetric, and electrolysis methods. Prerequisite, Course 31. Classroom, *one hour a week;* laboratory, *eight hours a week.* Two breakage cards. *Four credit hours.* Mr. Otto

42. Chemical and Engineering Computations.—Computation procedures employed by chemists and chemical engineers, including use of slide rule, logarithms, etc. Lectures and recitations, *two hours a week. Two credit hours.* Mr. Otto, Mr. Jenness

51, 52. Organic Chemistry.—Lectures, recitations, and laboratory work. Course 31 is prerequisite. For juniors. Classroom, *three hours a week;* laboratory, *four hours a week.* Two breakage cards. *Five credit hours.*

Mr. Gilliland, Mr. Osborn

71, 72. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures, recitations, and laboratory. Prerequisite, Chemistry 40. Calculus and physics are desirable. Classroom, *three hours a week;* laboratory, *four hours a week.* One breakage card. *Five credit hours.*

Mr. Brann, Mr. Tomlin

97, 98. Methods of Teaching Chemistry.—Administration, supervision, costs, discipline, subject matter, questioning, the project method, true and false question tests, texts, examinations, lesson planning, grading or scoring, high-school chemistry, history of the teaching of chemistry, kinds

of courses, laboratory arrangement, purchase of supplies and equipment, laboratory instruction, etc. Course 31 is prerequisite. Classroom, *two hours a week. Two credit hours.* MR. BRAUTLECHT

Other courses in the Department of Chemistry not listed here are described under the College of Technology.

GEOLOGY

These and other courses in Geology are described under the Department of Civil Engineering in the College of Technology.

12. ECONOMIC GEOGRAPHY.—An investigation of the geographical character and economic resources of various subdivisions of the world as determining their position in world trade and commerce. The subject includes such factors as geography, history, natural resources, economics, manufacturing, and customs as they affect trade relations. No prerequisite. Classroom, *three hours a week. Three credit hours.* MR. CHASE

13. PHYSICAL GEOLOGY.—An introduction to the dynamic and structural features of geology. The materials and structures and the geological agents and processes which act upon the materials are treated in a general manner. The relationship of these features of geology to mankind is presented throughout the course. No prerequisite. Classroom, *three hours a week. Three credit hours.* MR. CHASE

14. HISTORICAL GEOLOGY.—A study of the past history of the Earth. The distribution of land and sea areas, the prevailing types of rock, climatic conditions through each successive period. The type of life characteristic of each age and its development will be discussed. Course 13 or 16 is prerequisite. Classroom, *three hours a week. Three credit hours.* MR. CHASE

BOTANY

Courses in the Department of Botany are described under the College of Agriculture.

ZOOLOGY

PROFESSOR MURRAY; ASSISTANT PROFESSOR PACKARD; ASSISTANT PROFESSOR MORTENSEN; DR. NELSON; MR. FLYNN; MR. MENDALL

Zoology is the branch of biological science which deals with the study of animal life. A knowledge of the general principles of zoology is prerequisite

to an understanding of the relationships which exist between man and his animal environment, and serves as a basis for the study of the mental and social side of human behavior.

The department offers introductory courses for students who desire a survey of the whole field, and advanced courses for those who seek training in specific subjects. Curricula of courses prerequisite for admission to graduate, medical, dental, and nursing schools are also offered.

1. General Zoology.—A one-semester course in the fundamentals of zoology, illustrated by laboratory study of typical forms from the various groups of the animal kingdom. This course is designed to meet the requirements of students in the College of Agriculture. Together with Botany 2 it may be taken to fulfill the science requirement in the College of Arts and Sciences. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* Mr. Murray, Miss Mortensen

3, 4. Animal Biology.—A two-semester course in the fundamental principles of animal life, with laboratory study of the structure and function of organ systems in typical forms from the various groups of the animal kingdom. This course is prerequisite to all advanced courses in the department and fulfills the science requirement in the College of Arts and Sciences. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* Mr. Murray, Mr. Flynn

5. Elementary Physiology and Hygiene.—The principles of anatomy, physiology, and hygiene applied especially to human well-being. Required of all first-year women except those in the Department of Home Economics. Classroom, *two hours a week. Two credit hours.* Miss Mortensen

6. Ornithology.—A course which deals with the characteristics of birds, their life histories, economic importance, and aesthetic value. Lectures are supplemented by laboratory study of skins and mounted specimens and by directed field observation. Open to qualified students. Classroom, *one hour a week;* laboratory, *four hours a week. Three credit hours.* Mr. Mendall

8. Invertebrate Zoology.—A study of invertebrate animals with reference to their anatomy, life histories, and phylogenetic relationships. The course is designed for students interested in aquatic or marine biology, and serves as a basic course for summer work at the Lamoine Marine Laboratory. Open to qualified students. Classroom, *one hour a week;* laboratory, *four hours a week. Three credit hours.* Miss Mortensen

12. Anatomy and Physiology.—A course which takes up the general principles of animal life and the structure and function of organs and organ systems, with special emphasis placed on higher mammalian forms. Designed

for students in the Department of Home Economics, but open, by permission of the instructor, to all qualified women students. Classroom, *three hours a week;* laboratory, *four hours a week. Five credit hours.*

Mr. Murray, Mr. Packard

15, 16. Comparative Anatomy.—A comparative study of the structure, origin, and history of the vertebrate organ-systems. Prerequisites, Zoology 1 and Botany 2, or Zoology 3, 4, passed satisfactorily. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.*

Mr. Nelson, Mr. Mendall

18. Vertebrate Embryology.—A study of the development and formation of tissues, organs, and organ-systems in vertebrates. Prerequisite, Course 15, 16, passed with a grade of C or better. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* Mr. Flynn

37, 38. General Physiology.—A study of the physico-chemical forces of the vital processes of plants and animals; the more special phenomena in higher animals, with their bearing on human physiology. Prerequisites, two years of chemistry, one year of physics, and either Zoology 3, 4, or Zoology 1 and Botany 2. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* Mr. Packard

41. Histology.—A study of animal tissues and of the methods of preparing microscopic slides. Admission by arrangement with the instructor. Prerequisite, two years of zoology. Classroom, *one hour a week;* laboratory, *six hours a week. Three credit hours.* Mr. Nelson, Mr. Mendall

44. Biological Theories.—A discussion of the more important generalizations concerning the biological sciences designed to portray the growth and development of biological knowledge as a phase of intellectual culture, and to indicate the value of such knowledge to human welfare. Open only to zoology majors in the junior and senior years and to others upon the written approval of the instructor. Classroom, *two hours a week. Two credit hours.*

Mr. Nelson

47, 48. Problems in Zoology.—Open to juniors and seniors who may have special interest, and special qualification, in some phase of zoology. The approval of the instructor concerned must be obtained before registering for this work. *Credit to be arranged in each case.* Mr. Murray

55, 56. Zoological Seminar.—A consideration of the historical and current literature which expresses the trends of thought in biological science. Required of all senior majors and graduates majoring in zoology. Classroom, *one hour a week. One credit hour.* The Staff

Opportunity is given for graduate work in the various phases of zoology under the direction of the members of the Department. Students with adequate preparation may register by special written permission for the following courses:

105, 106. Problems in Zoology.

111, 112. Problems in Physiology.

School of Education

FACULTY OF INSTRUCTION

Olin Silas Lutes, Ph.D., *Dean and Professor of Education*
Ava Harriet Chadbourne, Ph.D., *Associate Professor of Education*
Ernest Jackman, A.M., *Associate Professor of Education*
John Raymond Crawford, Ph.D., *Assistant Professor of Education*
Edith Grace Wilson, M.A., *Instructor in Education*
Charles Lester Smith, A.B., *Instructor and Critic Teacher*
Veysey Hiram Robinson, B.Pd., *Instructor and Critic Teacher*
Grace Stetson Grant, A.B., *Critic Teacher*
Helen Louise Hathorne, B.A., *Critic Teacher*
Alice Lowe Brown, A.B., *Critic Teacher*
Sadie Jane Thompson, M.S., *Critic Teacher*
Horace Alcander Croxford, B.A., *Critic Teacher*
Caroline Ella Collins, B.A., *Critic Teacher*

Heads of coöperating Departments of the Colleges of Arts and Sciences and Technology.

Charles Andrew Brautlecht, Ph.D., *Professor of Chemistry and Chemical Engineering*
Milton Ellis, Ph.D., *Professor of English*
François Joseph Kueny, L. ès L., *Professor of French*
Edward French Dow, Ph.D., *Associate Professor of History and Government*
George Davis Chase, Ph.D., *Professor of Latin*
Harley Richard Willard, Ph.D., *Professor of Mathematics*
Albert Lewis Fitch, Ph.D., *Professor of Physics*
Charles Alexius Dickinson, Ph.D., *Professor of Psychology*
Joseph Magee Murray, Ph.D., *Professor of Zoology*

GENERAL INFORMATION

The School of Education offers professional training to secondary teachers, superintendents, principals, and supervisors. Students will ordi-

narily enter with Junior standing, having had the first two years of work in either a liberal arts college or a normal school. Those with a different type of training may enter as special students until Junior standing is attained.

ADMISSION

Students in the College of Arts and Sciences

Those students in the College of Arts and Sciences of the University of Maine who plan to teach are given the opportunity to transfer to the School of Education at the beginning of their junior year. Such students should take the regular course as prescribed by the College of Arts and Sciences during the freshman and sophomore years, including in particular the course in General Psychology and such basic courses in other fields as will lay the foundation for a field of concentration.

At the beginning of the sophomore year, such students should register their intention to teach in the office of the Dean of the School of Education, and secure his approval as well as the approval of the Dean of the College of Arts and Sciences for their courses of study.

To be admitted to the School of Education students must have made a grade of C or better in at least three-fourths of their entire work during the freshman and sophomore years.

These students will be candidates for the degree of Bachelor of Arts in Education on the completion of their program in the School of Education.

Normal School Graduates

Graduates of the two-year course in normal schools who rank in the upper half of their graduating class, and who are recommended for college work by their principal, will be admitted to the School of Education with Junior standing. These graduates will be given fifty-four semester hours of advanced credit and by carrying a full program may graduate on the completion of two years of work. This rule is subject to modification if experience should warrant it. Successful teaching experience will be taken into consideration in passing on qualifications for admission.

Graduates of three-year training courses for junior high school teachers may be admitted in the same manner and be given eighty hours of credit and Senior standing. This will make it possible to complete the requirements for graduation in a year and one or two summer sessions, depending on how heavy a program is carried.

All normal school graduates will be expected to meet the requirement of a field of concentration in academic subjects, except that those who plan to enter administrative or supervisory work, or to remain in elementary school work, may be permitted to take this work in Education and Psychology. In either case any work previously taken at the normal school which lies within the field chosen will be given due credit toward the requirements.

Normal school graduates who are interested in entering the School of Education should request their principal to send a transcript of their record together with a statement giving their class rank to the Registrar of the University. These should be accompanied by a recommendation of the candidate by the principal.

Students who come from the normal schools will ordinarily be candidates for the Bachelor of Science in Education degree.

Graduates from the normal training departments of commercial schools approved by the State Department of Education for such work, whose ranks have placed them in the upper half of their graduating class, and who have had two years of successful teaching experience, may be admitted to the School of Education with a maximum of forty semester hours of advanced credit.

Graduates of other types of teacher-training institutions will be considered on their merits as special cases.

GRADUATION REQUIREMENTS

A total of 125 semester hours of college work is required for graduation. Of this total, approximately 24 hours will be required in Education and Psychology, and 40 to 50 hours in the field of concentration, all of which must be carried with a grade of C or better.

In addition, three-fourths of all work counted toward a degree must be completed with a grade of C or better.

Professional Subjects Required

Ed 29 (or 30)—Practice Teaching
Ed 51, 52, 53, or 54—History of Education
Ed 59—Principles of Secondary Education
Ed 65 (or 66)—Educational Measurement
Ed 77 (or 78)—Principles and Methods of High School Teaching
Py 1, 2—General Psychology
Py 66—Educational Psychology
Special Methods (one such course to be selected in a subject within the field of concentration)

Besides these specific requirements in strictly professional subjects, students will be strongly advised to take general courses in a number of subjects of vital importance as a part of the background of any teacher or educator, such as biology, economics, English, history and government, and sociology.

Field of Concentration

In order better to meet the needs of the typical high-school situation, the traditional requirement of a single major subject will be replaced by that of a field of concentration in the academic subjects. This field of concentration must include a minimum of 40 to 50 semester hours in a group of related subjects commonly taught in the secondary schools, the exact amount to depend on the number and character of the subjects combined, and the quality of the work done. This work must be carried with a grade of C or better to qualify for a degree in Education, and must be acceptable to the heads of the departments in which it is taken.

This requirement applies to all students whether working for the Bachelor of Arts in Education or the Bachelor of Science in Education degree. However, those who have had teaching experience and who plan to enter administrative, supervisory or elementary school work may be permitted to carry their field of concentration in Education and Psychology instead of academic subjects.

Combinations of subjects which occur frequently in the secondary schools are as follows: French and Latin; English and History; Mathematics and the Natural Sciences; English and Latin; English and French; History and Latin; English, French, and Latin; English, History, and Latin; English, History, and French; History, Civics, Economics, and Sociology.

Subjects which occur in a large variety of combinations are Physical Education, Music, Debating, and Dramatics. Each student will be expected to take sufficient work to attain proficiency in at least one of these fields.

COMPREHENSIVE EXAMINATIONS

Beginning with the Class of 1935 seniors in the School of Education will take a comprehensive oral examination in the subject of education, to be given individually by arrangement during the month of May. Non-resident students will be expected to take the examination beginning with the class of 1936.

The main purpose of this requirement is to enable students in education to develop a better integration of their professional training and outlook. To facilitate this purpose and to compensate in part for the lack of a tutorial

system which usually accompanies a system of comprehensive examinations, a new course, Education 49 (50), is required of students one semester during their senior year.

HONORS COURSE

Attention is called to the tutorial honors course which is open to superior students in education who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section on General Courses.

RESIDENCE REQUIREMENT

A minimum of thirty semester hours of credit must be earned while in residence at the University to qualify a candidate for a degree. This requirement may be met by one academic year of residence, or in case of teachers by attendance in summer sessions. Four summer sessions may be accepted as the equivalent of one academic year provided the work is of distinctly high quality. In either case, this requirement must ordinarily be met after the student has become a candidate for a degree in the School of Education.

Exceptions to these rules will not be permitted except by a vote of the faculty.

A maximum of sixteen semester hours may be earned toward a degree by extension work, of which not over eight hours may be taken by correspondence.

DEGREES

(1) Bachelor of Arts in Education. This degree will be given to students who do the first two years of work in the College of Arts and Sciences, or the equivalent thereof, meet their entrance requirements, and their curricular requirements for the first two years. Candidates for this degree will be required to complete a minimum of 40 to 50 hours in a group of related academic subjects which are commonly taught in the public schools, with a grade of C or better.

(2) Bachelor of Science in Education. This degree will be given to students who are admitted from normal schools with advanced standing. Requirements for the degree will include a field of concentration in the academic subjects as for the B.A. degree, and the same professional courses.

In meeting both these requirements, however, due credit will be given for the courses which have been previously taken in the normal school course.

PROFESSIONAL CERTIFICATES

On the successful completion of the above program students will be recommended to the State Department of Education for the Professional Secondary Certificate.

Students will be recommended for the various Special Certificates on the satisfactory completion of programs of study which have been approved by the State Department. Such programs are now under preparation in Physical Education, Music, and Junior High School Education.

Courses of Instruction

For courses in Psychology, see Department of Psychology in the College of Arts and Sciences

29 (30). Supervised Student Teaching.—A course in student teaching in academic subjects. Open to a limited number of seniors recommended by the Dean of the School of Education and approved by the heads of the academic departments. Preference is given to those who have completed Education 77 or 78. *Five hours a week* for nine weeks. *Two hours credit.*
Mr. Jackman

43 (44). Character Education.—A study of the nature of character and a critical appraisal of the means employed to cultivate it in young people with reference to theories of mental hygiene and progressive education. Prerequisite, Psychology 1, 2. *Three hours a week.* Miss Wilson

49 (50). Education Seminar.—This course is required of seniors in education one semester, and is designed to help integrate the various courses in education for the comprehensive examination. *Two hours a week.*
Departmental Staff

51. History of Education in the United States.—Evolution of education, educational institutions, school systems and practices of the American people. Open to juniors and seniors. *Three hours a week.*
Miss Chadbourne

52. History of Education in Maine.—A study of the evolution of the educational system in the State from its earliest period to the present time. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

53. History of Ancient and Medieval Education.—Historical analysis and interpretation of the more important elements in modern education derived from the Hebrews, Greeks, Romans, Middle Ages, and Renaissance. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

54. History of Modern Education.—Evolution of present-day educational theory; institutions and practices of modern civilizations from the time of the Reformation up to the present. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

56. History of Education of Women.—A study of the development of the education of women from the time of the Greeks to the present, with an especial emphasis on American education. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

59. Principles of Secondary Education.—A course in the application of the principles of education with special reference to the problems of high-school teaching. The aims of secondary education in a democracy in terms of skills, knowledges, tastes, and ideals which are demanded in modern life. Primarily for juniors and seniors. Open to sophomores by permission. *Three hours a week.* Mr. Lutes

61. School Administration.—The general problems of school organization and administration in the United States. Primarily for seniors. Open by permission. *Three hours a week.* Mr. Lutes

62. Secondary School Administration and Supervision.—A practical course for those who are looking forward to positions as high-school principals or supervisors. Problems of organization, teacher selection and rating, improvement of teachers in service, salary schedules, extra-curricular activities, testing programs, and techniques of supervision will be emphasized. Primarily for seniors. Open by permission. *Three hours a week.* Mr. Lutes

63. Junior High School Methods.—The course aims to present a theory of the junior high school based upon the psychology of adolescence, and to show the concrete consequences of such theory in the formation and treatment of a desirable curriculum. Open to juniors and seniors. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Jackman

65 (66) Educational Measurements.—An introduction to educational measurements including principles of measurement; informal, standard, and group mental testing; and the uses of elementary statistics in educational measurements. Open to juniors and seniors. *Three hours a week.* Mr. Crawford

68. Vocational and Educational Guidance.—The aim is to present to prospective teachers the general problem of guidance in junior and senior high schools, with especial reference to the vocational phase, organization for guidance, necessary materials and techniques of counseling. Open to juniors and seniors. *Three hours a week.* Mr. Jackman

71. Psychology of Secondary Education.—A study of the adolescent age and its characteristics. Psychological principles which determine the scope and character of secondary education. Open to students who have passed Psychology 1, 2 with a grade of C; to others by permission. *Three hours a week.* Mr. Lutes

74. Extra-Curricular Activities in the Secondary School.—This course is designed to acquaint the prospective high-school teacher with the nature and scope of non-academic cultural and recreational activities related to the needs of adolescence, and to aid the teacher in developing a technique

for their promotion, and for their correlation with the usual academic courses. Given in 1934-35 and alternate years thereafter. *Two hours a week.*

MR. JACKMAN

75. TEACHING THE SOCIAL SCIENCES IN SECONDARY SCHOOLS.—The purpose of the course is to acquaint the prospective teacher of the social sciences with a point of view and vital methods of presentation that will tend to make these subjects effective in the everyday problems of living. Geography, biology, psychology, economics, political science, ethics, history and sociology are considered, the greater emphasis being placed on the subjects likely to appear in the average high-school curriculum. Open to juniors and seniors. Given in 1935-36 and alternate years. *Two hours a week.*

MR. JACKMAN

77 (78). PRINCIPLES AND METHODS OF TEACHING IN SECONDARY SCHOOLS.—A general course in methods for prospective high-school teachers. Open to seniors and juniors who have had General Psychology. *Three hours a week.* MR. JACKMAN

81. SUPERVISION IN THE ELEMENTARY SCHOOL.—This course will attempt to define the duties of the administrative officer of the elementary school in so far as such duties are concerned with supervision and improvement of instruction. The theory of supervision in general and specific methods of supervision of the prominent elementary school subjects will be considered. Open to normal school graduates, and students with teaching experience. Others by permission. *Two hours a week.* MR. CRAWFORD

84. ADMINISTRATION OF THE ELEMENTARY SCHOOL.—A course for prospective superintendents and elementary school principals. The following topics will be considered: origin of the elementary school, the meaning of elementary education, the place of the elementary school in our total school system, and duties of the administrative officer, such as, personnel problems, curricular and instructional material selection, time allotment, and reports. Open to normal school graduates and students with teaching experience; to others by permission. *Two hours a week.* MR. CRAWFORD

95, 96. PHILOSOPHY OF EDUCATION.—A course for seniors and graduate students designed primarily for the reading and discussion of conflicting factors in education with a view to their criticism and coördination. *Two hours a week.* MISS CHADBOURNE

97, 98. CURRENT PROBLEMS IN EDUCATION.—Each student is assigned special problems in the field of education. Primarily for majors in education. Open by permission to others. Seniors only. *Two hours a week.*

MR. LUTES AND STAFF

105. Methods of Research in Education.—A course in principles and techniques of educational research. Designed primarily for graduate students writing theses in education. Opportunity will be afforded to use thesis problems to illustrate the principles and techniques emphasized in the course. This course will be required of graduate students majoring in education. *Two hours a week.* Mr. Lutes

College of Technology

FACULTY OF INSTRUCTION

Paul Cloke, E.E., Eng.D., *Dean of the College of Technology and Director, Maine Technology Experiment Station*
Charles Partridge Weston, C.E., M.A., *Professor of Mechanics*
William Edward Barrows, B.S., E.E., *Professor of Electrical Engineering*
William Jordan Sweetser, S.B., *Professor of Mechanical Engineering*
Charles Andrew Brautlecht, Ph.D., *Professor of Chemistry and Chemical Engineering*
Embert Hiram Sprague, B.S., *Professor of Sanitary Engineering*
Arthur St. John Hill, E.E., M.S.E., *Professor of Electrical Engineering*
Benjamin Calvin Kent, B.S., *Professor of Engineering Drafting*
Paul DeCosta Bray, B.S., Ch.E., *Professor of Pulp and Paper Technology*
Weston Sumner Evans, M.S., *Professor of Civil Engineering*
Alpheus Crosby Lyon, S.B., C.E., *Associate Professor of Civil Engineering*
Bertrand French Brann, S.M., *Associate Professor of Chemistry*
Harold Walter Leavitt, C.E., M.S., *Associate Professor of Civil Engineering*
Walter Joseph Creamer, B.S., E.E., B.A., *Associate Professor of Electrical Communication*
Harry Dexter Watson, M.S., *Associate Professor of Mechanical Engineering*
Lyle Clayton Jenness, M.S., *Associate Professor of Chemistry*
Carl Everett Otto, Ph.D., *Assistant Professor of Chemistry*
Everett Louis Roberts, B.S., *Assistant Professor of Electrical Engineering*
Irving Henry Prageman, Ph.B., M.E., *Assistant Professor of Mechanical Engineering*
Earl Maynard Dunham, M.A., *Assistant Professor of Engineering Drafting*
William Lester Gilliland, Ph.D., *Assistant Professor of Chemistry*
Everett Willard Davee, *Instructor in Mechanical Engineering*
Everett Joshua Felker, B.S., *Instructor in Civil Engineering*
Harry Roy Perkins, *Instructor in Mechanical Engineering*
John George Leslie Caulfield, M.S., *Instructor in Pulp and Paper Technology*

KENNETH GERARD CRABTREE, S.B., *Instructor in Electrical Engineering*
THERON ALONZO SPARROW, B.S., *Instructor in Mechanical Engineering*
LAWRENCE LEWIS OSBORN, A.M., *Instructor in Chemistry*
EDGAR JUNIOR BOGAN, A.M., *Instructor in Chemistry*
RALPH ALBERT SAWYER, B.S., *Instructor in Engineering Drafting*
LEONIDAS DACOSTA STEPHENSON, JR., B.S., *Instructor in Civil Engineering*
WILBUR EVERETT TOMLIN, A.M., *Instructor in Chemistry*
WARREN HERBERT BLISS, M.S., *Instructor in Electrical Engineering*
HUGH DONALD CHASE, S.M,. *Instructor in Civil Engineering*
FREDERIC THURMAN MARTIN, Ph.D., *Instructor in Chemistry*
CECIL CLOUGH TYRRELL, M.S., *Instructor in Mechanical Engineering*
GERTRUDE ELVIRA EBBESON, B.Arch., *Special Lecturer in Engineering Drafting*
NEIL MOODY CALDERWOOD, B.S., *Graduate Assistant in Personnel*
HERBERT BURR ABBOTT, *Mechanician in Mechanical Engineering*
RALPH FREEMAN BOWDEN, *Electrician in Electrical Engineering*

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, various branches of engineering and Pulp and Paper Technology. The various engineering curricula have been arranged to fit the needs of most students. Although not stated in the outline of courses, bands of electives have been arranged for the student having decided aptitudes or preference, so that a sequence of studies in any one of several groups of non-technical subjects, which will especially train him for work in those fields in which he is interested, may be pursued. These elective groups are: (1) mathematics and science, (2) economics and psychology, (3) history, psychology, and sociology, (4) foreign language, (5) literature.

Those students showing marked inventive or research abilities are guided to studies in mathematics and science; those with tendencies for commercial or managerial work are advised to elect the second or third group; and for the students with strong preference for language or literature, the fourth and fifth groups are provided.

Orientation lectures, which engineering freshmen are required to attend, and conferences with faculty advisers during his first year are designed to assist the freshman in the final selection of his course.

Under each of the curricula described below is given a tabulated statement of the subjects pursued and the amount of work required. The college comprises:

Chemical Engineering Curriculum
Chemistry Curriculum
Civil Engineering Curriculum
Electrical Engineering Curriculum
General Engineering Curriculum
Mechanical Engineering Curriculum
Pulp and Paper Technology Curriculum

The following requirements for graduation are common to all curricula in this college:

1. A total of 143 semester hours exclusive of military and physical training. Three of these hours may be for thesis.
2. Drawing, four semester hours.
3. Language: English and Public Speaking, twelve semester hours with a minimum of two semester hours and a maximum of four semester hours of Public Speaking.
4. Mathematics, eighteen semester hours.
5. Military science, seven semester hours. Physical Training, two years.
6. Science: Chemistry, eight semester hours; Physics, ten semester hours.

At graduation in any of these curricula the student receives the degree of Bachelor of Science.

Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he may receive the degree of Master of Science. Five or more years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive a professional degree.

HONORS COURSE

Attention is called to the tutorial honors course which is open to superior students in engineering who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section devoted to General Courses.

MAINE TECHNOLOGY EXPERIMENT STATION

Staff and Assistants

Paul Cloke, E.E., Eng.D., *Director*
Harold Walter Leavitt, C.E., M.S., *Secretary*

WILLIAM EDWARD BARROWS, B.S., E.E., *Professor of Electrical Engineering*
CHARLES ANDREW BRAUTLECHT, Ph.D., *Professor of Chemistry and Chemical Engineering*
PAUL DECOSTA BRAY, B.S., Ch.E., *Professor of Pulp and Paper Technology*
WESTON SUMNER EVANS, M.S., *Professor of Civil Engineering*
WILLIAM JORDAN SWEETSER, S.B., *Professor of Mechanical Engineering*
ARTHUR ST. JOHN HILL, E.E., M.S.E., *Professor of Electrical Engineering*
EMBERT HIRAM SPRAGUE, B.S., *Professor of Sanitary Engineering*
WALTER JOSEPH CREAMER, B.S., E.E., B.A., *Associate Professor of Electrical Communication*
LYLE CLAYTON JENNESS, M.S., *Associate Professor of Chemistry*
WILLIAM LESTER GILLILAND, Ph.D., *Assistant Professor of Chemistry*
CARL EVERETT OTTO, Ph.D., *Assistant Professor of Chemistry*
WARREN HERBERT BLISS, M.S., *Instructor in Electrical Engineering*
ROGER LEE ANNIS, M.S., *Research Assistant in Chemistry*
EDNA R. BISHOP OTTO, A.M., *Research Assistant*
HORACE ASA PRATT, B.S., *Assistant Engineer*
WILLIAM FRANCIS SCAMMAN, M.A., *Editor of Bulletins*
JOHN H. SWEATT, B.A., *Bituminous Chemist for the State Highway Commission*
CLAYTON LEONARD SAWYER, *Highway Laboratory Assistant*

General Statement

By action of the Board of Trustees, June, 1915, the establishment of a Maine Technology Experiment Station was authorized. This station is under the direct control of the Dean of the College of Technology and the heads of the departments.

Income

The income of the Station is derived from University appropriations and from the State Highway Department.

Object

The objects of the Station are to carry on practical research in engineering subjects, make investigations for State boards and municipal authorities, furnish scientific information to the industries of the State, and distribute accurate scientific knowledge to the people of the State.

Equipment

Most of the Station offices and laboratories are at present located in Wingate Hall, described in the section on University buildings. The station is well equipped for the testing of concrete and highway materials, both bituminous and non-bituminous. Crosby laboratory is available for researches in the fields of hydraulics, steam-engineering, gas-engineering, metallography, and strength of materials. The new electrical power laboratory in Lord Hall includes among its equipment a 150,000 volt testing transformer and standard instruments for calibration purposes. The new communication laboratory in this building offers facilities for telephone transmission testing and radio research. The Department of Pulp and Paper Technology in Aubert Hall is equipped for the testing of pulp and paper products. The highway materials laboratory in the basement of Wingate Hall is equipped jointly by the Civil Engineering Department and the Maine State Highway Department.

Investigations

The principal line of research has been in the field of concrete and concrete materials. Some work has also been started in the pulp and paper industry. Researches are also being conducted in the electrical, mechanical, and chemical fields. Recently a State Highway Materials Survey, in cooperation with the Maine State Highway Commission, has been completed. Approximately three thousand samples of sand, gravel, and rock have been located and tested for suitability for highway use. Volume I, Parts I and II, has already been published.

Publications

The Station issues two series of publications: Bulletins and Papers. It has issued thirty Bulletins and fifteen Papers. The papers have been issued as reprints from such technical journals and magazines as: Proc. Nat. Acad. of Sciences, Proc. Am. Soc. Testing Materials, Proc. Am. Conc. Inst., Proc. Am. Soc. Civil Eng., Electrical Engineering, Journal Me. Assoc'n of Engrs., Industrial and Engineering Chemistry.

CURRICULA

FRESHMAN YEAR

Common to all engineering courses and Chemistry

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. Cr.				Rec.	Lab. Cr.
Ch	1	Gen. Chem. or Adv. Gen. Chem.	2	4 4	Ch	2	Gen. Chem. or Adv. Gen. Chem.	2	4 4
Eh	1	Comp. & Lit.	3	0 3	Eh	2	Comp. & Lit.	3	0 3
Md	1	Funds. Draft.	0	4 2	Md	2	Ely. Mach. Draft.	0	4 2
Ms	1	Trigonometry	2	0 2	Ms	6	Anal. Geom.	4	0 4
Ms	3	Algebra	2	0 2	Mt	2	Military	2	1 1½
Mt	1	Military	2	1 1½	Ps	2	Elec., Mag., Light, and Sound	5	2 5
Ps	1	Mech. & Heat.	5	2 5					
Pt	1	Phy. Education	0	2 0	Pt	2	Phy. Education	0	2 0
Gc	5	Orientation	1	0 ½	Gc	6	Orientation	1	0 ½

Chemical Engineering Curriculum

This curriculum is offered to furnish training in engineering and chemistry. The first two years are almost identical with those under the Chemistry curriculum, but in the junior and senior years, the students enrolled take, in part, fundamental courses in mechanics, mechanical and electrical engineering, etc., while in the Chemistry curriculum students take subjects having a chemical and general scientific objective. Chemical engineering graduates will be prepared to enter the profession of chemical engineering and to occupy positions as production foremen, research chemists, chemists, and engineers in industrial plants, in Federal and other government civil service laboratories, and in bleacheries, dye houses, chemical plants, rubber works, gas works, sugar refineries, etc. Some chemical engineering students also pursue advanced work and enter the fields of law, medicine, and teaching.

FRESHMAN YEAR

Common to all engineering courses. Outlined above.

The student must register for all courses listed in the first group for his year. Courses not italicized in this group *must be passed* before he is eligible

for graduation. Courses in italics, if failed, may have an approved elective substituted for them.

From the elective list the student must select three additional hours' credit in Chemistry courses, five in other engineering departments, two in English or Public Speaking, and sufficient additional hours to bring his total to that required by the college, namely, 143 exclusive of Military. See also statements on pages 212 and 213.

SOPHOMORE YEAR

Fall Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	31	Qual. Anal.	2	8	5
Ms	7	Diff. Calculus	5	0	5
Mt	3	Military	2	1	2
Pb	1	Pub. Speaking	2	0	2
Ps	*23*	*Elec. Meas.*	*0*	*3*	*1½*
Pt	3	Phy. Education	0	2	0
		Electives	—	—	3-5

Spring Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	40	Quant. Anal.	1	8	4
Me	*28*	*Kinematics*	*2*	*0*	*2*
Ms	8	Int. Calculus	5	0	5
Mt	4	Military	2	1	2
Ps	*24*	*Elec. Meas.*	*0*	*3*	*1½*
Pt	4	Phy. Education	0	2	0
		Electives	—	—	4-6

SUGGESTED ELECTIVE COURSES

Elective Band 1

Ch	37	Hist. of Chem.	1	0	1
Fr	5	Adv. French	3	0	3
Gm	1	First-Yr. German	5	0	5
Me	9	Machine Work	0	4	1½

Elective Band 2

Es	1a	Prin. of Econ.	3	0	3
Es	1b	Prin. of Econ.	2	0	2
Md	3	Des. Geometry	0	6	2

Elective Band 3

Es	1	Prin. of Sociology	3	0	3

SUGGESTED ELECTIVE COURSES

Elective Band 1

Ch	42	Chem. Computations	2	0	2
Ch	44	Metallurgy	3	0	3
Ch	48	Mineralogy	1	4	3
Fr	6	Adv. French	3	0	3
Gm	2	First-Yr. Ger.	5	0	5
Me	10	Machine Work	0	4	1½
Ps	10	Meteorology	3	0	3

Elective Band 2

Ce	12	Economic Geog.	3	0	3
Es	2a	Prin. of Econ.	3	0	3
Es	2b	Prin. of Econ.	2	0	2
Md	4	Adv. Mach. Drafting	0	6	2

Elective Band 3

Es	2	Prin. of Soc.	3	0	3

		Elective Band 4				Elective Band 4		
Fr	5	Adv. French 3	0	3	Fr	6 Adv. French 3	0	3
Gm	1	First-Yr. German 5	0	5	Gm	2 First-Yr. Ger....5	0	5
		Elective Band 5				Elective Band 5		
Eh	7	Second-Yr. Comp. 3	0	3	Eh	8 2nd-Yr. Comp. ..3	0	3
					Pb	2 Pub. Speaking...2	0	2

JUNIOR YEAR

Fall Semester					*Spring Semester*			
Subject			Hours		Subject		Hours	
			Rec.	Lab. or Comp.	Cr.		Rec.	Lab. or Comp.	Cr.
Ch	51	Organic Chem....3	4	5	Ch	52 Organic Chem...3	4	5
Ch	71	Phys. Chem. 3	4	5	Ch	72 Phys. Chem.....3	4	5
Mn	53	Mechanics 3	0	3	Ee	30 D. C. Machinery 2	0	2
		Electives .....—	—	5-8	Mn	54 Mechanics 3	0	3
						Electives .....—	—	3-6
		Suggested Elective Courses				Suggested Elective Courses		
		Elective Band 1				Elective Band 1		
By	1	Bacteriology and 0	6	3	Ce	14 Hist. Geology...3	0	3
By	3	Bacteriology 2	0	2	Ch	62 Technical Anal. .1	8	4
Ce	13	Phys. Geology....3	0	3	Me	66 Machine Design.2	3	3
Ch	61	Adv. Quant. Anal. 1	8	4	Ms	56 Diff. Equations..3	0	3
Pa	65	Pulp Technology 2	0	2	Pa	66 Pulp Technology 2	0	2
Ps	61	Heat 3	0	3				
Ps	69	Mod. Phys. Theories 3	0	3				
		Elective Band 2				Elective Band 2		
Es	51	Corp. Finance....3	0	3	Es	52 Social Con. of Ind. 3	0	3
Es	73	Labor Problems ..3	0	3				
Ms	17	Invest. Theory ...2	0	2	Ms	18 Invest. Theory..2	0	2
Py	1	Gen. Psychology..3	0	3	Py	2 Gen. Psychology 3	0	3
Py	5	App. Psychology 3	0	3	Py	6 App. Psychology 3	0	3
					Py	12 Advertising 3	0	3

		Elective Band 3					Elective Band 3	
Hy	73	Inter. Relations	3	0	3	Hy 74	Amer. For. Relations	3 0 3
Py	1	Gen. Psychology	3	0	3	Py 2	Gen. Psychology	3 0 3
Py	5	App. Psychology	3	0	3	Py 6	App. Psychology	3 0 3
						Py 12	Advertising	3 0 3
		Elective Band 4					Elective Band 4	
		Fr. or German	3	0	3		Fr. or German	3 0 3
							Elective Band 5	
						Eh 78	Creative Writing	3 0 3

SENIOR YEAR

Fall Semester			Hours			*Spring Semester*			Hours		
Subject			Rec.	Lab. or Comp.	Cr.	Subject			Rec.	Lab. or Comp.	Cr.
Ch	77	Industrial Chem.	3	0	3	Ch	78	Els. of Chem. Eng.	3	0	3
Ch	*93*	*Econ. of Chem.*	*2*	*0*	*2*	Ch	80	Inorg. Chem. Tech.	2	0	2
Ee	31	Alter. Curr.	2	0	2	*Ch*	*94*	*Econ. of Chem.*	*2*	*0*	*2*
Ee	33	Elec. Lab.	0	3	1½	Me	40	Mechanical Lab.	0	3	1½
Eh	*5*	*Technical Comp.*	*2*	*0*	*2*	*Me*	*98*	*Management*	*2*	*0*	*2*
Me	43	Heat Engineering	3	0	3			Electives	—	—	7-11
		Electives	—	—	4-8						

Suggested Elective Courses						Suggested Elective Courses					
		Elective Band 1						Elective Band 1			
Ce	35	Hydraulics	2	0	2	Ce	26	Hydraulics	3	0	3
Ch	49	Thesis	Arr.		1-3	Ch	50	Thesis	Arr.		1-3
Ch	75	Microscopy	0	6	2	Ch	76	Microscopy	0	6	2
Ch	91	Adv. Org. Chem.	3	0	3	Ch	92	Adv. Org. Chem.	3	0	3
Ch	95	Electro-Chem.	3	0	3	Ch	96	Electro-Chem.	3	0	3
Ch	101-107	Investigation	Arr.		0-3	Ch	102-108	Investigation	Arr.		0-3
Gm	15	Scientific German	2	0	2	Gm	16	Sci. German	2	0	2
Mn	101	Adv. Mechanics	2	0	2	Mn	102	Adv. Mechanics	2	0	2
Ms	53	Adv. Calculus	3	0	3	Ms	54	Adv. Calculus	3	0	3
Pa	87	Paper Testing & Analysis	0	4	2						

		Elective Band 2					Elective Band 2		
Ce	17	Econ. Geology....2	0	2	Ms	20	Theory of Stat...2	0	2
Ms	19	Theory of Stat...2	0	2	Py	82	Mental Measurement 1	4	3
Py	81	Mental Measurement 1	4	3					
		Elective Band 3					Elective Band 3		
Hy	21	Cur. World Prob. 2	0	2	Hy	22	Cur. World Prob. 2	0	2
Py	81	Mental Measurement 1	4	3	Py	82	Mental Measurement 1	4	3
		Elective Band 4					Elective Band 4		
Gm	15	Scientific German 2	0	2	Gm	16	Sci. German 2	0	2
		Elective Band 5					Elective Band 5		
Eh	9	Modern Lit.....2	0	2	Eh	10	Modern Lit.....2	0	2

Credit will not be given for election of courses covering substantially the same ground as another elected or required course that has been passed, i.e., Ce 35 and Ce 26.

Students desiring to elect any course not on a suggested list may do so only with approval of the major instructor. Such free electives will be limited in number.

Since every university granting the Ph.D. degree requires a reading knowledge of both French and German, it is advisable for the student who may possibly continue with graduate work to be prepared in this respect.

Chemistry Curriculum

This curriculum is designed to give the student not only a thorough technical training, but also a breadth of education which will enable him readily to undertake the great variety of problems which naturally present themselves to a chemist. It differs from the Chemical Engineering curriculum in that the student takes some secondary courses having a general scientific objective instead of secondary courses of an engineering type. The curriculum is a broad one and prepares the student for teaching or for the profession of analytical or research chemist in experiment stations, food laboratories, in dye, chemical, fertilizer, and tanning plants; and for many branches of the government civil service, and the general consulting and analytical work of a professional chemist. Some graduates also pursue advanced studies and enter fields of law, medicine, and teaching.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

The student must register for all courses listed in the first group for his year. Courses not italicized in this group must be passed before he is eligible for graduation. Courses in italics, if failed, may have an approved elective substituted for them.

From the elective list the student must select twelve additional hours credit in Chemistry or Biochemistry courses, ten in any other sciences, two in English or Public Speaking, and sufficient additional hours to bring his total to that required by the college, namely, 143, exclusive of Military.

SOPHOMORE YEAR

Fall Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	31	Qual. Anal.	2	8	5
Ch	*37*	*Hist. of Chem.*	*1*	*0*	*1*
Ms	7	Diff. Calculus	5	0	5
Mt	3	Military	2	1	2
Pt	3	Phy. Education	0	2	0
		Electives	—	—	5-8

Spring Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	40	Quant. Anal.	1	8	4
Ms	8	Int. Calculus	5	0	5
Mt	4	Military	2	1	2
Pb	2	Pub. Speaking	2	0	2
Pt	4	Phy. Education	0	2	0
		Electives	—	—	5-8

Suggested Elective Courses

Elective Band 1

Fr	5	Adv. French	3	0	3
Gm	1	First-Yr. German	5	0	5
Ps	23	Elec. Meas.	0	3	1½
Zo	3	Animal Biology	2	4	4

Elective Band 2

Es	1a	Prin. of Econ.	3	0	3
Es	1b	Prin. of Econ.	2	0	2

Suggested Elective Courses

Elective Band 1

Ch	42	Chem. Computations	2	0	2
Ch	44	Metallurgy	3	0	3
Ch	48	Mineralogy	1	4	3
Fr	6	Adv. French	3	0	3
Gm	2	First-Yr. Ger.	5	0	5
Ps	10	Meteorology	3	0	3
Ps	24	Elec. Meas.	0	3	1½
Zo	4	Animal Biology	2	4	4

Elective Band 2

Ce	12	Economic Geol.	3	0	3
Es	2a	Prin. of Econ.	3	0	3
Es	2b	Prin. of Econ.	2	0	2

		Elective Band 3					Elective Band 3		
Es	1	Prin. of Sociology	3	0	3	Es 2	Prin. of Soc.	3	0	3
		Elective Band 4					Elective Band 4		
Fr	5	Adv. French	3	0	3	Fr 6	Adv. French	3	0	3
Gm	1	First-Yr. German	5	0	5	Gm 2	First-Yr. Ger.	5	0	5
		Elective Band 5					Elective Band 5		
Eh	7	Second-Yr. Comp.	3	0	3	Eh 8	2nd-Yr. Comp.	3	0	3
Pb	1	Pub. Speaking	2	0	2					

JUNIOR YEAR

Fall Semester						*Spring Semester*					
Subject			Hours			Subject			Hours		
			Rec.	Lab. or Comp.	Cr.				Rec.	Lab. or Comp.	Cr.
Ch	51	Organic Chem.	3	4	5	Ch 52	Organic Chem.	3	4	5
Ch	61	Adv. Quant. Anal.	1	8	4	Ch 72	Phys. Chem.	3	4	5
Ch	71	Phys. Chem.	3	4	5		Electives	—	—	8-11
		Electives	—	—	4-7					

Suggested Elective Courses						Suggested Elective Courses					
		Elective Band 1					Elective Band 1				
By	1	Bacteriology and	0	6	3	By 2	Bacteriology	0	6	3
By	3	Bacteriology	2	0	2	Ce 14	Hist. Geology	3	0	3
Ce	13	Phys. Geology	3	0	3	Ch 62	Technical Anal.	1	8	4
Ch	97	Teach'g of Chem.	2	0	2	Ch 98	Teach. of Chem.	2	0	2
Mn	53	Mechanics	3	0	3	Mn 54	Mechanics	3	0	3
Pa	65	Pulp Technology	2	0	2	Ms 56	Diff. Equations	3	0	3
Ps	61	Heat	3	0	3	Pa 66	Pulp Technology	2	0	2
Ps	65	Vacuum Tubes	2	0	2					
Ps	69	Mod. Phys. Theories	3	0	3					
		Elective Band 2					Elective Band 2				
Es	51	Corp. Finance	3	0	3	Es 52	Social Con. of Ind.	3	0	3
Es	73	Labor Problems	3	0	3	Ms 18	Invest. Theory	2	0	2
Ms	17	Invest. Theory	2	0	2	Py 2	Gen. Psychology	3	0	3
Py	1	Gen. Psychology	3	0	3	Py 6	App. Psychology	3	0	3
Py	5	App. Psychology	3	0	3	Py 12	Advertising	3	0	3

		Elective Band 3					Elective Band 3	
Hy	73	Inter. Relations	3	0	3	Hy 74	Amer. For. Relations	3 0 3
Py	1	Gen. Psychology	3	0	3	Py 2	Gen. Psychology	3 0 3
Py	5	App. Psychology	3	0	3	Py 6	App. Psychology	3 0 3
						Py 12	Advertising	3 0 3
		Elective Band 4					Elective Band 4	
		Fr. or German	3	0	3		Fr. or German	3 0 3
							Elective Band 5	
						Eh 78	Creative Writing	3 0 3

SENIOR YEAR

Fall Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	77	Industrial Chem.	3	0	3
Ch	*93*	*Econ. of Chem.*	*2*	*0*	*2*
Eh	5	Technical Comp.	2	0	2
		Electives	—	—	10-14

Spring Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	*94*	*Econ. of Chem.*	*2*	*0*	*2*
		Electives	—	—	15-19

		Suggested Elective Courses Elective Band 1					Suggested Elective Courses Elective Band 1			
Bc	51	Biochemistry	3	0	3	Bc 2	Biochemistry	3	4	5
Bc	57	Biological Colloids	3	0	3	Ch 50	Thesis	Arr.		1-3
Ch	49	Thesis	Arr.		1-3	Ch 76	Microscopy	0	6	2
Ch	75	Microscopy	0	6	2	Ch 80	Inorg. Chem. Tech.	2	0	2
Ch	89	Organ. Prepns.	0	4	2	Ch 90	Organ. Analysis	0	4	2
Ch	91	Adv. Org. Chem.	3	0	3	Ch 92	Adv. Org. Chem.	3	0	3
Ch	95	Electro-Chem.	3	0	3	Ch 96	Electro-Chem.	3	0	3
Ch 101	-107	Investigation	Arr.		0-3	Ch 102	-108 Investigation	Arr.		0-3
Gm	15	Scientific German	2	0	2	Gm 16	Sci. German	2	0	2
Ms	53	Adv. Calculus	3	0	3	Ms 54	Adv. Calculus	3	0	3
Pa	87	Paper Test. & Anal.	0	4	2	Pl 6	Philosophical Anal.	3	0	3
Pl	5	Philosophical Anal.	3	0	3	Pl 8	Logic	2	0	2

		Elective Band 2					Elective Band 2		
Ce	17	Econ. Geology....2	0	2	Es	16	Business Law....3	0	3
Es	53	Money & Banking 3	0	3	Es	54	Investments 3	0	3
Ms	19	Theory of Stat. ..2	0	2	Me	98	Management ...2	0	2
Py	81	Mental Measurement 1	4	3	Ms	20	Theory of Stat...2	0	2
					Py	82	Mental Measurement 1	4	3
		Elective Band 3					Elective Band 3		
Hy	21	Cur. World Prob. 2	0	2	Hy	22	Cur. World Prob. 2	0	2
Py	81	Mental Measurement 1	4	3	Py	82	Mental Measurement 1	4	3
		Elective Band 4					Elective Band 4		
Gm	15	Scientific German 2	0	2	Gm	16	Sci. German 2	0	2
		Elective Band 5					Elective Band 5		
Eh	9	Modern Lit.....2	0	2	Eh	10	Modern Lit.....2	0	2

Credit will not be given for election of courses covering substantially the same ground as another elected or required course that has been passed.

Students desiring to elect any course not on a suggested list may do so only with approval of major instructor. Such free electives will be limited in number.

Since every university granting the Ph.D. degree requires a reading knowledge of both French and German, it is advisable for the student who may possibly continue with graduate work to be prepared in this respect.

Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college curriculum to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily limited. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The endeavor is made to impress upon the mind of the student that the granting of his bachelor's degree does not create him an engineer, and to make him see that he has received only the basic mental training which will fit him to follow the profession, and that he must begin at the bottom of the

ladder of practice in order to obtain experience and judgment, without which he can never become a successful engineer.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engineering practice and with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and by those engaged only in practical work. These lectures tend to increase the interest of the student and to bring him in touch with men from outside his own institution.

The work of the first year is the same for all engineering students. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased until the senior year, when it is nearly all professional. At the beginning of the senior year an opportunity is offered to elect one of three options. The first, called Option 1, consists of work in hydraulic engineering; the second, Option 2, consists of work in highway engineering; while Option 3 is specialized along the lines of sanitary engineering.

Beginning with the summer of 1936, all Civil Engineering students will be required to attend one Summer Camp of six weeks' duration. The first summer camp will be opened in 1936.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
Ce	1	Surveying	3	0	3	Ce	16	Geol. for Engrs.	2	0	2
Ce	3	Field Work & Plotting	0	9	3	Ce	32	Sanitary Eng.	2	0	2
Md	3	Des. Geometry	0	6	2	Ms	8	Int. Calculus	5	0	5
Ms	7	Diff. Calculus	5	0	5	Mt	4	Military	2	1	2
Mt	3	Military	2	1	2	Pb	4	Debate	2	0	2
Pb	1	Pub. Speaking	2	0	2	Ps	22	Mechanics & Heat	0	4	2
Pt	3	Phy. Education	0	2	0	Pt	4	Phy. Education	0	2	0
		Elective	—	—	—			Elective	—	—	—

JUNIOR YEAR

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
As 11	Pract. Astron.		2	0	2	Ce 20	Structural & Highway Materials	1	4	3
Ce 9	R.R. Curves & Earthwork		3	0	3	Ce 26	Hydraulics	3	0	3
Ce 23	Adv. Surveying		2	0	2	Ce 52	Theory of Structures	5	0	5
Ce 25	Eng. Geology		2	2	3	Mn 52	Mechanics	5	0	5
Ce 29	Highway Const.		2	0	2		Elective	—	—	—
Mn 51	Mechanics		5	0	5					
	Elective		—	—	—					

SUMMER CAMP

Subject		Hours. Cr.
Ce 11s	Highway & Railroad Surveys	3
Ce 24s	Geodetic & Topographic Surveying	2
Ce 51s	Hydrographic Surveying	1

SENIOR YEAR

Fall Semester				*Spring Semester*			
Subject	Hours			Subject	Hours		
	Rec.	Lab. or Comp.	Cr.		Rec.	Lab. or Comp.	Cr.
Ce 57 Conc. Structures & Foundations	5	0	5	Ce 60 Drafting	0	6	2
Ce 59 Drafting	0	9	3	Ce 59 Thesis, or equal	Arr		3
Ce 49 Thesis, or equal	Arr		3	Ee 36 Alt. Currents	2	0	2
Ee 35 D. C. Machy	2	0	2	Ee 38 Elec. Lab	0	3	1½
Me 39 Mech. Lab	0	3	1½	Eh 6 Tech. Comp.	2	0	2
				Es 16 Business Law	3	0	3
Highway Option				Highway Option			
Ce 53 Hyd. Eng	0	2	1	Ce 68 Highway Design	0	4	2
Ce 63 Highway Econ	3	0	3	Ce 72 Highway Eng	2	0	2
Hydraulic Option				Hydraulic Option			
Ce 51 Hyd. Eng	0	4	2	Ce 56 Hyd. Eng	0	4	2
Ce 55 Hydrology	2	0	2	Me 78 Hyd. Lab	0	3	1½
Sanitary Option				Sanitary Option			
By 3 Bacteriology	2	0	2	By 2 Bacteriology	0	6	3
Ce 71 Water Supply	2	0	2	Ce 74 Sanitary Eng	2	0	2

Electrical Engineering Curriculum

This curriculum is intended to provide the student with a thorough understanding of the underlying principles of electrical engineering and to develop an ability to solve problems of an engineering nature from commercial as well as technical premises. To accomplish this, the student first studies the various electrical laws and methods of electrical measurements and correlates them with various laws previously assimilated in the study of physics and mathematics. These studies are followed by more advanced courses involving the fundamental electrical laws and theories and showing their application to the design, operation, and performance of electrical apparatus such as is used in the generation of electrical energy or in transforming electrical energy into mechanical energy for the various commercial requirements.

Courses in telephone and radio engineering are offered. These aim to provide the student with a thorough understanding of the basic principles of electrical communication, and to familiarize him with the design and operating characteristics of communication systems and component apparatus. Electrical reproduction of sound for motion pictures is also treated, with some emphasis on architectural acoustics, speech, and hearing. Basic work

in television and the industrial applications of vacuum tubes are made a part of the laboratory work of the department.

It is the endeavor of the department to acquaint the student with contemporary engineering practice, and, by persistent association of abstract analysis with practical problems, to equip him with the fundamentals of a successful career. Stress is laid upon the systematic reading of technical periodicals and the acquirement of a reference library. Effort is made to have lectures by active engineers and alumni following their profession, thus bringing the student into more intimate contact with the engineering world.

In addition to the purely electrical subjects, the student takes the customary work in mathematics, physics, mechanics, shop, drawing, and allied engineering courses, together with the humanistic studies enumerated below.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject		Hours			Subject		Hours		
		Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
Ee	1 Els. Elec. Eng.	2	5	4	Ee	2 Els. Elec. Eng.	2	5	4
Es	1b Prin. of Econ.	2	0	2	Es	2b Prin. of Econ.	2	0	2
Md	3 Des. Geometry	0	6	2	Md	4 Adv. Mach. Drafting	0	6	2
Ms	7 Diff. Calculus	5	0	5	Ms	8 Int. Calculus	5	0	5
Mt	3 Military	2	1	2	Mt	4 Military	2	1	2
Pb	1 Pub. Speaking	2	0	2	Pb	4 Debate	2	0	2
Py	5 App. Psychology	3	0	3	Py	6 App. Psychology	3	0	3
Pt	3 Phy. Education	0	2	0	Pt	4 Phy. Education	0	2	0

JUNIOR YEAR

Fall Semester				*Spring Semester*			
Subject	Hours			Subject	Hours		
	Rec.	Lab. or Comp.	Cr.		Rec.	Lab. or Comp.	Cr.
Ee 13 Electronics	1	3	2	Ee 16 El. Cir. & Mach.	4	0	4
Ee 15 El. Cir. & Mach.	3	0	3	Ee 18 Elec. Lab.	1	3	2½
Ee 17 Elec. Lab.	1	3	2½	Ee 22 Tel. Com.	3	0	3
Eh 5 Tech. Comp.	2	0	2	Ee 24 Tel. Lab.	0	3	1½
Es 53 Money & Banking	3	0	3	Me 44 Heat Eng.	3	0	3
or				Mn 54 Mechanics	3	0	3
Me 9 Machine Work	0	4	1½	Options (One subject required)			
or							
Ms 53 Adv. Calculus	3	0	3	Es 72 Labor Problems	3	0	3
Me 27 Kinematics	3	0	3	Me 10 Machine Work	0	4	1½
Mn 53 Mechanics	3	0	3	Ms 54 Adv. Calculus	3	0	3
				Ms 56 Diff. Equations	3	0	3

SENIOR YEAR

Subject	Hours			Subject	Hours		
	Rec.	Lab. or Comp.	Cr.		Rec.	Lab. or Comp.	Cr.
Ee 51 Alt. Cur. Appar.	4	2	5	Options (Six subjects required)			
Ee 75 Elec. Lab.	1	3	2½				
Me 45 Heat Eng.	3	0	3	Ee 56 Elec. Power Plants	3	0	3
Options (Two subjects required)				Ee 58 Elec. Transm.	2	3	3
				Ee 60 Adv. Elec. Mach.	3	0	3
Ee 61 Illum. Eng.	3	0	3	Ee 76 Elec. Lab.	1	3	2½
Ee 63 Elec. Transp.	3	0	3	Ee 84 Tel. Transm.	0	6	2
Ee 81 Comm. Eng.	0	6	3	Ee 86 Radio Eng.	3	0	3
Ee 83 Comm. Lab.	0	3	1½	Ee 88 Radio Lab.	0	3	1½
Ee 85 Radio Eng.	1	2	2	Ee 50 Thesis	Arr.		1-3
Ee 91 Theory of Elect.	2	0	2	Ee 92 Theory of Elect.	2	0	2
Es 51 Corp. Finance	3	0	3	Es 16 Business Law	3	0	3
Me 41 Mech. Lab.	0	3	1½	Me 98 Management	2	0	2
Ee 49 Thesis	Arr.		1-3				

General Engineering Curriculum

This curriculum is designed primarily to permit a selected few, preeminently capable students the opportunity of pursuing a curriculum which gives a broad emphasis on the fundamentals of engineering and to develop themselves along lines of particular aptitudes or choice. The first objective is met by including such studies as organic chemistry and biochemistry, or qualitative and quantitative analysis, metallurgy, geology, thermodynamics, the laws of the electric circuit, and the theory of structures. In addition to these studies in technical culture, a sequence of studies in any one of several groups in scientific culture, or liberal culture, is afforded.

These elective groups are: (1) mathematics and science, (2) economics and psychology, (3) history, psychology, and sociology, (4) foreign language, (5) literature.

Those students showing marked inventive or research abilities are guided to studies in mathematics and science; those with tendencies for commercial or managerial work are advised to elect the second or third group; and for the students with strong preference for language or literature, the fourth and fifth groups are provided.

Orientation lectures, which engineering freshmen are required to attend, and conferences with faculty advisers during his first year are designed to assist the freshman in the final selection of his course.

This course is also particularly adapted to the needs of the student who prefers to specialize in a graduate rather than in an undergraduate course and can utilize the latter as preparation for the former. In such a case a student at the beginning of the sophomore year would definitely select certain fundamental studies in one of the four departments: Chemical Engineering, Civil Engineering, Electrical Engineering, or Mechanical Engineering, and pursue, during the course, a sequence of studies in that department.

The Dean of the College is the adviser and registering officer for students in this course.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
Ch	31	Qual. Anal.	2	8	5	Ch	40	Quan. Anal.	1	8	4
Es	1b	Prin. of Econ.	2	0	2	Ce	16	Geology	2	0	2
Md	3	Des. Geometry	0	6	2	Ch	44	Metallurgy	3	0	3
Ms	7	Diff. Calculus	5	0	5	Es	2b	Prin. of Econ.	2	0	2
Mt	3	Military	2	1	2	Ms	8	Int. Calculus	5	0	5
Pb	1	Pub. Speaking	2	0	2	Mt	4	Military	2	1	2
Pt	3	Phy. Education	0	2	0	Pt	4	Phy. Education	0	2	0
		Elective	—	—	—			Elective	—	—	—

JUNIOR YEAR

Subject			Hours			Subject			Hours		
			Rec.	Lab. or Comp.	Cr.				Rec.	Lab. or Comp.	Cr.
Ee	1	Els. Elec. Eng.	2	5	4	Ee	2	Els. Elec. Eng.	2	5	4
Me	69	Mech. Lab.	0	3	1½	Me	70	Mech. Lab.	0	3	1½
Me	79	Heat Eng.	3	0	3	Me	80	Heat Eng.	3	0	3
Mn	51	Mechanics	5	0	5	Mn	52	Mechanics	5	0	5
		Elective	—	—	4½			Elective	—	—	4½

SENIOR YEAR

Subject			Hours			Subject			Hours		
			Rec.	Lab. or Comp.	Cr.				Rec.	Lab. or Comp.	Cr.
Ce	35	Hydraulics	2	0	2	Ce	52	Theory & Design of Steel Structures	5	0	5
Me	55	Kinematics	3	3	4						
Me	71	Mech. Lab.	0	3	1½	Me	72	Mech. Lab.	0	3	1½
Me	81	Heat Eng.	2	3	3	Me	82	Heat Power	3	0	3
		Elective	—	—	—			Elective	—	—	—

The above curriculum is designed for students desiring to pursue mechanical engineering subjects. Similar curricula will be arranged for those interested in other subjects.

Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all work involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manufacture, and installation of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power; the equipment of railways, and similar work.

The Mechanical Engineering curriculum is arranged to equip men as well as possible in four years' time to enter any of these lines of work.

It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short, and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught by lectures and recitations. The texts are carefully chosen and are supplemented, where necessary to illustrate more recent practice, by explanation and examples given by the instructor. Numerous problems are assigned for work outside the classroom to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation, and testing of apparatus by direct contact with it. In the drawing rooms, application of theories to work in design are taught, together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice in the electrical laboratory. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

designed for students desiring to pursue mechan-
Similar curricula will be arranged for those in-

cal Engineering Curriculum

anical engineer embraces all work involving the
tallation of machinery, either for manufacturing,
neration; the design, manufacture, and installa-
ing or refrigerating equipment; the superinten-
factories, power plants, and motive power; the
similar work.

neering curriculum is arranged to equip men as
time to enter any of these lines of work.
elop the student into an expert engineer in any
is also not possible, in general, to foresee what
ion. Accordingly, those subjects which are funda-
work and which may best be learned in college
e required courses, while those subjects which
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An endeavor is made, however, to give the more
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are supplemented, where necessary to illustrate
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the principles learned.

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ork, and also teach methods of construction, op-
ratus by direct contact with it. In the drawing
es to work in design are taught, together with
for the production of neat and accurate engineer-

is given in the theory and operation of both direct
ectrical machinery, with ample practice in the
ories by practical engineers and trips of inspection
to bring before the student the conditions existing

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject			Hours Rec. or Comp.	Lab. Cr.	Subject			Hours Rec. or Comp.	Lab. Cr.
Es	1b	Prin. of Econ.	2	0 2	Es	2b	Prin. of Econ.	2	0 2
Md	3	Des. Geometry	0	6 2	Md	4	Adv. Mach. Drafting	0	6 2
Me	1	Foundry & Forging	0	6 2	Me	2	Pattern Work	0	6 2
Me	21	Els. Mech. Eng.	2	0 2	Me	38	Mech. Lab.	0	3 1½
Ms	7	Diff. Calculus	5	0 5	Me	32	Materials of Eng.	2	0 2
Mt	3	Military	2	1 2	Ms	8	Int. Calculus	5	0 5
Pb	1	Pub. Speaking	2	0 2	Mt	4	Military	2	1 2
Ps	21	Mech. & Heat	0	4 2	Pb	4	Debate	2	0 2
Pt	3	Phy. Education	0	2 0	Pt	4	Phy. Education	0	2 0

JUNIOR YEAR

Subject			Hours Rec. or Comp.	Lab. Cr.	Subject			Hours Rec. or Comp.	Lab. Cr.
Es	73	Labor Problems or Option	3	0 3	Eh	6	Tech. Comp.	2	0 2
Me	7	Machine Work	0	6 2	Me	8	Machine Work	0	6 2
Me	55	Kinematics	3	3 4	Me	66	Machine Design	2	3 3
Me	69	Mech. Lab.	0	3 1½	Me	70	Mech. Lab.	0	3 1½
Me	79	Heat Eng.	3	0 3	Me	82	Heat Power	3	0 3
Mn	51	Mechanics	5	0 5			or Option		
					Mn	52	Mechanics	5	0 5

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University of Maine

Orono, Maine

Catalog Number with Records of the Sessions of 1934-1935

Announcements for the Sessions of 1935-1936

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1935

JANUARY

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JANUARY

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MARCH

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OCTOBER

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NOVEMBER

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DECEMBER

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Calendar

1935

January 2, Wednesday, Christmas Recess ends, 8 A.M.
January 23, Wednesday, Final Examinations begin in Arts and Sciences and Education.
January 25, Friday, Final Examinations begin in Agriculture and Technology.
February 1, Friday, Final Examinations end. End of Fall Semester, 5.05 P.M.

SPRING SEMESTER

February 2, Saturday, Registration 8 A.M. to 12 M.
February 4, Monday, Spring Semester begins 8 A.M.
February 22, Friday, Washington's Birthday, a holiday.
March 22, Friday, Spring Recess begins 11:30 A.M.
April 2, Tuesday, Spring Recess ends, 8 A.M.
May 20, Monday-May 22, Wednesday, Entrance Examinations.
May 27, Monday, Final Examinations begin in Arts and Sciences and Education.
May 28, Tuesday, Final Examinations begin in Agriculture and Technology.
May 30, Thursday, Memorial Day, a holiday.
June 5, Wednesday, Final Examinations end.
June 7, Friday, Class Day.
June 8, Saturday, Alumni Day.
June 9, Sunday, Baccalaureate address.
June 10, Monday, Commencement.

SUMMER SESSION

July 1, Monday, Registration 8 A.M. to 12 M. and 1:30 to 4:30 P.M.
July 2, Tuesday, Classes begin 8 A.M.
July 4, Thursday, a holiday.
August 9, Friday, Summer Session ends, 12 M.

1935

FALL SEMESTER

September 9, Monday-September 10, Tuesday, Entrance Examinations.
September 11, Wednesday, University opens for freshmen.
September 16, Monday, Registration for transfer students 10 A.M.-12 M. and 2:00-3:00 P.M.

September 17, Tuesday, University opens for upperclassmen. Registration 8 A.M.-12 M. and 1:30-3 P.M.
November 28, Thursday, Thanksgiving Day, a holiday.
December 20, Friday, Christmas Recess begins, 11:30 A.M.

1936

January 7, Tuesday, Christmas Recess ends, 8 A.M.
January 22, Wednesday, Final Examinations begin in Arts and Sciences and Education.
January 24, Friday, Final Examinations begin in Agriculture and Technology.
January 31, Friday, Final Examinations end. End of Fall Semester, 5:05 P.M.

SPRING SEMESTER

February 1, Saturday, Registration 8 A.M. to 12 M.
February 3, Monday, Spring Semester begins 8 A.M.
February 22, Saturday, Washington's Birthday, a holiday.
March 20, Friday, Spring Recess begins at 11:30 A.M.
March 31, Tuesday, Spring Recess ends at 8 A.M.
May 18, Monday-May 20, Wednesday, Entrance Examinations.
May 25, Monday, Final Examinations begin in Arts and Sciences and Education.
May 26, Tuesday, Final Examinations begin in Agriculture and Technology.
May 30, Saturday, Memorial Day, a holiday.
June 3, Wednesday, Final Examinations end.
June 5, Friday, Class Day.
June 6, Saturday, Alumni Day.
June 7, Sunday, Baccalaureate address.
June 8, Monday, Commencement.

Board of Trustees

Hon. Harmon Gustavus Allen, President Term expires June 17, 1938	Springvale
Thomas Edward Houghton, Clerk Term expires May 6, 1941	Fort Fairfield
Bertram Everett Packard, B.A., LL.B., Ed.D., *ex officio*	Augusta
Walter Alonzo Danforth Term expires May 4, 1935	Bangor
Edward Everett Chase, B.A. Term expires January 10, 1936	Portland
Hosea Ballou Buck, C.E. Term expires July 18, 1936	Bangor
Frank Porter Washburn Term expires January 25, 1939	Augusta
John Thomas Gyger, M.S. Term expires November 20, 1940	Portland
Eugene Boutelle Sanger, Ph.B., M.D., F.A.C.S. Term expires November 20, 1940	Bangor

Executive Committee, Buck, Danforth, Packard

Officers of Administration

OF THE UNIVERSITY

ARTHUR ANDREW HAUCK, President. Alumni Hall; Campus†
JAMES NORRIS HART, Dean. Alumni Hall; 123 Main Street
GEORGE DAVIS CHASE, Dean of Graduate Study. 140 Stevens Hall; 143 Main Street
LAMERT SEYMOUR CORBETT, Dean of Men. 27 Rogers Hall; Campus
EDITH GRACE WILSON, Dean of Women. 16 Stevens, South; 6 North Main Street
ROY MERLE PETERSON, Director of the Summer Session and Editor of the University Catalog. 3 Stevens, North; 29 Bennoch Street
WALTER JOSEPH CREAMER, Director of Freshman Week. 22 Lord Hall; 331 Center Street, Bangor
LOUIS TAPPE IBBOTSON, Librarian. Library; University Place
CHARLES JOHN DUNN, Treasurer Emeritus. 114 Main Street
FREDERICK SHAW YOUNGS, Treasurer. Alumni Hall
JAMES ADRIAN GANNETT, Registrar. Alumni Hall; 166 Main Street
EDWARD HAVENER KELLEY, Acting Purchasing Agent. Alumni Hall; 225 Main Street
IRVING PIERCE, Accountant. Alumni Hall; 34 Sixth Street, Old Town
ADDIE MATILDA WEED, Recorder. Alumni Hall; Veazie
EVELYN TAYLOR, Assistant Registrar. Alumni Hall; 33 Bennoch Street
WILLIAM CARL WELLS, Steward. Alumni Hall; 229 State Street, Bangor
MAYNARD ALTON HINCKS, Student Counselor. 24 Rogers Hall; 36 Myrtle Street

OF THE COLLEGES AND EXPERIMENT STATION

PAUL CLOKE, Dean of the College of Technology. 12 Wingate Hall; 49 Forest Avenue
OLIN SILAS LUTES, Dean of the School of Education. 24 Stevens, South; College Road

†Offices and residences.

FRED GRIFFEE, Director of the Maine Agricultural Experiment Station. Holmes Hall; 32 Forest Avenue

JAMES MUILENBURG, Dean of the College of Arts and Sciences. 100 Stevens Hall; 104 Main Street

ARTHUR LOWELL DEERING, Dean of the College of Agriculture. 16 Winslow Hall; 160 College Road

OF THE DEPARTMENTS

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT. Professor Merchant, 36 Winslow Hall; 39 Mill Street

AGRICULTURAL EDUCATION. Professor Hill, 35 Winslow Hall, 162 College Road

AGRONOMY AND AGRICULTURAL ENGINEERING. Professor Chucka, 26 Winslow Hall; 48 High Street, Old Town

ANIMAL INDUSTRY. Professor Corbett, 27 Rogers Hall, Campus

BACTERIOLOGY. Professor Hitchner, 13 Winslow Hall; 51 Bennoch Street

BIOLOGICAL AND AGRICULTURAL CHEMISTRY. Professor Smith, 15 Winslow Hall; 382 College Road

BIOLOGY (AGRICULTURAL EXPERIMENT STATION). Professor Dove, Holmes Hall; 142 Park Street

BOTANY AND ENTOMOLOGY. Professor Steinmetz, 24 Coburn Hall; 38 North Main Street

CHEMISTRY AND CHEMICAL ENGINEERING. Professor Brautlecht, 333 Aubert Hall; 63 Bennoch Street

CHEMISTRY (AGRICULTURAL EXPERIMENT STATION). Professor Bartlett, Holmes Hall; 148 College Road

CIVIL ENGINEERING. Professor Evans, 21 Wingate Hall; 8 Kell Street

CLASSICS. Professor Chase, 140 Stevens Hall; 143 Main Street

ECONOMICS AND SOCIOLOGY. Professor Ashworth, 46 Stevens, South; 88 North Main Street

EDUCATION. Professor Lutes, 24 Stevens, South; College Road

ELECTRICAL ENGINEERING. Professor Barrows, 2 Lord Hall; 40 Myrtle Street

ENGINEERING DRAFTING. Professor Kent, 30 Wingate Hall; 16 Sixth Street, Bangor

ENGLISH. Professor Ellis, 230 Stevens Hall; 29 Park Street

ENTOMOLOGY (AGRICULTURAL EXPERIMENT STATION). Professor Patch, Holmes Hall; Braeside, College Road

FORESTRY. Professor Demeritt, 24 Winslow Hall; 15 University Place.

GERMAN. Professor Drummond, 325 Stevens Hall; 61 Bennoch Street
HISTORY AND GOVERNMENT. Professor Dow, 145 Stevens Hall; Bennoch Road
HOME ECONOMICS. Professor Greene, 23 Merrill Hall; 6 University Place
HORTICULTURE. Professor Waring, 34 Winslow Hall; College Road and Kell Street
MATHEMATICS AND ASTRONOMY. Professor Willard, 130 Stevens Hall; 100 Bennoch Street
MECHANICAL ENGINEERING. Professor Sweetser, 1 Lord Hall; 109 Main Street
MECHANICS. Professor Weston, 1 Fernald Hall; College Road
MILITARY SCIENCE AND TACTICS. Major Oliver, Armory; 36 Myrtle Street
MUSIC. Professor Sprague, 15 Stevens, North; 217 Union Street, Bangor
PHILOSOPHY. Professor Levinson, 335 Stevens Hall; 78 North Main Street
PHYSICAL EDUCATION. Professor Wallace, Memorial Gymnasium; 45 Park Street
PHYSICS. Professor Fitch, 200 Aubert Hall; 32 College Road
PLANT PATHOLOGY (AGRICULTURAL EXPERIMENT STATION). Professor Folsom, Holmes Hall; 63 Forest Avenue
PSYCHOLOGY. Professor Dickinson, 31 Stevens, North; Bennoch Street
PUBLIC SPEAKING. Professor Bailey, 240 Stevens Hall; University Place
PULP AND PAPER TECHNOLOGY. Professor Bray, 135 Aubert Hall; 47 Forest Avenue
ROMANCE LANGUAGES. Professor Peterson, Chairman, 1934-35, 3 Stevens, North; 29 Bennoch Street
ZOOLOGY. Professor Murray. 16 Coburn Hall; 3 Summer Street

OF THE DORMITORIES

DELIA BIRD SULLIVAN, Superintendent of Colvin Hall
GERTRUDE HAYES, Superintendent of the University Inn
CELESTIA STILES, Superintendent of the Maples
RUTH ESTHER COPE, Superintendent of Balentine Hall

MAJOR ADMINISTRATIVE ASSISTANTS

FLORENCE ELIZABETH JOHNSON, Secretary to the President. Alumni Hall
BLANDENA COUILLARD GARLAND, Secretary to the Dean of the University. Alumni Hall

YVONNE MORIN, Secretary to the Dean of the College of Agriculture. 16 Winslow Hall

KATHLEEN KELLEY, Secretary to the Dean of the College of Arts and Sciences. 100A Stevens Hall

MILDRED FRENCH CREAMER, Secretary to the Dean of the College of Technology. 12 Wingate Hall

THELMA DEMONT, Secretary to the Dean of the School of Education. 22 Stevens, South

MARY NORTON CAMERON, Secretary to the Director of the Experiment Station. Holmes Hall

DOROTHEA LEWIS MILLER, Secretary to the Treasurer. Alumni Hall

GENEVA MORTON, Secretary to the Dean of Men. 27 Rogers Hall

Faculty of Instruction*

ARTHUR ANDREW HAUCK, President.
A.B., Reed, 1915; Ph.D., Columbia, 1932

LUCIUS HERBERT MERRILL, Professor Emeritus of Biological and Agricultural Chemistry.
B.S., Maine, 1883; Sc.D., 1908

JAMES NORRIS HART, Dean of the University and Professor of Mathematics and Astronomy.
B.C.E., Maine, 1885; C.E., 1890; S.M., Chicago, 1897; Sc.D., Maine, 1908; Ph.D., 1922

FREMONT LINCOLN RUSSELL, Professor Emeritus of Bacteriology and Veterinary Science.
B.S., Maine, 1885; V.S., New York College of Veterinary Surgeons, 1886

JAMES STACY STEVENS, Dean Emeritus of the College of Arts and Sciences.
B.S., Rochester, 1885; M.S., 1888; M.S., Syracuse, 1889; LL.D., Rochester, 1907; Litt.D., Maine, 1922

JOHN HOMER HUDDILSTON, Professor of Ancient Civilization and Lecturer on Art History.
B.A., Baldwin-Wallace, 1890; M.A., 1892; A.B., Harvard, 1893; Ph.D., Munich, 1898

GEORGE DAVIS CHASE, Dean of Graduate Study and Professor of Classics.
A.B., Harvard, 1889; A.M., 1895; Ph.D., 1897; LL.D., Maine, 1927

CAROLINE COLVIN, Professor Emeritus of History and Government.
A.B., Indiana, 1893; Ph.D., University of Pennsylvania, 1901; LL.D., Maine, 1927

CHARLES PARTRIDGE WESTON, Professor of Mechanics.
B.C.E., Maine, 1896; C.E., 1899; A.M., Columbia, 1902

GEORGE EDWARD SIMMONS, Professor Emeritus of Agronomy.
B.S., Ohio Northern, 1902; M.S., 1905; B.Sc., Ohio State, 1909; D.Sc., Ohio Northern, 1922

WILLIAM EDWARD BARROWS, Professor of Electrical Engineering.
B.S., Maine, 1902; E.E., 1908

*Arranged in groups in order of seniority of appointment.

LAMERT SEYMOUR CORBETT, Dean of Men and Professor of Animal Industry.
B.S., Massachusetts State College, 1909; B.S.A., Boston University, 1909; M.S., Kentucky, 1913

WILLIAM JORDAN SWEETSER, Professor of Mechanical Engineering.
S.B., Massachusetts Institute of Technology, 1901

ROY MERLE PETERSON, Professor of Romance Languages (Chairman, 1934-35) and Director of the Summer Session.
A.B., Coe, 1906; A.M., Harvard, 1910; Ph.D., 1912; F.A.A.R.

ROBERT RUTHERFORD DRUMMOND, Professor of German.
B.S., Maine, 1905; Ph.D., University of Pennsylvania, 1909

HERBERT STAPLES HILL, Professor of Agricultural Education.
A.B., Bowdoin, 1905

HARLEY RICHARD WILLARD, Professor of Mathematics and Astronomy.
A.B., Dartmouth, 1899; A.M., 1902; A.M., Yale, 1910; Ph.D., 1912

JOHN H ASHWORTH, Professor of Economics and Sociology.
A.B., Emory and Henry, 1906; Ph.D., Johns Hopkins, 1914

CHARLES ANDREW BRAUTLECHT, Professor of Chemistry and Chemical Engineering.
Ph.B., Yale, 1906; Ph.D., 1912

MILTON ELLIS, Professor of English.
B.A., Maine, 1907; M.A., 1908; A.M., Harvard, 1909; Ph.D., Harvard, 1913

EMBERT HIRAM SPRAGUE, Professor of Sanitary Engineering.
B.S., Dartmouth, 1900

ALBERT LEWIS FITCH, Professor of Physics.
A.B., Albion, 1911; A.M., 1912; Ph.D., University of Michigan, 1916

FRED MANSFIELD BRICE, Professor of Physical Education.

JAMES ADRIAN GANNETT, Registrar.
B.S., Maine, 1908; M.A., 1928

FRANÇOIS JOSEPH KUENY, Professor of Romance Languages.
B. ès L., University of Paris, 1897; L. ès L., Besançon, 1901

CHARLES HENRY MERCHANT, Professor of Agricultural Economics and Farm Management.
B.S., Cornell University, 1920; M.S., 1922; Ph.D., 1928

MARK BAILEY, Professor of Public Speaking.
A.B., Yale, 1915; A.M., University of Michigan, 1917

JAMES HOWARD WARING, Professor of Horticulture.
B.S., Pennsylvania State, 1920; M.S., 1921; Ph.D., Michigan State College, 1930

PAUL CLOKE, Dean of the College of Technology and Director of the Technology Experiment Station.
E.E., Lehigh, 1905; M.S., 1913; Eng.D., Maine, 1934

Charles Alexius Dickinson, Professor of Psychology.
A.M., Clark, 1922; Ph.D., 1925

Olin Silas Lutes, Dean of the School of Education and Professor of Education.
A.B., Ohio University, 1915; M.A., State University of Iowa, 1923; Ph.D., 1926

Pearl Stuart Greene, Professor of Home Economics.
B.A., Northwestern, 1909; B.S., Lewis Institute, 1914; A.M., Columbia, 1923

Arthur St. John Hill, Professor of Electrical Engineering.
E.E., Polytechnic Institute of Brooklyn, 1911; M.S.E., University of Michigan, 1932

Ronald Bartlett Levinson, Professor of Philosophy.
A.B., Harvard, 1920; Ph.D., Chicago, 1924

Ferdinand Henry Steinmetz, Professor of Botany and Entomology.
B.S., Illinois, 1915; M.S., Minnesota, 1921; Ph.D., 1926

Louis Tappe Ibbotson, Librarian.
A.B., Hamilton, 1922; B.L.S., University of the State of New York, 1925

Edward James Oliver, Professor of Military Science and Tactics.
Major of Infantry (D.O.L.), U. S. Army. B.A., Wisconsin, 1908

Loren Prescot Stewart, Professor of Military Science and Tactics.
Major, Infantry (D.O.L.), U. S. Army. B.S., Maine, 1915

Benjamin Calvin Kent, Professor of Engineering Drafting.
B.S,. Maine, 1912

Chester Albert Jenkins, Professor of Physical Education.
B.S., Dartmouth, 1911; M.S., Maine, 1931

Maurice Daniel Jones, Professor of Agricultural Economics and Farm Management.
B.S., Maine, 1912; M.S., 1927

Elmer Reeve Hitchner, Professor of Bacteriology.
B.S., Pennsylvania State, 1915; M.S., 1916; Ph.D., Wisconsin, 1931

Llewellyn Morse Dorsey, Professor of Dairy Husbandry.
B.S., Maine, 1916; M.S., 1923

Stanley Moore Wallace, Professor of Physical Education.
Diploma, New Haven Normal School of Gymnastics, 1917

Harry Woodbury Smith, Professor of Biological and Agricultural Chemistry.
B.S., Maine, 1909; M.S., 1922; Ph.D., Rutgers, 1934

Marion Deyoe Sweetman, Professor of Home Economics.
B.S., Iowa State College, 1921; M.S., 1922; Ph.D., Minnesota, 1927

Adelbert Wells Sprague, Professor of Music.
B.S., Maine, 1905; A.M., Harvard, 1907

THEODORE SMALL CURTIS, Faculty Manager of Athletics.
B.S., Maine, 1923

SIDNEY SOHNS EBERLE, Professor of Military Science and Tactics.
Major, Infantry (D.O.L.), U. S. Army. A.B., University of Washington, 1914

JAMES MUILENBURG, Dean of the College of Arts and Sciences.
A.B,. Hope, 1920; A.M., Nebraska, 1922; Ph.D., Yale, 1926

ARTHUR LOWELL DEERING, Dean of the College of Agriculture.
B.S., Maine, 1912; Sc.D., 1934

DWIGHT BURGESS DEMERITT, Professor of Forestry.
B.S., Maine, 1922; M.F., Yale, 1923

JOSEPH ANTHONY CHUCKA, Professor of Agronomy.
B.S., Wisconsin, 1927; M.S., 1928; Ph.D., 1930

PAUL DECOSTA BRAY, Professor of Pulp and Paper Technology.
B.S., Maine, 1914; Ch.E., 1918

WESTON SUMNER EVANS, Professor of Civil Engineering.
B.S., Maine, 1918; M.S., 1923

JOSEPH MAGEE MURRAY, Professor of Zoology.
B.A., Maine, 1925; M.A., University of Michigan, 1927; Ph.D., 1929

ARCHIE ELLSWORTH PHINNEY, Professor of Military Science and Tactics.
Captain, Infantry (D.O.L.), U. S. Army

ALPHEUS CROSBY LYON, Associate Professor of Civil Engineering.
B.S., Maine, 1902; S.B., Massachusetts Institute of Technology, 1904; C.E., Maine, 1913

BERTRAND FRENCH BRANN, Associate Professor of Chemistry.
B.S., Maine, 1909; M.S., 1911; S.M., Massachusetts Institute of Technology, 1912

AVA HARRIET CHADBOURNE, Associate Professor of Education.
B.A., Maine, 1915; M.A., 1918; A.M., Columbia, 1919; Ph.D., 1928

HAROLD WALTER LEAVITT, Associate Professor of Civil Engineering and Secretary Technology Experiment Station.
B.S., Maine, 1915; C.E., 1918; M.S., 1921

ALBERT AMES WHITMORE, Associate Professor of History and Government.
B.S., Maine, 1906; M.A., 1917

NOAH ROSENBERGER BRYAN, Associate Professor of Mathematics.
B.A., Pennsylvania State, 1913; A.M., University of Pennsylvania, 1918; Ph.D., Columbia, 1921

*Albert Morton Turner, Associate Professor of English and Comparative Literature.
A.B., Harvard, 1912; A.M., 1914; Ph.D., 1920

Walter Joseph Creamer, Associate Professor of Electrical Communication and Director of Freshman Week.
B.S., Maine, 1918; E.E., 1921; B.A., 1923

Maynard Fred Jordan, Associate Professor of Mathematics and Astronomy.
B.A., Maine, 1916; M.A., 1921

Charles Burton Crofutt, Associate Professor of Physics.
B.A., Cornell College, 1919; M.S., State University of Iowa, 1920; Ph.D., 1923

John Robert Smyth, Associate Professor of Poultry Husbandry.
B.S., Purdue, 1920; M.S., Kentucky, 1928

George William Small, Associate Professor of English.
B.A., Tennessee, 1915; M.A., Johns Hopkins, 1921; Ph.D., 1922; B.Litt., Oxford, 1927

Edward French Dow, Associate Professor of History and Government and Head of the Department.
B.S., Bowdoin, 1925; A.M., Harvard, 1926; Ph.D., 1932

Harry Dexter Watson, Associate Professor of Mechanical Engineering.
B.S., Maine, 1920; M.S., 1929

Stanley Royal Ashby, Associate Professor of English.
B.A., Texas, 1904; B.A., Oxford, 1907; M.A., 1923; A.M., Harvard, 1925; Ph.D., 1927

Ernest Jackman, Associate Professor of Education and Director of Teacher Training.
A.B., Colby, 1912; A.M., Columbia, 1924

Walter Whitmore Chadbourne, Associate Professor of Economics and Sociology.
B.A., Maine, 1920; M.B.A., Harvard, 1922

Edward Newcomb Brush, Associate Professor of Psychology.
A.B., Vermont, 1925; A.M., Harvard, 1926; Ph.D., 1932

George Baer Fundenburg, Associate Professor of Romance Languages.
A.B., Princeton, 1916; A.M., 1917; Ph.D., Columbia, 1919

Allen Wright Goodspeed, Associate Professor of Forestry.
B.S., Maine, 1928; M.F., Yale, 1929

Lyle Clayton Jenness, Associate Professor of Chemistry.
B.S., New Hampshire, 1922; M.S., Maine, 1925

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*On leave of absence, spring semester, 1934-35.

GEORGE FARRINGTON DOW, Associate Professor of Agricultural Economics and Farm Management.
B.S., Maine, 1927; M.S., 1929

CHAUNCEY WALLACE LORD CHAPMAN, Assistant Professor of Forestry.
B.S., Maine, 1914; M.S,. 1921

LEIGH PHILBROOK GARDNER, Assistant Professor of Poultry Husbandry.
B.S., Maine, 1920; M.S., 1923

WARREN STANHOPE LUCAS, Assistant Professor of Mathematics.
B.A., Maine, 1914; M.A., 1922

CARL EVERETT OTTO, Assistant Professor of Chemistry.
B.A., Cincinnati, 1916; M.A., 1920; Ph.D., 1922

FRANCES ELIZABETH ARNOLD, Assistant Professor of Romance Languages.
B.A., Maine, 1910; M.A., 1923

MARION STEPHANIE BUZZELL, Assistant Professor of Romance Languages.
B.A., Maine, 1914; M.A., 1915

HAROLD CLAYTON SWIFT, Assistant Professor of Agronomy.
B.S., Maine, 1918; M.S., 1923

EVERETT LOUIS ROBERTS, Assistant Professor of Electrical Engineering.
B.S., Maine, 1920

CHARLES ORVILLE DIRKS, Assistant Professor of Entomology.
B.S., Kansas State College, 1924; M.S., Iowa State College, 1925

HELEN ANNA LENGYEL, Assistant Professor of Physical Education for Women.
Diploma, Sargent School for Physical Education, 1915; B.A., Maine, 1927

IRVING HENRY PRAGEMAN, Assistant Professor of Mechanical Engineering.
Ph.B., Yale, 1918; M.E., 1923

RICHARD GEORGE WOOD, Assistant Professor of History and Government.
A.B., Dartmouth, 1922; A.M., Harvard, 1924; Ph.D., 1934

WILLIAM FRANCIS SCAMMAN, Assistant Professor of English.
B.A., Maine, 1908; M.A., 1930

GEORGE PETER STEINBAUER, Assistant Professor of Botany.
B.S., Minnesota, 1925; M.S., 1927; Ph.D., 1929

MARGUERITE RUTH MUSGRAVE, Assistant Professor of Home Economics.
B.S., Columbia, 1925; A.M., 1926

HIMY BENJAMIN KIRSHEN, Assistant Professor of Economics and Sociology.
B.S., Whitman, 1926; A.M., Columbia, 1929

RUTH CROSBY, Assistant Professor of English.
A.B., Mount Holyoke, 1919; A.M., Radcliffe, 1920; Ph.D., 1929

JOHN RAYMOND CRAWFORD, Assistant Professor of Education and Director of Bureau of Educational Research and Service.
B.A., Culver-Stockton, 1924; M.A., State University of Iowa, 1929; Ph.D., 1931

MONROE EDWARD FREEMAN, Assistant Professor of Biological and Agricultural Chemistry.
B.A., Minnesota, 1928; M.S., 1929; Ph.D., 1931

ROBERT IRVING ASHMAN, Assistant Professor of Forestry.
A.B., Cornell University, 1913; M.F., Yale, 1929

HOWE WIGGIN HALL, Assistant Professor of Animal Husbandry.
B.S., Maine, 1914; M.S., 1925

EARL MAYNARD DUNHAM, Assistant Professor of Engineering Drafting.
B.A., Maine, 1924; M.A., 1928

FAY HYLAND, Assistant Professor of Botany.
B.S., Michigan State College, 1925; M.S., Maine, 1929

WILLIAM LESTER GILLILAND, Assistant Professor of Chemistry.
B.S., University of Washington, 1920; M.S., 1921; Ph.D., Massachusetts Institute of Technology, 1925

ALFRED CARLETON ANDREWS, Assistant Professor of Classics.
A.B., Bowdoin, 1926; A.M., University of Pennsylvania, 1930; Ph.D., 1931

HELENE HEYE, Assistant Professor of Home Economics.
B.S., Hastings, 1925; M.S,. Iowa State College, 1927

JOHN FRANKLIN WITTER, Assistant Professor of Animal Pathology.
B.S., Maryland, 1928; D.V.M., Michigan State College, 1932

JOHN HENRY MAGEE, Assistant Professor of Economics and Sociology.
B.A., Maine, 1917; M.A., 1931; M.S., 1933

HOWARD LLOYD FLEWELLING, Assistant Professor of English.
A.B., Dartmouth, 1921; M.A., Maine, 1925; Ph.D., University of Michigan, 1931

EVELYN FAYE WILSON, Assistant Professor of History.
A.B., Beloit, 1921; M.A., University of Washington, 1924; Ph.D., California, 1930

EDITH ELIZABETH MORTENSEN, Assistant Professor of Zoology.
B.A., Carleton, 1925; M.A., Minnesota, 1927

JOHN FREDERICK KLEIN, Assistant Professor of German.
A.B., Cornell University, 1912; A.M., 1913; Ph.D., 1920

CHARLES EARL PACKARD, Assistant Professor of Zoology.
A.B., Bates, 1919; S.M., Yale, 1924

CLARENCE EDWIN BENNETT, Assistant Professor of Physics.
Ph.B., Brown, 1923; Sc.M., 1924; Ph.D., 1930

Stephen Martin Raleigh, Assistant Professor of Agronomy.
B.S., Kansas State College, 1927; Ph.D., Minnesota, 1934
Roger Clapp, Assistant Professor of Horticulture.
B.S., Cornell University, 1928; M.S., Maine, 1932
Richard McVay Riley, Assistant Professor of Horticulture.
B.S., Ohio University, 1926; M.S., Cornell University, 1929
Donald McLean Purdy, Assistant Professor of Psychology.
A.B., Cornell University, 1921; A.M., Harvard, 1926; Ph.D., 1930
Frederick Eugene Melder, Assistant Professor of Economics.
B.B.A., University of Washington, 1926; M.A., 1931

Percie Hopkins Turner, Lecturer in English.
A.B.. Smith, 1917; A.M., 1920; A.M., Radcliffe, 1923; Ph.D., 1924
Gertrude Elvira Ebbeson, Special Lecturer in Architectural Design and Drawing, Department of Engineering Drafting.
B.Arch., Massachusetts Institute of Technology, 1933

Everett Willard Davee, Instructor in Mechanical Engineering.
Everett Joshua Felker, Instructor in Civil Engineering.
B.S. in Ed., Maine, 1931
Harry Roy Perkins, Instructor in Mechanical Engineering.
Herman Samuel Silverman, Instructor in Mathematics.
B.A., Maine, 1925; M.A., 1927
John George Leslie Caulfield, Instructor in Pulp and Paper Technology.
B.S., Maine, 1924; M.S., 1926
Kenneth Gerard Crabtree, Instructor in Electrical Engineering.
S.B., Massachusetts Institute of Technology, 1922
William Curtis Kenyon, Instructor in Physical Education.
George Ogilvie, Instructor in Military Science and Tactics.
Sergeant (D.E.M.L.), U. S. Army
Beulah Elizabeth Osgood, Instructor in Home Economics.
B.S., Maine, 1926; A.M., Columbia, 1931
Theron Alonzo Sparrow, Instructor in Mechanical Engineering.
B.S., Maine, 1924
Marion Elizabeth Rogers, Instructor in Physical Education for Women.
Diploma, Sargent School for Physical Education, 1927; B.A., Maine, 1930
Herschel Leonard Bricker, Instructor in Public Speaking.
A.B., Coe, 1928

Gladys Marie Gould, Instructor in Home Economics.
B.S., Maine, 1922

Lawrence Lewis Osborn, Instructor in Chemistry.
A.B., Indiana, 1924; A.M., 1927

John Emmons Stewart, Instructor in Mathematics.
B.A., Maine, 1927; M.A., 1928

Edgar Junior Bogan, Instructor in Chemistry.
A.B., Miami, 1926; A.M., Princeton, 1929

Ralph Albert Sawyer, Instructor in Engineering Drafting.
B.S., Norwich, 1925

Leonidas Dacosta Stephenson, Jr., Instructor in Civil Engineering.
B.S., North Carolina State College, 1927

Fred Lincoln Lamoreau, Instructor in Mathematics and Astronomy.
B.A., Maine, 1930; M.A., 1934

James Moreland, Instructor in English, in charge of University Publicity.
B.A., Georgetown College, 1924; M.A., Maine, 1934

Delyte Wesley Morris, Instructor in Public Speaking.
A.B., Park, 1928; M.A., Maine, 1934

Wilbur Everett Tomlin, Instructor in Chemistry.
A.B., Kentucky Wesleyan, 1926; A.M., Columbia, 1931

Warren Herbert Bliss, Instructor in Electrical Engineering.
B.S., Michigan State College, 1928; M.S., 1931

Mabel Lancaster Stewart, Instructor in Home Economics.
B.S., Maine, 1931

Henry Gruber Stetler, Instructor in Sociology.
B.S., Franklin and Marshall, 1928; A.M., Columbia, 1930

Hugh Donald Chase, Instructor in Civil Engineering.
S.B., Massachusetts Institute of Technology, 1931; S.M., 1932

Edward Bays, Instructor in Military Science and Tactics.
Sergeant (D.E.M.L.), U. S. Army

Carl Munro Flynn, Instructor in Zoology.
B.A., Maine, 1930; M.A., Wesleyan, 1932

Arthur Eugene Jensen, Instructor in English.
Ph.B., Brown, 1926; A.M., 1928; Ph.D., Edinburgh, 1933

Richard Wilder Merrill, Instructor in German.
B.S., Bowdoin, 1928; M.A., Maine, 1933

Edwin Kenneth Miles, Instructor in German.
B.A., Lawrence, 1929; M.A., Northwestern, 1930; Ph.D., University of Pennsylvania, 1933

Elven Clifford Nelson, Instructor in Zoology.
B.A., University of Colorado, 1929; M.A., 1930; Sc.D., Johns Hopkins, 1933

EDITH GRACE WILSON, Dean of Women and Instructor in Education.
B.A., Southern California, 1923; M.A., 1928

*LAWRENCE ALFRED CHATTO, Acting Instructor in Agricultural Economics and Farm Management.
B.S., Maine, 1934

MARTHA JANE GIBSON, Instructor in English.
B.A., Cincinnati, 1912; M.A., 1914; Ph.D., Yale, 1933

ROBERT BECHTOLD HEILMAN, Instructor in English.
A.B., Lafayette, 1927; M.A., Ohio State, 1930; M.A., Harvard, 1931

KARL DAVIS LARSEN, Instructor in Physics.
B.A., Maine, 1929; M.A., 1930; Ph.D., Pennsylvania State, 1934

GAYLORD CLARKE LEROY, Instructor in English.
A.B., Oberlin, 1930; A.M., Harvard, 1931

FRED PERLEY LORING, Director of Short Courses in the College of Agriculture.
B.S., Maine, 1916

FREDERIC THURMAN MARTIN, Instructor in Mechanical Engineering.
Ch.E., Lehigh, 1925; Ph.D., Johns Hopkins, 1929

RISING LAKE MORROW, Instructor in History and Government.
A.B., Wesleyan, 1923; A.M., Harvard, 1925; Ph.D., 1932

CECIL CLOUGH TYRRELL, Instructor in Mechanical Engineering.
B.S., Purdue, 1931; M.S., 1932

HAROLD WAVE WHICKER, Instructor in English.
B.A., Washington State College, 1922

CHARLES LESTER SMITH, Instructor and Critic Teacher, School of Education.
A.B., Harvard, 1907

VEYSEY HIRAM ROBINSON, Instructor and Critic Teacher, School of Education.
B.Pd., Maine, 1917

ALICE LOWE BROWN, Critic Teacher, School of Education.
A.B., Colby, 1899

GRACE STETSON GRANT, Critic Teacher, School of Education.
A.B., Colby, 1907

HELEN LOUISE HATHORNE, Critic Teacher, School of Education.
B.A., Maine, 1922

HORACE ALCANDER CROXFORD, Critic Teacher, School of Education.
B.A., Maine, 1930

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*Appointment effective from August 20, 1934 to November 30, 1934.

Caroline Ella Collins, Critic Teacher, School of Education.
B.A., Maine, 1929
Sarah Jane Thompson, Critic Teacher, School of Education.
B.A., Maine, 1929

Howard Lewis Mendall, Assistant in Zoology.
B.A., Maine, 1931; M.A., 1934
Roger Aylmer Allen, Graduate Fellow in Physics.
B.S., Parsons, 1933
Garnet Edward Davis, Graduate Fellow in Dairy Husbandry.
B.S., Maryland, 1934.
Arnold Evans Hook, Graduate Fellow in Bacteriology.
B.S., Wisconsin, 1934
Clifford Egerton Lloyd, Graduate Fellow in Botany and Entomology.
B.S., Cornell University, 1932
Neil Moody Calderwood, Graduate Assistant, College of Technology.
B.S., Maine, 1932

Herbert Burr Abbott, Mechanician in the Mechanical Engineering Department.
Leo Edward Day, Highway Laboratory Assistant.
Ralph Freeman Bowden, Electrician in the Electrical Engineering Department.
Clayton Leonard Sawyer, Highway Laboratory Assistant.
Horace Asa Pratt, Assistant Engineer, Technology Experiment Station.
B.S., Maine, 1930
Anne Morrison Tropp, Resident Health Nurse.
R.N., Eastern Maine General Hospital, Bangor, 1928
Helen Louise O'Leary, Resident Health Nurse.
R.N., Eastern Maine General Hospital, Bangor, 1933
Dorothy Smith, Reference Librarian.
B.S., Simmons School of Library Science, 1921
Mary Florence Reed, Cataloger.
B.A., Maine, 1929; B.S., Simmons School of Library Science, 1930
Dorothy Mayo Morris, Circulation Assistant in the Library.
B.A., Maine, 1930
Louise Grindle Gray, Clerk in the Library.
Mary Rich Carter, Assistant in the Library.
B.A., Maine, 1931

VISITING MEMBERS OF SUMMER SESSION FACULTY

Session of 1934

ESTHER VIOLA BALDWIN, Nutritionist and Executive Secretary, Penobscot County Chapter, Red Cross, Bangor, Maine.
B.S., Simmons, 1923 *Home Economics*

DOROTHY BROWN DEAN, Formerly Supervisor of Music, Public Schools, Bangor, Maine.
A.B., Smith, 1924 *School Music*

ORA LEE EVERTS, Director of the Training School and of the Kindergarten-Primary Department, State Normal School, Glassboro, New Jersey.
Graduate, Sam Houston State Teachers College, Huntsville, Texas, 1914; B.S., Columbia, 1927; A.M., 1928 *Education*

MATTIE LOUISE HATCHER, Specialist in Reading and Supervisor of Elementary Education, State Normal School, Paterson, New Jersey.
Ph.B., Chicago, 1909 *Education*

ARTHUR LEWIS JONES, Director of Physical Education and Supervisor of Junior High School Athletics, Public Schools, Framingham, Massachusetts.
Graduate, Teachers College, East Stroudsburg, Pennsylvania, 1924; B.S. in Ed., Boston University, 1931 *Physical Education*

PAUL SLOATE MILLER, Principal of Eastern School, East Orange, New Jersey.
B.A., Gettysburg, 1910; A.M., Yale, 1922; Ph.D., New York University, 1928 *Education*

EMILY PENDLETON, Teacher of English, High School, Sanford, Maine.
B.A., Maine, 1926; M.A., 1927 *English*

JEANNE ROSSELET, Assistant Professor of French, Goucher College.
A.B., and A.M., Vassar, 1925; Ph.D., Radcliffe, 1930 *French*

Faculty of Investigation

(THE MAINE AGRICULTURAL EXPERIMENT STATION)

Fred Griffee, Director.
B.S., Kansas State College, 1919; M.S., Minnesota, 1920; Ph.D., 1924

James Monroe Bartlett, Chemist.
B.S., Maine, 1880; M.S., 1883; Sc.D., 1927

Edith Marion Patch, Entomologist.
B.S., Minnesota, 1901; M.S., Maine, 1910; Ph.D., Cornell University, 1911

Donald Folsom, Plant Pathologist.
A.B., Nebraska, 1912; M.A., Minnesota, 1914; Ph.D., 1917

Elmer Robert Tobey, Chemist.
B.S., Maine, 1911; M.S., 1917; Ch.E., 1920

Charles Henry Merchant, Agricultural Economist.
B.S., Cornell University, 1920; M.S., 1922; Ph.D., 1928

Pearl Stuart Greene, Home Economist.
B.A., Northwestern, 1909; B S., Lewis Institute, 1914; A.M., Columbia, 1923

William Franklin Dove, Biologist, Animal Breeding and Nutrition.
B.S., Iowa State College, 1922; M.S., Wisconsin, 1923; Ph.D., 1927

Frank Heidtman Lathrop, Entomologist.
B.S., Clemson, 1913; M.S., Ohio State, 1915; Ph.D., 1923

Mary Morris Clayton, Nutritionist.
B.S., Columbia, 1918; M.S., Rochester, 1926; Ph.D., 1929

Charles Harry White, Associate Chemist and Photographer.
Ph.C., Maine, 1899

Reiner Bonde, Associate Plant Pathologist.
B.S., Minnesota, 1922; M.S., Maine, 1926

George Farrington Dow, Associate Agricultural Economist.
B.S., Maine, 1927; M.S., 1929

Marion Deyoe Sweetman, Associate Home Economist.
B.S., Iowa State College, 1921; M.S., 1922; Ph.D., Minnesota, 1927

Joseph Anthony Chucka, Associate Biologist, Plant Breeding and Nutrition.
B.S., Wisconsin, 1927; M.S., 1928; Ph.D., 1930

Russell Manley Bailey, Associate Biologist, Plant Breeding and Nutrition.
B.S., Maine, 1928

Bernie Elliott Plummer, Jr., Assistant Chemist.
B.S., Maine, 1924; M.S., 1925

John Henry Hawkins, Assistant Entomologist.
B.S., Illinois, 1926; M.S., Maine, 1927

Florence Lydia Markin, Assistant Plant Pathologist.
B.S., Montana State College, 1924; M.S., Wisconsin, 1926

William Ernest Schrumpf, Assistant Agricultural Economist.
B.S., Maine, 1928; M.S., 1930

Frederick Barker Chandler, Assistant Biologist in Charge of Blueberry Investigations.
B.S., Maine, 1928

Geddes Wilson Simpson, Assistant Entomologist.
A.B., Bucknell, 1929; A.M., Cornell University, 1931

Delmar Simon Fink, Assistant Biologist, Plant Breeding and Nutrition.
B.S., Wisconsin, 1930; M.S., 1931; Ph.D., 1934

George Peter Steinbauer, Seed Analyst, Department of Inspections.
B.S., Minnesota, 1925; M.S., 1927; Ph.D., 1929

Mildred Rebecca Covell, Assistant in Biology.

Iva Merchant Burgess, Assistant in Biology.
B.S., Maine, 1923; M.S., 1925

Elizabeth Florence Murphy, Assistant in Animal Breeding and Nutrition.
B.A., Maine, 1930; M.A., 1934

Merna Myrtha Monroe, Assistant in Home Economics Research.
B.S., Iowa State College, 1929; M.S., Kansas State College, 1932

Elaine Mary Pooler, Chief Assistant in Agricultural Economics.

Magretta Blackmore, Assistant in Agricultural Economics.

Iris MacIntosh Williams, Assistant in Agricultural Economics.

Alice Woods Averill, Laboratory Assistant in Entomology.

Emmeline Wilson Kenney, Laboratory Assistant in Biology.

Gladys Elizabeth Babbin, Seed Analyst and Laboratory Assistant in Plant Pathology.

Delmar Boynton Lovejoy, Laboratory and Field Assistant, Plant Breeding and Nutrition.
B.S., Maine, 1928

Irvin Carrol Mason, Laboratory and Field Assistant, Blueberry Investigations.
B.S., Maine, 1930; M.S., 1932

Andrew Elwell Watson, Graduate Assistant in Agricultural Economics.
B.S., Maine, 1934

Faculty of Extension Service

(COLLEGE OF AGRICULTURE)

ARTHUR LOWELL DEERING, Director.
B.S., Maine, 1912; Sc.D., 1934
GEORGE EDGAR LORD, Assistant Director.
B.S., Maine, 1924

STATE AGENTS

RAYMON NEALE ATHERTON, Extension Economist, Marketing.
B.S., Maine, 1918
EDNA MANSFIELD COBB, Home Management Specialist.
B.S., Cornell University, 1928
ALBERT KINSMAN GARDNER, Crops Specialist.
B.S., Maine, 1910
GEORGE EDGAR LORD, County Agent Leader.
B.S., Maine, 1924
WENDALL EARL MOSHER, Executive Secretary to Director of Extension.
B.S., Maine, 1929
ESTELLE NASON, State Home Demonstration Agent Leader.
B.S., Maine, 1922
ALBERT DEANE NUTTING, Forestry Specialist.
B.S., Maine, 1927
DONALD WINSLOW REED, Extension Economist, Farm Management.
B.S., Maine, 1922
WAYNE SCHERMERHORN RICH, Assistant Extension Editor.
B.S., Maine, 1934
HARRISON LAMBERT RICHARDSON, Poultry Specialist.
B.S., Maine, 1924
GLENN KENTON RULE, Extension Editor.
B.S., Ohio State, 1917
LESTER HALE SHIBLES, State Club Leader.
A.B., Colby, 1915
HELEN CONSTANCE SPAULDING, Clothing Specialist.
B.S., Simmons, 1913
LOANA MARY SPEARIN, Assistant State Club Leader.
RICHARD FOSTER TALBOT, Dairy Specialist.
B.S., Maine, 1907

CLESSON NATHAN TURNER, Agricultural Engineer.
B.S., Cornell University, 1931
THERESE ELIZABETH WOOD, Foods Specialist.
B.S., Western Reserve, 1923

COUNTY AGENTS

VERNE CURTIS BEVERLY, Aroostook County.
B.S., Maine, 1920
RICHARD FRANCIS BLANCHARD, Oxford County.
B.S., Maine, 1931
RALPH ASHTON CORBETT, Franklin County.
B.S., Maine, 1930
CLARENCE ALBERT DAY, Kennebec County.
M.S., Maine, 1929
RICHARD CARLTON DOLLOFF, Assistant County Agent, Aroostook County
B.S., Maine, 1927
GERALD COBB DUNN, Somerset County.
B.S., Maine, 1923
CHARLES LESLIE EASTMAN, Androscoggin and Sagadahoc Counties.
B.S., Maine, 1922
RALPH WILLIAM HOBSON, Washington County.
B.S., Maine, 1925
RAYMOND HARWOOD LOVEJOY, York County.
B.S., Maine, 1921
PHILIP STEWART PARSONS, Waldo County.
B.S., Maine, 1934
WILFRED SHERMAN ROWE, Cumberland County.
MELZOR STETSON SMITH, Penobscot County.
B.S., Maine, 1931
GARDNER BERRY TIBBETTS, Hancock County.
B.S., Maine, 1922
RALPH CARLTON WENTWORTH, Knox and Lincoln Counties.
B.S., Maine, 1918
OSCAR LEWIS WYMAN, Piscataquis County.
B.S., Maine, 1926

HOME DEMONSTRATION AGENTS

HORTENSE BRADBURY, Washington County.
RUTH ISABEL CALLAGHAN, Oxford County.
B.S., Maine, 1933

Margaret Lillian Childs, Kennebec County.
Charlotte Elizabeth Cleaves, Penobscot County.
B.S., Maine, 1931
Leone Mae Dakin, Aroostook County.
B.S., Maine, 1926
Lucy Farrington, Piscataquis County.
B.S., Maine, 1927
Agnes Freyer Gibbs, Cumberland County.
B.S., Framingham Normal, 1926
Jessie Mildred Lawrence, Knox and Lincoln Counties.
B.S., Maine, 1928
Agnes May Massé, Waldo County.
B.S., Maine, 1928
Evelyn June Mills, Hancock County.
B.S., Maine, 1933
Elizabeth Tryon, Franklin County.
B.S., Maine, 1933
Doris Elaine Urquhart, Somerset County.
B.S., Rhode Island State, 1927
Jean Warren, York County.
B.S., Cornell University, 1929
Hortense Agnes Welch, Androscoggin and Sagadahoc Counties.
B.S., Maine, 1927

County Club Agents

Earle Theodore Blodgett, York County.
B.S., Maine, 1927
Ruth Mabelle Clark, Knox and Lincoln Counties.
B.S., Maine, 1932
Frank Wilbur Hagan, Cumberland County.
B.S., Maine, 1933
Allegra Maxine Ingerson, Kennebec County.
B.S., Maine, 1934
Kenneth Cousins Lovejoy, Waldo County.
B.S., Maine, 1928
Martha Corinne Merrill, Penobscot County.
B.S., Farmington Normal, 1928
Doris Eleanor Rosen, Oxford County.
B.S., Maine, 1934

Faculty Committees

ADMINISTRATION—President, University and College Deans, Dean of Men, Registrar, Treasurer
ASSEMBLIES—Fielder, Lutes, Muilenburg
ATHLETICS—Corbett, Gardner, A. K., Kent
COE RESEARCH FUND—Dickinson, Ashby, Brautlecht, Chase, G. D., Griffee, Hill, A. S., Hitchner, Steinmetz
EDUCATIONAL RESEARCH—Hart, Brautlecht, Bryan, Chadbourne, W. W., Crawford, Dickinson, Evans, Fitch, Fundenburg, Greene, Jones, Leavitt, Lutes, Merchant, Sweetman
ELIGIBILITY—Gannett, Curtis, Sprague, A. W., Wilson, E. G.
FINANCIAL AFFAIRS—Youngs, Kent, Pierce
HEALTH—Tomlinson, Greene, Oliver, Wallace, Wilson, E. G.
HONORS—Ellis, Brann, Chadbourne, A. H., Creamer, Greene, Merchant
MILITARY—Oliver, Hauck, Cloke, Deering, Lutes, Muilenburg
PUBLICATIONS—Gannett, Crawford, Dorsey, Ibbotson, Leavitt, Peterson
PUBLICITY—Moreland, Bray, Crawford, Crossland, Gannett, Jones
RHODES SCHOLARSHIP—Chase, G. D., Ashby, Brautlecht, Corbett, Hart
SCHEDULE—Weston, Dorsey, Evans, Gannett, Peterson, and College Deans
SECONDARY SCHOOL RELATIONS—Hart, Cloke, Deering, Gannett, Lutes, Muilenburg
SOCIAL AFFAIRS—Small, Corbett, Sweetser, Wilson, E. G., Youngs
WOMEN STUDENTS—Wilson, E. G., Buzzell, Chadbourne, A. H., Crosby, Greene, Lengyel, Sweetman

GENERAL INFORMATION

HISTORY

The University of Maine is a part of the public educational system of the State. It was established originally as the State College of Agriculture and the Mechanic Arts under the provisions of the Morrill Act, approved by President Lincoln in 1862. The next year the State of Maine accepted the conditions of the Act and in 1865 created a corporation to administer the affairs of the college.

The institution opened September 21, 1868, with a class of twelve members and a faculty of two teachers; Dr. Merritt Caldwell Fernald was appointed acting president. By 1871 four curricula had been arranged—Agriculture, Civil Enginering, Mechanical Engineering, and Elective. By gradual growth these curricula developed into the College of Agriculture, the College of Technology, and the College of Arts and Sciences. Women have been admitted as students since 1872, in compliance with special legal enactment. The original name was changed to the University of Maine in 1897. The School of Education was established in 1930.

The Maine Agricultural Experiment Station was established as a division of the University by act of the Legislature of 1887, as a result of the passage by Congress of the Hatch Act. It succeeded the Maine Fertilizer Control and Agricultural Experiment Station, which had been established in 1885.

The College of Law was opened in 1898. It was an integral part of the institution and until the year 1917 occupied quarters at the corner of Union and Second streets in Bangor. Later it was located on the campus at Orono. It was discontinued in 1920.

Graduate instruction has been given by various departments for many years. The first master's degree was conferred in 1881. Since 1923 graduate work has been a separate division in charge of a dean.

Beginning with 1902, a Summer Session has usually been held annually, consisting at first of five weeks, but now of six. It is designed primarily for teachers and educational administrators and for college students who desire to make up work or secure additional credits.

To provide permanently for the support of the University the Legislature in 1929 passed an act levying a tax of one mill on the general property valuation of the State.

The University is controlled by a Board of Trustees. The first Board was composed of sixteen members, each county delegation in the Legislature selecting one member. Various changes have occurred in the appointment of Trustees. At the present time seven members are appointed by the Governor of the State, with the advice and consent of the Council, for a term of seven years. One member is appointed for three years by the Governor upon the nomination of the Alumni Association. The Commissioner of Education is *ex officio* a member of the Board.

The institution has been served by the following presidents: Rev. Charles Frederick Allen, Dr. Merritt Caldwell Fernald, Dr. Abram Winegartner Harris, Dr. George Emory Fellows, Dr. Robert Judson Aley, Dr. Clarence Cook Little, Dr. Harold Sherburne Boardman, and Dr. Arthur Andrew Hauck.

LOCATION

The University is located in Orono, an attractive town of 3,400 population, with good schools and four churches. The extensive campus, situated about a mile from the business section, borders the Stillwater River, a branch of the Penobscot, and is of great beauty.

Orono is situated on the main line of the Maine Central Railroad, eight miles east of Bangor. It is half way between Kittery, the most southerly town in the State, and Fort Kent, the most northerly. It is not far from the center of population of the State. The campus, which is nine miles from Bangor and three from Old Town, is connected with both cities by a paved highway offering easy access by automobile. Cars of the Bangor Hydro-Electric Company also afford a half-hour trolley service in both directions.

Bangor, the third city of the State in size, has a population of about 29,000 and is an important business center. The location of the University gives students an opportunity to avail themselves of its social, religious, and other advantages. Old Town is a manufacturing city with about 7,200 inhabitants.

BUILDINGS AND THEIR EQUIPMENT

Balentine Hall.—This building, erected in 1914, is the largest dormitory for women on the campus. It consists of three stories and a basement and has accommodation for 121 students. The name was given in honor of Elizabeth Abbott Balentine, secretary and registrar of the University from 1895 to 1913.

Colvin Hall.—This building, the newest dormitory on the campus, was completed in 1930. It is a three-story brick structure of colonial style

with accommodations for forty-eight girls. It was named for Professor Caroline Colvin, of the Department of History and Government, who served as the first dean of women at the University.

HANNIBAL HAMLIN HALL.—A men's dormitory, completed in 1911, which contains four stories and a concrete basement. It was named for the Hon. Hannibal Hamlin, of Hampden and Bangor, the first president of the Board of Trustees. It will accommodate 152 students.

THE MAPLES.—A three-story wooden building remodeled in 1931, accommodating forty-nine students. It is used as a dormitory for freshman women.

NORTH HALL.—A two-story frame building used as the laboratory for the course in Household Administration by the Department of Home Economics.

OAK HALL.—This dormitory for men was erected in 1871 and was named for the Hon. Lyndon Oak, of Garland, a long-time member and president of the Board of Trustees. It is a four-story building and has rooms for ninety-six students.

UNIVERSITY INN.—A four-story wooden building, located in the village of Orono, which was purchased by the University to provide living quarters for members of the faculty. It has accommodations for twenty persons.

ALUMNI HALL.—This building, erected in 1900, was given its name because a part of the funds required for its erection was furnished by the alumni of the University. It contains principally administrative offices but also a gymnasium for women and a Little Theatre for the use of the Deparment of Public Speaking.

ALUMNI MEMORIAL.—This structure, consisting of an Indoor Field, Armory, and Gymnasium, stands as a memorial to those Maine men who died in the service of their country in the Spanish and World Wars. It cost nearly $500,000 and is the gift of alumni, faculty, and friends of the University. The Indoor Field, built in 1926, was believed to be, at the time of its construction, the largest in the world, being 340 feet long, 168 feet wide, and 70 feet high.

The Gymnasium was completed in 1933. It is 150 feet deep, 137 feet wide, and three stories high. The main hall and balconies have a seating capacity of approximately 2500. Opportunity is afforded to play two basketball games at one time. Equipment and training rooms are centrally located with reference to the Athletic and Physical Education Departments. The facilities for home and visiting teams are ideal, with shower and locker rooms for varsity, freshmen, and faculty. The offices are located on the ground floor adjoining one another. On the second floor handball, boxing, and wrestling are carried on in separate rooms, and a corrective room offers additional

opportunities for restrictive physical education. The large kitchen is used for pre-season football training as well as banquets. At present the Gymnasium is also used as an auditorium for lectures and student assemblies.

AUBERT HALL.—A four-story building, including a high basement, which was named in honor of the late Alfred Bellamy Aubert, professor of chemistry from 1874 to 1910. It is used by the Departments of Chemistry and Physics.

COBURN HALL.—This building is chiefly used by the Department of Botany and Entomology and the Department of Zoology. It was named for ex-Governor Abner Coburn, of Skowhegan, a former president of the Board of Trustees and benefactor of the University.

CROSBY LABORATORY.—This building, with a main section two stories high and two wings of one story, contains the laboratories of the Department of Mechanical Engineering. The main section houses the equipment for work in hydraulics, steam engineering, and compressed air; the wings are devoted to testing operations of various kinds. The building is named in honor of the Hon. Oliver Crosby, class of '76, who bequeathed $100,000 for its construction.

FERNALD HALL.—This building, the oldest on the campus, was named in honor of ex-President Merritt C. Fernald. It contains offices and classrooms used by the College of Technology for work in mechanics and geology, the office of the Alumni Association, the University Store, and the rooms reserved for the Health Department.

HOLMES HALL.—A two-story building, in addition to a basement, which contains the offices and laboratories of the Maine Agricultural Experiment Station. It was named for Dr. Ezekiel Holmes, of Winthrop.

LIBRARY BUILDING.—The Library Building is of stone, two stories above a basement, and surmounted by a dome. For its erection and furnishing, Andrew Carnegie gave $55,000, and the Hallowell Granite Works furnished the granite at a price that was equivalent to a gift of several thousand dollars.

LORD HALL.—This building was erected for the Departments of Electrical Engineering and Mechanical Engineering. It is two stories in height and contains recitation rooms, laboratories, drawing room, and offices for the members of these departments. It was named for the Hon. Henry Lord, of Bangor, a former president of the Board of Trustees.

MERRILL HALL.—This three-story brick building was erected in 1930 for resident teaching, extension, and experiment station work in Home Economics. Besides offices and classrooms it contains laboratories for student work in child development, institutional management, household equipment, foods and nutrition, art, clothing and textiles; and research laboratories for nutrition, foods, and household management. The building is named in honor of Leon S. Merrill, formerly dean of the College of Agriculture.

ROGERS HALL.—A two-story brick building for dairy manufactures forming the eastern end of the agricultural quadrangle. In it are housed the divisions of Animal Husbandry and Dairy Husbandry of the Department of Animal Industry. The first floor is made up of laboratories for butter, ice cream, and cheese making, market milk processing, and milk and milk products testing. On this floor are also located cold-storage rooms, a refrigerating machinery room, and a supplies room. The second floor contains offices, classrooms, and a research laboratory. The building was named in honor of Dr. Lore A. Rogers, Chief, Research Laboratories, Bureau of Dairy Industry, United States Department of Agriculture.

STEVENS HALL.—This building, formerly known as the Arts and Sciences Building, was rechristened Stevens Hall in 1932 in honor of Dean Emeritus James S. Stevens. It consisted originally of forty-six classrooms and offices used by the College of Arts and Sciences. Two wings have recently been added with spacious and attractive rooms. These house, besides the School of Education, the Departments of Economics and Sociology, Romance Languages, Music, and Psychology. A large part of the floor of one wing is devoted to the laboratories and work rooms of the Department of Psychology.

WINGATE HALL.—This building, containing four stories and a basement, is used by the Departments of Civil Engineering and Engineering Drafting. It contains also the offices and laboratories of the Technology Experiment Station as well as the offices of the dean of the College of Technology.

WINSLOW HALL.—A four-story building, including the basement, which contains offices, laboratories, and recitation rooms for various departments of the College of Agriculture. It was named in honor of Hon. Edward B. Winslow, of Portland, a former president of the Board of Trustees.

AGRICULTURAL ENGINEERING BUILDING.—A large two-story wooden building located on the north side of the road leading to the dairy barns is used by the Department of Agronomy for laboratory instruction purposes in connection with its courses in agricultural engineering.

FARM BUILDINGS.—These comprise two large modern dairy barns having accommodations for 150 head of cattle, a hay storage barn, a piggery, a sheep barn, and a tool house; also a modern horse barn and a farm implement storage building, both located directly north of the dairy barns.

HORTICULTURAL GREENHOUSES.—Three modern steel-frame houses interconnected with one another and with a two-story brick service and educational building are located near the south end of the campus. Two of these houses are devoted to the growing of flowers, ornamental plants, and vegetables. The third house was erected in 1932 by the Maine Agricultural Experi-

ment Station for use in experimental studies of plant breeding, physiology, and pathology. The service building contains work rooms, laboratories, a classroom, sales and storage rooms, and a basement winter-storage room.

MILK HOUSE.—The milk house, located west of the dairy barns, is designed to serve as a demonstrational laboratory in milk handling and processing. It contains a milk room, bottle and can washing room, laundry, boiler room, milk testing room, mechanically refrigerated holder for milk, and an office for herdsman and dairyman.

POULTRY BUILDINGS.—These are two frame buildings of two stories each at the south end of the campus. One building houses the divisions of Animal Pathology and Poultry Husbandry of the Department of Animal Industry. On the ground floor are a poultry fattening and killing room, an autopsy room, and a detention and hospital room. On the second floor are offices, recitation room, and an animal pathology laboratory.

The second building, recently enlarged, contains, on the ground floor, an egg-candling and grading room, incubator rooms, and a room for battery brooders. On the second floor are laboratories for students and quarters for the plant poultryman.

The laying houses adjacent to this latter building have capacity to accommodate 600 laying hens. These laying houses are supplemented by six modern colony houses, available for chick brooding and special investigational or research work.

RESEARCH BUILDING.—The old greenhouse of wood-frame type, east of Holmes Hall, is utilized by several departments for investigational work requiring greenhouse space. The two-story frame building attached provides office space on the second floor for several extension specialists, while the first floor is devoted to research laboratories equipped for studies in biological chemistry and in bacteriology.

STOCK JUDGING PAVILION.—This is an octagonal structure located in the rear of Winslow Hall. It has a seating capacity of 400.

MECHANICAL ENGINEERING SHOPS.—The Mechanical Engineering Department Shops are located in a one-story brick building erected in 1934 and located about one hundred feet northeasterly of Crosby Laboratory. The building plan has the form of the letter E. The three parallel sections are 100 x 30 feet each and contain the machine shop at the south, the pattern shop at the north, and the forge shop and foundry in the center. The connecting sections contain the offices and stockrooms, under which are basements for storage, wash-room, and lockers.

MAINE CHRISTIAN ASSOCIATION BUILDING.—Used chiefly by the Maine Christian Association, but also contains the offices of the Maine *Campus*. On the ground floor are reading and social rooms for men and the general offices of the M.C.A., and on the second floor recreation, study, and lunch rooms for

women, the office of the Secretary for Women, and a chapel for private devotions. The *Campus* offices are on the third floor.

Observatory.—The astronomical observatory stands on a slight elevation near the farm buildings. It contains equipment for work in descriptive and practical astronomy.

Infirmary.—This building is used in caring for cases of infectious diseases that may appear among the students. It is located in the rear of Hannibal Hamlin Hall.

Print Shop.—The University Press is located in a wooden building north of Aubert Hall. It contains a modern outfit for the printing required by the University.

Central Heating Plant.—The Central Heating Plant is located on low ground so that the buildings drain by gravity to the plant. It contains three 150 H.P. horizontal return tubular boilers equipped with perfection semi-automatic stokers, and two 290 H.P. H-type Stirling water tubular boilers equipped with Westinghouse automatic stokers with overhead coal bunkers and scales for weighing coal. The smoke stack is 150 feet in height.

Other Buildings.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house and five residences occupied by members of the faculty.

Marine Station.—The University of Maine Marine Biological Station is located at East Lamoine on the northeast shore of Frenchman's Bay within fifty miles of the University. The buildings provide adequate housing for laboratories, research workers, students, and faculty. A pier with 400 foot frontage, row boats, and a motor boat, and various types of collecting apparatus facilitate marine investigation. Both research work and organized class work have been in operation at the Station.

Fraternity Houses.—The local chapters of Beta Theta Pi, Delta Tau Delta, Kappa Sigma, Lambda Chi Alpha, Phi Kappa Sigma, Sigma Alpha Epsilon, Theta Chi, Sigma Nu, and the Phi Eta Kappa Society have houses on the campus. The following chapters own houses in the vicinity of the University: Alpha Tau Omega, Phi Gamma Delta, Phi Mu Delta, Tau Epsilon Phi, and Beta Kappa on College Road; Alpha Gamma Rho on Grove Street; Phi Kappa on College Road at the intersection of North Main Street; Delta Chi Alpha on Park Street; and Sigma Chi on North Main Street. These houses accommodate from twenty to fifty students each.

ATHLETIC FIELDS

ALUMNI FIELD.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northern end of the campus. It contains a quarter-mile cinder track, with a 220-yard straightaway, and is graded and laid out for football, and track and field athletics. It contains a grandstand with a seating capacity of 2,100 and also bleachers seating 4,600.

A new varsity baseball field has been completed and will be used for the 1935 intercollegiate schedule for the first time. The field is one of the best in New England and conforms to all major league field requirements. Additional territory is being developed adjoining the baseball field for freshman baseball, practice football fields, tennis courts, and for physical educational purposes.

ATHLETIC FIELD FOR WOMEN.—A new field on the southern end of the campus consists of a regulation hockey field, archery range, seventy-five yards of cinder straightaway, and a twenty-four foot jumping pit. A field house on the northern end houses all the athletic supplies, and serves as a shelter for teams not in action.

A field house on the western border overlooking the field has just been completed. This adds materially to the quality of teaching and the comfort of the students. It consists of a club room with fireplace, a store room adequate to house all the athletic equipment, and a small kitchenette.

THE UNIVERSITY FARMS

The University farms consist of approximately 645 acres divided into two farms, one of which adjoins the campus while the other is located in Stillwater. The land under cultivation amounts to 258 acres, divided as follows: 208 acres for farm crops, ten acres for orchards, two acres for the forest nursery, eighteen acres for poultry lots, twenty acres for systematic forestry, and 387 acres of forest and pasture lands. These farm lands, together with the campus, make the University holdings at Orono and vicinity approximately 735 acres.

THE LIBRARY

The University Library contained at the end of the academic year 113,451 volumes and 39,420 pamphlets. In addition to the general collection of books it includes the following of a more special nature: Law Library, 5,600 vol-

umes, the greater part of which are on deposit in the Court House at Bangor; Agricultural Experiment Station Library, 9,011 volumes, on deposit in the Library Building; Reference Collections shelved in the Department of Physics and the College of Agriculture. About 460 periodicals are subscribed for by the library; 200 received as gift or exchange; 100 received by the Experiment Station.

The library is housed in a building erected in 1906 by gift of Andrew Carnegie. The reading and seminar rooms have seating accommodations for 150 students. In the seminar rooms are shelved German, French, Spanish, Italian, Greek, and Latin literature and language; history; and material relating to the State and the University of Maine. The two basement reading rooms contain the books and periodicals on the subjects of education and agriculture. The reference room contains a working collection of almanacs, atlases, concordances, dictionaries, encyclopedias, and yearbooks for the convenience of the student, and for use in the room. Magazines for the current year are on file in the periodical room.

The library is classified by the Dewey decimal system. Each book is fully cataloged by author, subject, and title. The catalog is situated in the rear of the delivery room, where are kept magazine indexes and bibliographies as well.

Elementary instruction in the use of the library is given new students during Freshman Week. This includes lectures and practice in the use of the catalog and magazine indexes.

Books will be loaned to other libraries, to schools, and to residents of the State when it can be done without interference with local needs. Transportation charges are payable by the borrower.

Any book in circulation or shelved elsewhere on the campus may be recalled to the library at any time. All library books must be returned to the library before the close of the academic year in June for inventory, repair, and binding.

Library Hours

7:45—9:30 p.m. Monday—Thursday
7:45—5 p.m. 6:30—9 p.m. Friday
8 a.m.—5 p.m. Saturday
2 p.m.—9:30 p.m. Sunday

COLLECTIONS

Art Collection

This collection, assembled to facilitate art history, consists of photographs, prints, engravings, polychrome reproductions, and plaster casts. Many of the large reproductions are framed and the entire collection has found a temporary home in the Library building, the gallery of which is used for the exhibition of many of the plaster-cast reliefs and the larger framed works. The collection is distributed on the first and second floors, in the lecture room, and a seminar room. In the latter is a specially constructed cabinet for mounted photographs.

The entire collection numbers over 5,000 reproductions of various sorts covering the fields of Classical and Renaissance architecture, sculpture, and painting. The illustrations for the Greek, Florentine, Venetian, and Saracenic schools are particularly representative. For much of the work the photographs are supplemented by lantern slides.

The University possesses several of the famous polychrome prints published by the Arundel Society. These and many other colored reproductions covering nearly all the great masters of Italian painting have been framed; and in the case of the *Madonna della sedia* and the *Sistine Madonna* the reproductions were imported in the frames, which are stucco copies of the originals in Dresden and Florence.

The lecture room in the Library building contains examples of the work of the chief Florentine and Umbrian masters of the fourteenth and fifteenth centuries.

Scientific Collections

The biological collections are located in Coburn Hall.

Zoology.—These collections consist of a working collection of bird skins; a display collection of bird mounts; a study collection of various other groups of both vertebrates and invertebrates. These are arranged in the various rooms and laboratories where they are best available for purposes of class use.

Botany.—These collections are situated in room 24 on the second floor. The herbarium includes several collections of considerable value, the most important of which is the one made by the late Rev. Joseph Blake and presented to the University by Mr. Jonathan G. Clark, of Bangor. It contains more than 7,000 species of both flowering and flowerless plants, and represents

more especially the flora of Maine and other New England States, but includes many forms from the Western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia. The late Professor F. L. Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's Algae of the Maine Coast, Halsted's Lichens of New England, Halsted's Weeds, Ellis and Everhart's North American Fungi, Cook's Illustrative Fungi, Underwood's Hepaticae, Cummings and Seymour's North American Lichens.

Geology.—The greater part of these collections are stored in the basement of the South Wing of Stevens Hall. One case is in the basement of the Maine Christian Association Building. Wall cases, containing such specimens as are necessary for classroom and lecture illustrations, have been placed in Winslow and Fernald Halls.

UNIVERSITY PUBLICATIONS

Maine Bulletin.—This is a publication issued monthly from August to May inclusive with two issues in the month of March, to give information to the alumni and the general public. It includes the Biennial Report, the Summer Session Bulletin, and the Annual Catalog.

University of Maine Studies, Second Series.—This is a series of research studies by members of the faculty and graduate students, published under the direction of the Faculty of Graduate Study. For a list of numbers published to date and of the issues of the first series, see the section on graduate study.

Annual Report of the Agricultural Experiment Station and the Agricultural Experiment Station Bulletins.—These give complete results of the investigations by the Station and the results of the inspections of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs and foods, and fungicides and insecticides.

Official Inspections.—These are published by the Agricultural Experiment Station, and contain the result of the work of inspection of agricultural seeds, commercial feeding stuffs, commercial fertilizers, drugs, foods, fungicides and insecticides.

Extension Bulletins, News, and Radio Releases.—These are issued by the Extension Service. Single copies of bulletins and circulars will be mailed to any Maine resident who makes the request. News releases are sent to all daily and weekly newspapers. Radio releases are issued each week to four coöperating broadcasting stations in Maine.

TECHNOLOGY EXPERIMENT STATION PUBLICATIONS.—Bulletins are published giving the results of investigations and research, and are usually sent free of charge on request.

THE MAINE ALUMNUS.—This is published nine times during the academic year by the General Alumni Association and is sent to former students of the University.

Student publications are described in the section "Student Activities."

HEALTH SERVICE

This department, located in 20 Fernald Hall, offers to the students the services of two nurses and part time services of four physicians. It is equipped to supervise the care of students on the campus who are ill; assists and cooperates with the Departments of Physical Education and Military Science in conducting physical examinations; when and wherever possible, aids students in securing the correction of defects revealed by the physical examination; maintains office hours for private consultations; and, so far as possible, supervises the health of students.

TEACHERS' REGISTRATION BUREAU

A registration bureau for teachers, located in the office of the Dean of the School of Education in Stevens Hall, undertakes to assist properly qualified graduates and former students in securing positions. All seniors who plan to teach are urged to register with the committee. Correspondence with officials who are looking for teachers is welcomed. A fee of $1.50 is charged for this service to students.

STUDENT ACTIVITIES

Cooperative Government

STUDENT SENATE.—The men's Student Senate exists to act as a coördinating body between the University administration and the student body and to make recommendations to the administration. It is formally recognized by the faculty and the board of administration as the official and truly representative group in all matters that call for discussion and adjustment between the student body and its superiors. The Senate is empowered to investigate any question relative to the student body or any member thereof and to recom-

mend action on the same to the administration. The Senate is empowered to summon before it any student or students for trial or testimony. It is truly representative of the men students of the University, being composed of representatives from: (a) each fraternity, (b) the dormitory men, (c) the off-campus men. It maintains a joint committee with the Women's Student Government. It is a member of the National Student Federation of America.

Women's Student Government Association.—All women registered at the University of Maine are members of this association. The purpose of the organization is to encourage among the women of the University an active sense of responsibility for self government. It also attempts to promote the highest standards of honor and integrity in all matters of personal conduct. The association enacts whatever laws are necessary to maintain congenial relationships on the campus.

Religious Activities

Maine Christian Association.—The Maine Christian Association, open to all students, has as its object the promotion of Christian fellowship, knowledge, and service. The work is done by student committees, under the guidance of a man and a woman secretary and a group of coöperating pastors. The Association conducts religious services, discussions of practical student questions and social problems, holds retreats, sends out religious deputations to churches and schools, brings comfort to the sick, and in general seeks to meet the spiritual needs of the students. The secretaries act as representatives of several coöperating denominations. The work centers in the Maine Christian Association Building, which also serves as a union building for student activities. Its rooms for reading, rest, recreation, meals, study, and worship are open all day.

National Honor and Professional Societies

Phi Kappa Phi.—The society of Phi Kappa Phi, founded at the University of Maine in 1897, is a national honor society that aims to recognize excellence in any field of knowledge. At the end of the junior year and near the beginning of the senior year it elects to membership a total of seven of the highest ranking members of the class. In the second semester of the senior year it elects additional members of the class who meet its standards.

Alpha Zeta.—The Maine chapter of Alpha Zeta, the national agricultural fraternity, was organized at the University in 1905. Chapters exist in thirty-seven other universities. Membership is honorary and is restricted to students attaining high class standing or to graduates who have shown marked ability along the lines of agricultural study and research.

KAPPA DELTA PI.—The Maine chapter of Kappa Delta Pi, a national honor society in education, was established in 1932. Membership is open to students in the School of Education who attain a required rank in scholarship. The purpose of the society is to foster scholarship and high standards of preparation for those students who plan to enter teaching as a life career.

OMICRON NU.—A national honor society for students in curricula leading to a degree in home economics. The chapter at the University was established in 1931. Membership is restricted to juniors, seniors, and graduate students who give promise of future achievement by having maintained high scholarship throughout their college careers.

PHI BETA KAPPA.—A chapter of Phi Beta Kappa, the oldest national honorary scholarship society, was granted to the College of Arts and Sciences of the University in 1922. Its object is to promote scholarship in the liberal arts. Elections to membership are based upon scholarship, breadth of culture, and general promise.

TAU BETA PI.—Tau Beta Pi is an honor fraternity for engineers and has chapters in leading universities and technical schools. Elections are made from those juniors and seniors in engineering who have shown high mental and moral qualifications.

XI SIGMA PI.—A national honorary forestry fraternity open to upperclass students in forestry who possess the proper qualifications. The local chapter was organized in 1917.

ALPHA CHI SIGMA.—A professional fraternity made up of majors in the Departments of Chemistry and Chemical Engineering and Pulp and Paper Technology. Two meetings are held monthly.

AMERICAN CHEMICAL SOCIETY.—Orono is headquarters for the Maine section. Students of chemistry and chemical engineering and of pulp and paper technology may become student members. Meetings, held monthly, are open to those interested.

STUDENT BRANCH OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS.—Composed of juniors and seniors enrolled for the curriculum in Civil Engineering. The object of the society is to investigate by reading and discussion engineering topics of the day. Monthly lectures are given by teachers of engineering and practicing engineers.

BRANCH OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—Composed of members of the teaching staff, graduate students, and undergraduates of the Department of Electrical Engineering. Its aim is to promote interest in electrical engineering and to foster acquaintance and good fellowship among faculty and students. Talks and lectures are given by members of the branch and practicing engineers.

American Society of Mechanical Engineers.—The members of the A.S.M.E. Branch at the University include accepted student grade members of A.S.M.E. Regular meetings of the local branch are held for presentation of papers by members and outside speakers, and one delegate is sent yearly to the regional conference of student branches.

University of Maine Branch of the American Home Economics Association.—Composed of members of the staff, and students from the three upper classes in home economics. The object of the society is to stimulate professional interest, and keep in touch with current problems. Election is on the basis of scholarship in home economics courses.

Kappa Phi Kappa.—A national educational fraternity whose membership is restricted to men who intend to make teaching their profession and who have a high scholastic record.

Phi Sigma.—A national honor society for students in biology who have completed a certain number of courses with honor grade.

Scabbard and Blade.—An honorary military fraternity with active membership restricted to cadet officers of high moral and scholastic standing. Commissioned officers of the United States Army and non-military persons deemed worthy of the honor may be elected as honorary members. The local company was organized in 1916.

Departmental Clubs

Agricultural Club.—An organization composed of students of agriculture. At the bimonthly meetings important agricultural topics are discussed by club members and also by prominent outside speakers.

Circulo Español.—An organization established in 1921 to afford practice in the use of the Spanish language, promote a knowledge of the culture of Spain and the Spanish-American nations, and encourage good fellowship among students of Spanish.

College 4-H Club.—An organization composed of students who have completed one or more years of Boys' and Girls' Agricultural and Home Economics Club Work. It was organized in 1924 to increase the interest in Club Work and to strengthen the friendships of College 4-H men and women. Meetings are held in October, January, and May.

Contributors' Club.—This organization, composed of students and members of the faculty who have shown ability in writing, has as its object the cultivation of the literary talents of its members and the general encouragement of literary interest in the University. It occasionally brings to the campus distinguished writers and speakers for literary lectures.

Delta Pi Kappa.—A musical fraternity which was founded at the University of Maine in 1929. The purpose of this fraternity is to promote the best interest of college music and to encourage a high type of musicianship.

DEUTSCHER VEREIN.—The purpose of this society is to stimulate interest in the various phases of German life and literature, and to afford practice in speaking German. Meetings are held once a month.

FORESTRY CLUB.—This organization, which is open to all majors in forestry, affords the opportunity for presenting informal discussions and technical papers on forestry subjects and aims to promote coöperation and good fellowship among students in the department. Meetings are held monthly.

HOME ECONOMICS CLUB.—Students receiving an average of 2.5 or better in their Home Economics subjects are elected to membership in this club. Monthly meetings are held at which subjects of interest to Home Economics students are discussed by club members and outside speakers.

KAPPA GAMMA PHI.—This is a local honorary journalistic fraternity, organized in 1924. The fraternity is made up of members of the *Campus* and *Prism* boards and conducts an annual State Journalistic Conference for secondary school editors in Maine.

THE LANGUAGE CONFERENCE.—An organization of faculty members and graduate students interested in the study of languages and literature. The meetings are devoted to discussions and papers on research problems or other topics of general interest.

MAINE MASQUE.—A dramatic club which aims to make a practical study of the acted drama, and to present each year several plays before the public. The Masque considers for active and associate membership all students who have participated in one or more plays, who have helped in the stage production of these plays, and who have aided the organization in a business way.

PHYSICS CLUB.—Open to members of the faculty and students who are taking courses in physics or allied subjects. Meetings are held every two weeks at which papers are presented and current topics are discussed.

SIGMA DELTA ZETA.—Open to all students majoring in mathematics and other students interested in the study of the subject who have attained a certain required proficiency in mathematics and in general college work. The purpose of this club is to stimulate interest in the study of mathematics and to give mathematics students the opportunity to present papers and take part in discussion.

SIGMA MU SIGMA.—The local honorary psychological fraternity holds its meetings twice monthly. Its purpose is the furtherance of interest in the theories and practical application of psychology. Members are chosen principally from those majoring and minoring in psychology whose records indicate an interest in this science.

SODALITAS LATINA.—Students who elect Latin a second year are eligible to membership. The club holds meetings occasionally for lectures, informal entertainments, or social gatherings.

Musical Organizations

University Band.—This organization is attached to the Military Department. Rehearsals are credited as regular class work under the director of music. A particular aim is to develop leadership, and to this end, in coördination with the course in interpretation and conducting in the Music Department, students properly qualifying are coached to conduct the concert presentations of the band. The band plays for various university functions and games and makes concert trips.

University Chorus.—This organization, open to both men and women students, has for its objective the study and public performance of choral music. Participation in college assemblies, student concerts, and the annual Bangor Music Festival is a part of the program. The sharing in programs at the Festival with world-famous musicians and concert artists renders this choral work inspiring and memorable. The chorus is conducted by the director of music as class work, for which students receive credit. Conditions of membership are listed under the Department of Music (Courses 25, 26).

University Orchestra.—This organization, recruited from the outstanding student talent, devotes weekly rehearsals to the study of standard and symphonic music. Its repertoire is presented at the university dramatic performances and in concerts on and off the campus. It accompanies the University Chorus and soloists in the annual Music Night program.

Social Fraternities and Sororities

The following fraternities and sororities have chapters, the figures in parentheses giving the dates chapters were established at the University.

Fraternities.—National: Beta Theta Pi, (1879); Kappa Sigma (1886); Alpha Tau Omega, (1891); Phi Kappa Sigma, (1898); Phi Gamma Delta, (1899); Sigma Alpha Epsilon, (1901); Sigma Chi, (1902); Theta Chi, (1907); Delta Tau Delta, (1908); Lambda Chi Alpha, (1913); Sigma Nu, (1913); Sigma Phi Sigma, (1921); Phi Mu Delta, (1923); Alpha Gamma Rho, (1924); Beta Kappa, (1926); Phi Kappa, (1926); Tau Epsilon Phi, (1929). Local: Phi Eta Kappa, (1906); Delta Chi Alpha, (1926).

Sororities.—National. Alpha Omicron Pi, (1908); Phi Mu, (1912); Delta Delta Delta, (1915); Pi Beta Phi, (1920); Chi Omega, (1921); Delta Zeta, (1924). Local: Sigma Tau, (1927).

Student Publications

Maine Campus.—This is a newspaper published weekly during the academic year by an editorial board composed of students.

THE MAINE REVIEW.—A quarterly magazine under student management, designed to express the various intellectual interests of the University.

PRISM.—The Prism is an illustrated annual published by the junior class.

Men's Debating Society

The Debating Society is open to all students interested in forensic work. Questions of public interest are discussed. The members make a special study of the questions used for intercollegiate debating. From this group representatives are chosen to speak before luncheon clubs, grange meetings, and community gatherings, and to participate in the intercollegiate debates.

The University of New Hampshire, Bates College, Rhode Island State College, New York University, Rutgers University, the University of Vermont, Boston University, Massachusetts State College, Bowdoin College, and Colby College are among the institutions usually scheduled for these debates, which are frequently of a dual nature. Members of this society are selected to represent the University on a debating tour of Eastern institutions.

Women's Forum

Membership in the Forum is open to all University women. The group meets once every three weeks for the purpose of discussing informally subjects of special interest to its members. Women's intercollegiate debating is sponsored by the Forum; however, no one is obligated to participate in this phase of the activity. During past years, the teams have taken part in debate with nearly every outstanding university in the East.

CHURCH SERVICES

Students receive a cordial welcome at the services of the churches of Orono—the Methodist Episcopal Church, St. John's Universalist Church, St. Mary's Roman Catholic Church, and the undenominational Fellowship Church. Other denominations are represented at Old Town and Bangor.

ADMISSION

ADMISSION TO THE FRESHMAN CLASS

General Requirements

Candidates for admission to the freshman class should apply to the Dean of the University for an application card and other necessary blanks.

These blanks should be returned promptly together with the application fee of $10 (and room deposit of $15 if a dormitory room is desired).

In order that all candidates may receive equal consideration, it is desired that applications be filed as early as May first of the year the candidate wishes to enter. Candidates must present satisfactory certificates of fitness, or pass the required examinations and on registration day make a cash deposit covering the bills of one semester.

The University admits men and women, both residents of Maine and non-residents; it reserves the right to terminate admissions whenever the capacity of the University to care properly for the students has been reached.

It is requested that all entering students submit a certificate from a physician stating that they have been vaccinated for smallpox within the past seven years, or be vaccinated at the time of their physical examination.

Admission from Schools in Maine

Graduates from Maine high schools and academies may be admitted upon their school records, under the restrictions shown below, provided they have pursued a course of study including all the subjects required for admission to the curriculum they propose to follow and a sufficient number of elective subjects to make a total of fifteen units.

Candidates whose four-year average is as stated under I of the following table, may be admitted in full standing. If, however, such a candidate has a poor record during his last year, or shows weakness in any subject vital for success in the curriculum that he wishes to undertake in college, he may be refused admission. In general greater weight will be given to the character of the candidate's work in the latter part of his course than to his earlier record.

Additional Information about Candidates

In addition to the school record, the following information is asked for:

A. From the student. The student is asked to answer a series of questions showing his favorite studies, his school activities, his choice of a life

work, reasons for this choice, and other matters bearing upon his preparation for college life.

B. From principal and teachers. The principal and two teachers named by the student are asked to give details regarding his character, class standing, activities, and general fitness for pursuing a college course.

C. Personal interview. So far as possible, a personal interview will be held with each candidate.

The information gained from the interview and from the information sheets furnished by candidate, principal, and teachers will be used to supplement the school record in determining whether the candidate shall be admitted.

Admission on Trial

Applicants from Maine schools whose four-year average is as shown under II of the table below, may be considered for admission on trial. Action upon such applications will ordinarily be deferred until after August first. Candidates will not be considered for admission on trial whose applications are received after September first.

All trial admissions will be reviewed at the close of Freshman Week. Trial candidates whose Freshman Week tests are unsatisfactory may be advised to withdraw.

A student admitted on trial may be dropped from the University at any time if his work is reported as unsatisfactory. The student's record will be carefully reviewed at the end of eight weeks and again at the end of the first half-year, and he will be placed in full standing, continued on the trial list, or required to withdraw, according to his record. While on trial, a student is not eligible to represent the University in any competition wih students from other institutions.

	I	II	III
Pass mark of school	Candidate admitted in full standing if rank is above	Candidate may be admitted on trial if rank lies between	Candidate not admitted if rank is below
60	76	68 and 76	68
65	79	72 and 79	72
70	82	76 and 82	76
75	85	80 and 85	80
80	88	84 and 88	84

Admission from Schools Outside of Maine

Applications of candidates from schools outside of Maine will be received provided the school is accredited by its State University or by the recognized accrediting agency of the state or region in which the school is located.

Certificates will not be accepted for non-graduates except in unusual cases, and then only provided the candidate is expressly recommended for admission by the principal. Certificates must be made out on blanks furnished by the University.

Certificates issued by the Regents of the University of the State of New York are accepted for any of the subjects in which we give admission credit and which are certified as having been passed with a satisfactory grade.

Admission by Examinations

Entrance examinations are held at Orono before the fall registration of freshmen. A schedule of the examinations will be furnished on request. Candidates for admission who wish to be examined in the spring can take the examinations at their own school, provided the principal is willing to arrange for giving the tests. These examinations are given during the fourth week in May. On request of any principal the University will send the necessary examination papers. Such requests should be received before May 15. Candidates for admission by examination should present statements from their school principals regarding their fitness to take the examinations and to undertake college work.

The examinations given by the College Entrance Examination Board will be accepted by the University. These examinations will be held during the week June 17-22, 1935. All applications for these examinations must be addressed to the Secretary of the College Entrance Examination Board, 431 West 117th Street, New York, N. Y., and must be made upon a blank form to be obtained from the Secretary of the Board upon application. Applications must be made before May 26 and must be accompanied by the examination fee of $10.00.

Information on Freshman Week

About August 12 parents of each candidate admitted will receive from the Registrar's office a letter giving detailed instruciton about arrangements for Freshman Week. Parents of candidates admitted after August 12 will receive the information at the time the candidate is admitted to the University.

Required Subjects

College of Arts and Sciences

English	3	units
Foreign languages (three years in one or two in each of two)	3 or 4	"
History	1	"
Mathematics (Algebra and Plane Geometry)	2	"
Total	9 or 10	units

College of Agriculture

English	3	units
*Algebra	1	"
*Plane Geometry	1	"
Science (including laboratory notebook)	1	"
History	1	"
Total	7	units

College of Technology

English	3	units
Foreign language (two years in one)	2	"
Algebra	2	"
Plane Geometry	1	"
History	1	"
Science	1	"
Total	10	units

Elective Subjects

A total of fifteen units is required for admission to any four-year curriculum. The units not named under required subjects may be selected as shown in the following table. Subjects not listed may be accepted among the electives, provided they represent a satisfactory equivalent for any of those listed.

*For admission to the Home Economics curriculum, two units in mathematics acceptable to the Committee on Administration are required.

Subjects	Units Accepted		Units required and units accepted in the several colleges					
			Arts and Sciences		Agriculture		Technology	
	Min.	Max.	Req.	Acc.	Req.	Acc.	Req.	Acc.
English	3	3	3	3	3	3	3	3
French	*2	4	Three units in one language or two in each of two	2, 3, or 4		1, 2, 3, or 4	Two units in one language††	1, 2, 3, or 4
German	2	4		2, 3, or 4		1, 2, 3, or 4		1, 2, 3, or 4
Greek	2	3		2 or 3		1, 2, or 3		1, 2, or 3
Latin	2	4		2, 3, or 4		1, 2, 3, or 4		1, 2, 3, or 4
Spanish	2	3		2 or 3		1, 2, or 3		1, 2, or 3
Algebra (Elem.)	1	**2	1	2	§1	2	2	2
Plane geometry	1	1	1	1	§1	1	1	1
Solid geometry	½	½		½		½		½
Trigonometry	½	½		½		½		½
Algebra (Adv.)	½	½		½		½		½
History	1	4	1	1, 2, 3, or 4	1	1, 2, 3, or 4	1	1, 2, 3, or 4
Civics	½	1		½ or 1		½ or 1		½ or 1
Economics	½	1		½ or 1		½ or 1		½ or 1
Biology	†1	1		1	One unit in Science	1	One unit in Science	1
Botany	†1	1		1		1		1
Chemistry	†1	2		1 or 2		1 or 2		1 or 2
Physics	†1	2		1 or 2		1 or 2		1 or 2
Physiography	½	1		½ or 1		½ or 1		½ or 1
Physiology	½	1		½ or 1		½ or 1		½ or 1
Zoology	†1	1		1		1		1
General Science	½	1		½ or 1		½ or 1		½ or 1
Agriculture	1	4	Not over two units in all of these			Not over five units in all of these		Not over four units in all of these
Domestic Science and Art	1	4						
Drawing	‡½	2						
Manual Training	‡½	2						
Commercial Subjects	½	4						
Music	½	1		½ or 1		½ or 1		½ or 1
Bible Study	½	1		½ or 1		½ or 1		½ or 1
Debating	½	1		½ or 1		½ or 1		½ or 1

*The minimum accepted in foreign languages applies to the College of Arts and Sciences only.

**Two units credit for elementary algebra completed. Technology can-

didates are expected to take some mathematics during their last year in school.

†The work in these subjects must include laboratory work with note-book, as specified in the detailed statement.

‡Credit for these subjects and for bookkeeping and typewriting is at the rate of one-half unit for a subject taken five forty-five minute periods per week for a year.

§See footnote at bottom of page 51.

††Latin or French preferred.

Recommended Subjects

While practically free election is permitted for the units not specified as required for each college, it is strongly recommended that the choice should be mainly from the fields of language, mathematics, natural science, and social science.

Requirements in Detail

ENGLISH

The entrance examination in English presupposes a study of English literature and of composition and rhetoric pursued throughout the preparatory school course. Candidates are expected to have had practice in writing equivalent to at least one composition a week during each of the four years in high school, and to have studied the elements of rhetoric in some such text as, for example, Tanner's *Rhetoric and Composition*.

The examination is designed mainly to test the candidate's ability to express his thoughts correctly and clearly. It is quite possible to answer all questions on the literature correctly, and yet fail on the examination as a whole because of crude and ungrammatical English. Candidates are advised to give special attention to sentence construction, grammar, idiomatic usage in words and phrases, spelling, punctuation as a means of securing clearness, paragraph formation.

Grammar and Rhetoric.—The examination will include questions and exercises dealing with sentence structure and grammatical principles and with the elementary principles of rhetoric.

Composition.—The student will be required to write, as an important part of the examination, one or two short compositions on topics based on the classics studied in high school or on the student's personal experiences.

Literature.—A portion of the examination will be devoted to questions on the works in English and American literature customarily studied in high

school. These are designed to reveal how thorough and intelligent has been the student's understanding of what he has read.

FOREIGN LANGUAGES

LATIN.—The following requirements are based upon a report to the College Entrance Examination Board in 1925.

I. *Amount and range of the reading recommended.* There are no prescribed readings in Latin, but the following recommendations are made:

1. In the second year the pupil should read easy Latin of gradually increasing difficulty. This may consist in part of "made" or adapted Latin. Not less than one semester of this year should be devoted to the reading of selections from Caesar. The reading for the year may also include easy selections from such authors as Aulus Gellius, Eutropius, Nepos, Phaedrus, Quintus Curtius Rufus, and Valerius Maximus.

2. In the third year, if the reading is in prose, not less than one semester should be devoted to the reading of selections from Cicero. The reading for the year may also include selections from such authors as Pliny, Sallust, and Livy.

3. In the fourth year, if the reading is in poetry, not less than one semester should be devoted to the reading of selections from Vergil. The reading for the year may also include selections from such works as the *Metamorphoses, Tristia, Heroides,* and *Fasti* of Ovid, or books of selections containing poems or extracts from Ovid or other poets.

II. *Description of the examination.* The examination aims to test the proficiency of those who have studied Latin in a secondary course of five lessons each week extending through two, three, or four years. (An examination on forms, syntax, and easy translation is provided for candidates in Agriculture and Technology offering one year of Latin, and for candidates in Arts offering one year of Latin taken in the last two years of the high-school course.)

The paper will include:

1. Passages of Latin prose and verse for translation.

2. Passages of Latin prose and verse for comprehension. Candidates will be asked qustions to test their understanding of these passages but will not be required to translate them.

3. English passages to be translated into Latin for candidates presenting two or three years of Latin. Candidates presenting four years of Latin in one examination will also be expected to answer these questions.

4. Questions on forms, syntax, and idioms in these passages, as well as such questions on subject matter, historical and literary, as may fairly be asked.

Credit will be given for passing the following College Entrance Board Examinations: Cp. 2, Cp. 3, Cp. 4, Cp. H, and Cp. K.

III. *Latin Word List.* The College Entrance Examination Board has prepared a Word List which indicates the vocabulary that students are expected to have at the end of two, three, and four years of study. Students will be expected to know accurately the words in this list.

FRENCH.—The admission requirements in elementary and intermediate French are those recommended by the Modern Language Association of America.

I. *Elementary French.*—Students who desire to receive credit for two units of high-school French should be able to pronounce French accurately, to read at sight easy French prose, to put into French simple English sentences taken from the language of everyday life or based upon a portion of the French text read, and to answer questions on the fundamentals of French grammar.

II. *Intermediate French.*—Those who desire credit for three units should be able to read modern prose and verse of moderate difficulty and to write a composition upon any subject within the range of everyday experience. Such students should also have a thorough knowledge of French grammar as presented by the Fraser and Squair and other textbooks of the same type, including a thorough study of the uses of the conditionals and subjunctives, and in general of such material as may have been in the work of the first two years.

The examination of the College Entrance Certificate Board in Elementary French will be accepted for two units, and that in Intermediate French for one additional unit.

GERMAN—*Elementary.*—The first year's work should comprise: Careful drill upon pronunciation and oral work; the rudiments of grammar including the inflection of nouns, pronouns, and adjectives; the conjugation of the more common weak and strong verbs; the use of the more common prepositions; the conjugation and meanings of the modal auxiliaries; the elementary rules of syntax and word order; dictation and elementary composition; the reading of 75 to 100 pages of prose and poetry.

The second year's work should include the continued study of the grammar and composition, and the reading of 150 to 200 pages of literature.

The advanced German should include constant practice in conversation and composition, and the reading of about 400 pages of moderately difficult prose and poetry.

SPANISH—*Elementary.*—The equivalent of Course 1, 2 offered by the University. The first year's work should comprise: Careful drill in the pronunciation; the rudiments of grammar, including the conjugation of the regular and more common irregular verbs; exercises containing illustrations of the principles of grammar; dictation; the translation of simple Spanish when spoken; sufficient translation from English to Spanish to illustrate the prin-

ciples of grammar; the reading of about 125 pages of modern prose. In the second year in addition to the continued study of the grammar and the use of suitable exercises similar to those employed in the preceding year there should be read from 300 to 400 pages belonging to modern Spanish literature.

HISTORY

One unit is required by all colleges of the University for entrance. Four may be offered.

The student will be expected to show judgment as well as memory and be able to make comparisons and give summaries. Some knowledge of geography is required, and collateral reading is essential

I. *Greek and Roman History.*—One unit.

Greek History.—To the death of Alexander with due consideration of Greek life, literature, and art. One-half unit.

Roman History.—To 800 A.D. with emphasis on government and institutions. One-half unit.

II. *English History.*—A general knowledge of the political and social development of England; in particular the growth of the limited monarchy with parliamentary government and the British Empire and Commonwealth. One unit.

III. *American History.*—Including civics and with especial attention to social and economic life. One unit.

IV. *Medieval and Modern History.*—One unit.

Medieval History.—To 1500. One-half unit.

Modern European History.—From 1500 to the present. One-half unit.

V. *General History.*—Beginning with ancient civilization and coming down to the present time. One unit.

MATHEMATICS

The requirements in mathematics given here are essentially those published by the College Entrance Examination Board. A pamphlet giving fuller details of the requirements can be obtained from the secretary of that Board.

Algebra to Quadratics.—One unit.

(1) The meaning, use, evaluation, and necessary transformations of simple formulas involving ideas with which the pupil is familiar, and the derivation of such formulas from rules expressed in words.

(2) The graph, and graphical representation in general. The construction and interpretation of graphs.

(3) Negative numbers; their meaning and use.

(4) Simultaneous equations. The solution of systems of equations of the first degree and also of systems consisting of one quadratic and one linear equation involving two unknown quantities, with verification of results.

(5) Ratio, as a case of simple fractions; proportion, as a case of an equation between two ratios; variation. Problems.

(6) The essentials of algebraic technique.

(7) Exponents and radicals; simple cases.

(8) Numerical trigonometry.

Quadratics and Beyond.—One unit.

(1) Numerical and literal quadratic equations in one unknown quantity. Problems.

(2) The binomial theorem for positive integral exponents, with applications.

(3) Arithmetic and geometric series.

(4) Simultaneous equations of the first degree in three unknown quantities.

(5) Simultaneous equations (in two unknown quantities), consisting of one quadratic and one linear equation, or of two quadratic equations of certain types. Graphs.

(6) Exponents and radicals.

(7) Logarithms.

Plane Geometry.—The usual theorems and constructions which treat the general properties of plane rectilinear figures, the circle and the measurements of angles, similar polygons, areas, regular polygons, and the measurement of the circle.

Solid Geometry.—The usual theorems and constructions which treat the relations of planes and lines in space; the properties and measurement of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle.

Trigonometry.—Definitions and relations of the six trigonometric functions considered as ratios; circular measurement of angles, proofs of principal formulas; in particular those for the sine, cosine, and tangent of the sum and the difference of two angles, of the double angle and the half angle; the product expressions for the sum and the difference of two sines and of two cosines; the transformation of trigonometric expressions by means of these formulas; solution of trigonometric equations of a simple character; theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles, and practical applications.

Advanced Algebra.—Permutations and combinations with applications of the theory limited to simple cases: complex numbers with graphical representation of sums and differences: determinants, chiefly of the second, third, and fourth orders; methods of evaluating such determinants including the method involving the use of minors; the application of determinants to the

solution of systems of equations of the first degree: so much of the theory of equations including graphical methods, Descartes' rule of signs and Horner's method, but not Sturm's functions or multiple roots, as is necessary for the solution of equations of higher degree with numerical coefficients; also the application of the theory to the solution of equations of this type.

SCIENCES

Biology.—This may consist of a continuous course for one year dealing with the problems of general biology, including the study of the structure, functions, and habits of both plants and animals; a course for one year in botany alone; a course for one year in zoology alone; or a course for one-half year in human physiology. The human physiology may be arranged to form a part of the general biology, or of the zoology; but in such cases it must be treated as an integral part of the subject under consideration.

The requirements in botany and zoology are the same as those of the College Entrance Examination Board, and are outlined in the syllabus of the Board. The notebook should include properly labeled drawings, and descriptions of experiments, representing as much of the work in this syllabus as may be practicable, and should be the record of a year's laboratory work in the subject. The making of an herbarium is optional.

Chemistry.—The necessary ground is covered by the first textbooks in chemistry, such as Brownlee and others; Hessler and Smith; McPherson, Henderson, and Fowler's *Chemistry for Today;* Newell; and Black and Conant. Records of laboratory work should be kept in permanent notebook form.

The work in chemistry should include at least ninety hours of classroom work and a full year of individual laboratory work of two double class periods weekly. The laboratory requirement is not limited to a specific number of experiments or exercises but must include a broad general training. The notebooks of students seeking entrance credit in chemistry must be certified by the instructor and presented as evidence, when called for, by the Department of Chemistry and Chemical Engineering.

Physical Geography (Physiography).—A satisfactory preparation may be obtained from Davis's *Physical Geography* or one of similar grade.

Physics.—The necessary preparation is covered in one year in a good fitting school. This covers the fundamental facts in mechanics, heat, light, sound, electricity and magnetism. A two-hour laboratory period per week should be a part of the course. Approximately forty exercises should be covered in the laboratory. It is expected that the principal submitting a credit in physics vouches for a satisfactory notebook.

ADMISSION OF SPECIAL STUDENTS

Persons twenty-one years of age, not candidates for a degree, may be admitted as special students, if they give satisfactory evidence that they are prepared to take the desired subjects.

ADMISSION TO THE TWO-YEAR COURSE IN AGRICULTURE.—Candidates for admission to the Two-Year Course in Agriculture must have satisfactorily completed two years of high-school work.

ADMISSION BY TRANSFER

A student desiring to transfer to the University of Maine from another college of recognized standing must present the following credentials:

A statement of his entrance record.

A statement showing a complete record of his work while in attendance including faculty action, if any.

A letter of honorable dismissal.

These credentials must be sent directly from the Registrar's office and should be addressed to the Registrar of the University of Maine.

Applicants should notify the Registrar whether they desire admission to the College of Agriculture, the College of Arts and Sciences, the School of Education, or the College of Technology. A college catalog should be mailed unless the Registrar knows that the University of Maine is on the permanent mailing list.

REGISTRATION

FRESHMEN.—All members of the incoming freshman class are REQUIRED to be in residence on the campus during the period known as Freshman Week. The dates are announced in the calendar in the front of the catalog. Following the general plan employed for the past eleven years, it will be devoted to tests of various sorts whereby the University authorities may obtain more accurate information concerning the type and degree of mental qualifications of the new students, and to lectures and demonstrations by which the students may be more intelligently informed of the University and its customs.

NO EXCUSES FOR NON-ATTENDANCE OTHER THAN ILLNESS CERTIFIED TO BY A PHYSICIAN IN GOOD STANDING WLL BE ACCEPTED.

UPPERCLASSMEN.—In the fall semester of 1935, upperclassmen will be required to register on September 17, or to present written evidence that they have been excused from so registering by the University authorities. In other

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words, upperclassmen must before September 17 have communicated with the dean of their college giving him their reasons for desiring to register late, and have received from him written authorization so to do. In the event of an unusual circumstance wholly beyond the control of the student, and occurring just prior to the opening of the fall semester, the student may present his case in person to the dean upon his arrival at the University. Late registration is a handicap both to students and to University authorities, and will be rigidly discouraged whenever and wherever possible.

STUDENT EXPENSES

A partial list of necessary expenses is indicated below. It includes only items which are fairly uniform for all students. The estimates are prepared upon the basis of students living in University halls.

	Students from within the State	Students from without the State
Tuition	$150.00	$250.00
Textbooks	25.00 to 50.00	25.00 to 50.00
Board 34 weeks @ $5.50	187.00	187.00
Room in Dormitory	85.00	85.00
Special Assessment for Athletics & Debating	10.50	10.50
Health Service Fee	2.00	2.00
	$459.50 to $484.50	$559.50 to $584.50

The tuition for students taking the Two-Year Course in Agriculture is $70.00 a year. Such students do not pay the special assessment for athletics and debating.

Application for Admission

A fee of $10.00 is required at the time of application. Checks should be made payable to the University of Maine. This fee is refunded if the applicant is not admitted. When the applicant enters the University the fee will be applied toward payment of the first semester's tuition.

Application for Room

A deposit of $15.00 is required at the time application is made for a room. If a student is unable to enter, the deposit will be refunded provided the room

is given up on or before August 1. If notice of withdrawal is given on or before September 1, $10.00 will be refunded. In case of withdrawal after September 1, the entire deposit is forfeited, but may be applied toward the payment for a room if the applicant enrolls in the University the following year.

When a student enters the University the deposit of $15.00 will be applied toward payment of dormitory charges.

Special Charges

A fee of $2.00 is charged a student for each special examination.

Students registering after the prescribed day of registration for the fall or spring semester shall pay an additional fee of two dollars.

Rooms

The rooms in the Maples, a freshman dormitory for women, accommodate one, two, or three students.

The rooms in Balentine Hall, accommodating one and two students each, and those in Colvin Hall, accommodating two and four students each, are available to all women students.

The rooms in Oak Hall and the middle section of Hannibal Hamlin Hall accommodate two students each; the north and south sections of Hannibal Hamlin Hall accommodate four students each. Oak Hall and Hannibal Hamlin Hall are freshman dormitories for men.

Dormitory charges include steam heat and electric lights. The rooms in the dormitories are furnished with beds, mattresses, chiffoniers, desks, and chairs. Each resident in the dormitory has bed linen and three towels laundered each week without extra charge. Students furnish pillows, bed linen, and blankets.

Women students not living at home are required to live in one of the women's dormitories. In exceptional cases women students are allowed to live at some boarding house approved by the Dean of Women.

Applications for dormitory rooms should be addressed to the Registrar.

Gymnasium Uniform for Women

Every woman will be expected to purchase a prescribed uniform before coming to college. Information regarding uniform and place where it can be bought will be sent with application blanks. The approximate cost of the uniform is $15.00.

All women students who are using locker rooms and shower baths will be assessed fifty cents each semester for the use of towels. This assessment will be added to the term bill at the end of each semester.

Deposits to Cover Expenses

The University *requires all students to pay in advance.* The payments indicated below are required at the beginning of each semester.

Deposit	Residents of Maine	Non-Residents of Maine
Tuition	$ 75.00	$125.00
Board and Room	136.00	136.00
Key Deposit (men only)	5.00	5.00
Military Deposit (required of all men taking military instruction)	30.00	30.00
Special Assessment for Athletics and Debating	5.25	5.25
Health Service Fee	1.00	1.00
Freshman Week (Freshmen only)	8.00	8.00
	$260.25	$310.25

For students who do not room and board in University halls the above amounts are reduced by $141.00.

All men taking military are required to make a deposit of $30.00 to cover cost of equipment. This deposit is returned at the end of the year, less a charge for goods furnished, plus a charge for lost and misused equipment.

For students in the Two-Year Course in Agriculture the deposit required for tuition is $35.00.

Diploma Fee

All students receiving a degree are required to pay a diploma fee of $5.00.

Communications

Communications with reference to financial affairs of students should be addressed to the Treasurer of the University of Maine.

LOAN FUNDS

Kittredge Fund.—This fund, amounting to over $2500, was established by Nehemiah Kittredge, of Bangor. It is in the control of the President and the Treasurer of the University, by whom it is loaned to needy students in

the three upper classes. In the deed of gift it was prescribed that no security but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest be paid promptly, and that the principal be returned from the first earnings after graduation. Individual loans are limited to $50.

Boston Alumnae Fund.—This is a fund now amounting to over $500, available for women of high scholastic standing who have completed at least two years of college work. Loans are made at the discretion of the faculty Committee on Honors, and shall in no case exceed $200. The recipient is required to sign a promissory note on which interest at the current rate is charged; she is expected to begin payment immediately upon leaving college and to complete the same within two years.

Maine Campus Fund.—This fund, the gift of the Maine *Campus*, amounting to $320, is loaned to juniors and seniors whose conduct and scholarship are satisfactory, preference being given to those interested in the literary activities of the University. Amount loaned is limited to $50 per person with interest at 4 per cent while in college and 6 per cent thereafter. Loans must have the endorsement of a satisfactory second party. Fund is in control of the Treasurer of the University, and the custodian, editor-in-chief, and business manager of the *Campus*. Payment is to be made from first earnings after graduation or withdrawal from college.

Class of 1926 Loan Fund for Seniors.—This fund, the gift of the Class of 1926, amounting to over $1100, is loaned to seniors of good scholastic standing during the last semester of their senior year. Amount loaned is $50 per person, exceptional cases to be allowed $100. Payment of such loan is to be made before March 1 of the following year, with interest at the prevailing rate. The fund is under the same control as the Kittredge Fund.

Women's Loan Fund.—This fund was inaugurated by the American Association of University Women, University of Maine Branch, in 1925. It provides for loans to undergraduate women of the University who have successfully completed one or more years of university work, and have been found by the University to be thoroughly satisfactory in regard to character, scholarship, and general ability, and to be in genuine need. The fund amounts at present to $1300; and loans to one student shall not exceed $200 a year. Loans bear interest at the rate of 4 per cent, and are made at the discretion of a committee of the local branch of the Association.

Mary S. Snow Memorial Fund.—Students and friends of Mary S. Snow, one-time superintendent of schools in Bangor, and later a leader in home economics education, have established as a tribute to her memory a loan fund to be used in helping earnest and deserving young women secure a home economics education at the University of Maine. The fund at present amounts to over $3700 and is administered by a committee consisting of the President

of the University, the Dean of the College of Agriculture, and the head of the Home Economics Department. Loans may be granted to young women of such character and scholarship as give promise that the education thus made possible will be of genuine value to the students and to society. Interest is charged at the rate of 3 per cent while the student is in school, 6 per cent thereafter. Conditions of repayment shall be made for the individual student on the basis of her obligation to contribute to the education of other students by repayment as soon as possible after graduation.

American Pulp and Paper Mill Superintendents' Association Fund.—This fund amounts to $2500. The income is to be used to improve instruction and aid investigations in pulp and paper chemistry and technology, to develop cooperation between pulp and paper mill superintendents and young technical graduates, or to be loaned to meritorious students pursuing the pulp and paper course. A report is to be made annually to the Association.

Drummond Fund.—This fund of $1000 was established in memory of Frank Hayden Drummond, of Bangor, by his widow and children. It is in control of the President and the Treasurer of the University by whom it is loaned to needy students of good character who have attained an average of C or its equivalent. Loans shall bear interest at 5 per cent, and the principal must be paid from the first earnings after leaving the University.

Carleton Orchard Fund.—This fund originated in the gift to the State of Maine by James A. Gregory of one interest-bearing first mortgage bond for $1000, the interest on which was to be used for the promotion of scientific orcharding in Maine. At first administered by the Maine Department of Agriculture, the income from this bond was transferred in 1925 to the College of Agriculture of the University "for the assistance of needy students who shall be residents of the State of Maine, majoring in horticulture at the said college of agriculture." Loans are made at the discretion of a committee consisting of the head of the Department of Horticulture, the Dean of the College of Agriculture, and the Treasurer of the University. They bear interest at the current rate from the date of issue until repaid.

The Bangor Business and Professional Women's Loan Fund.—This fund now amounting to $345 was established by the Business and Professional Women's Club of Bangor, Maine, for needy and deserving women students, preferably from Bangor and vicinity, who have been in attendance at least two years and who have maintained an average grade of "C" or better. Loans shall not exceed $250 per student and the recipient shall sign a promissory note to begin payments on the loan within four months after leaving the University at the rate of not less than $10 per month, with interest at the current rate from the date of the loan. The recommendation to the President for loans shall be made upon the recommendation of the Registrar, the Dean of Women, and the Chairman of the Education Committee of the Bangor Business and Professional Women's Club.

GENERAL LOAN FUND.—This fund, now amounting to $1380, was donated by unknown friends, students, and faculty of the University. The first donation was made in May, 1930, and has been increased at various periods since that time. Loans from this fund are made at the discretion of the Dean of Men, or Dean of Women, and the President of the University.

KAPPA PSI LOAN FUND.—This fund, amounting to $200, was donated by the Kappa Psi Sorority during the spring of 1933, to be used for the benefit of women students.

SCHOLARSHIPS AND PRIZES

Applications for scholarships, unless otherwise indicated, should be sent to the Chairman of the Committee on Honors before April 15. Application blanks may be obtained from the Chairman of the Committee on Honors or from the Registrar's office.

Scholarships available for graduate students are described in the section of the catalog devoted to graduate study.

TRUSTEE SCHOLARSHIPS.—Five undergraduate scholarships of the value of a year's tuition are awarded annually by authorization of the Board of Trustees, primarily on a basis of scholarship standing. One scholarship at large is offered to a student of distinguished record in any college or school of the University, without restriction as to residence. Of the other four, for residents of Maine only, one is offered in each of the three colleges and one in the School of Education.

SECONDARY SCHOOL CONTEST SCHOLARSHIPS.—Eight tuition scholarships, established by the Board of Trustees, are awarded each year to freshmen entering the University from Maine secondary schools. These scholarships are awarded, one in each of eight districts of the State, to the secondary school senior making the highest rank in his district in the Senior Scholarship Contest sponsored by the School of Education. This contest is held in May, and the scholarships are available the following September. The highest ranking senior of the eight selected is awarded a tuition scholarship for four years, the second highest for three years, the third highest for two years, and the remaining five for one year each. Each scholarship is issued for one semester and will be continued in the second semester upon evidence of satisfactory work in the University.

HOVEY MEMORIAL SCHOLARSHIP.—The Stone and Webster Corporation in 1931 permanently allocated to the University of Maine the Hovey Memorial Fund of $5900, established in 1932 in honor of the late Francis J. Hovey. The income from this fund makes available annually two or three scholarships of approximately $150 for students in the College of Technology, on the

basis of scholastic attainment, character, and general promise. A scholastic standing of at least 3.00 must be attained to be eligible, and must be maintained during tenure. Award is made by the Dean and the heads of departments in the College, subject to the approval of the President. Preference is given to students residing in the State of Maine, if there are suitable candidates in this group.

Charles H. Hood Fund Scholarships.—Seven scholarships of $200 each are available annually to men and women students of the College of Agriculture whose intention is to promote farming as a life opportunity. They are awarded by a committee comprising the Dean of the College of Agriculture as chairman, the head of the Department of Animal Industry, and the Treasurer of the University, and are distributed as follows: Two sophomore and two junior scholarships are granted to students whose scholastic standing for the previous year places them in the upper half of their class; and three senior scholarships are granted to students whose scholastic standing for the previous year places them in the upper third of the class. The junior and senior scholarships are further restricted to students specializing in some phase of dairy industry promotion.

W. H. Bowker Scholarships.—The American Agricultural Chemical Company has established two scholarships in honor of W. H. Bowker, one of the first technically trained agricultural college graduates to utilize agricultural research in the manufacture of commercial fertilizers. These scholarships provide $300 each to pay two years' tuition in the College of Agriculture. One scholarship is to be awarded to some boy now studying vocational agriculture in any high school or academy in Aroostook County, or in Patten Academy, Penobscot County. The second scholarship is to be awarded to some boy now studying vocational agriculture in any high school or academy in the state. The awards will be made in June, 1935. Each scholarship is to be awarded by a committee comprising the Dean of the College of Agriculture, the Professor of Agricultural Education, and the teachers of vocational agriculture in the section involved.

William Emery Parker Scholarship.—In memory of William Emery Parker, Class of 1912, the income from a one thousand dollar bond donated by Hosea B. Buck, Class of 1893, is awarded annually to that male student of the sophomore or junior class who, in addition to being above the average rank scholastically, shows most clearly those qualities of manliness, honesty, and constructive effort which characterized the college career of the alumnus in whose memory the scholarship is given. It is to be awarded by the Committee on Honors with the approval and agreement of the President.

Women's Student Government Association Scholarships.—Two scholarships of fifty dollars each are awarded annually by the Women's Student Government Association to deserving women students who are in need

of financial assistance and whose conduct and scholarship record are satisfactory. Applications must be submitted to the president of the Student Council by April 1. Award is made by the Committee on Honors on recommendation of the Dean of Women and the Student Council.

NEW YORK ALUMNI ASSOCIATION SCHOLARSHIPS.—Two scholarships of fifty dollars each are annually offered by the New York Alumni Association for the encouragement of proficiency in written and oral expression.

SCHOLARSHIP No. 1 is offered for excellence in debating by the faculty Committee on Honors, on recommendation of the Department of Public Speaking. In case the effort in debating does not justify the award in any year or years, the amount shall be accumulative.

SCHOLARSHIP No. 2 is offered annually to a junior in the College of Technology, to encourage advancement and proficiency in English, particularly in correct, clear, direct, and efficient writing as equipment for later professional, commercial, and civil life. The candidates shall assemble on an announced date, and each shall write an essay on a subject selected from a list of ten, of which five are chosen by the Department of English and five by the College of Technology. The award, based upon the quality of the essay and the advancement which is indicated by the student's grade in courses in English, shall be made by three judges, of whom one shall represent the College of Technology and the other two shall be selected by the Department of English.

THE KIDDER SCHOLARSHIP.—A scholarship of thirty dollars was endowed by Frank E. Kidder, Ph.D., of Denver, Colorado, a graduate of the University in the Class of 1879. This scholarship is awarded by the Committee on Honors, with the approval of the President, to a student whose rank excels in his junior year.

THE PITTSBURGH ALUMNI ASSOCIATION SCHOLARSHIP.—A scholarship of thirty dollars is awarded annually by the Pittsburgh Alumni Association to a member of the junior class in the College of Technology whose ability and needs justify the award. The selection is made by the President and the Dean and professors of the College of Technology.

THE JOSEPH RIDER FARRINGTON SCHOLARSHIP.—The income from a one thousand dollar bond, a gift of Arthur M., Edward H., Oliver C., Horace P., and Wallace R. Farrington, all graduates of the University of Maine and sons of Mr. and Mrs. Joseph Rider Farrington, is offered annually as a scholarship in honor of their parents. The following order of preference is considered in awarding this scholarship: (a) To any direct descendant of Joseph Rider and Ellen Holyoke Farrington, or anyone whom three of such descendants may select; (b) To any student bearing the surname of Farrington or Holyoke; (c) To the student in the junior class of the College of Agriculture who attains the highest rank in studies and deportment during the year of award and who shall make application for the scholarship.

THE STANLEY PLUMMER SCHOLARSHIP.--The income of one thousand dollars, the bequest of Colonel Stanley Plummer of Dexter, Maine, is awarded anunally to a needy and deserving student selected by the Committee on Honors. Students born in Dexter, Maine, shall have the preference; but if there are none such, any needy and deserving student may be selected.

THE ELIZABETH ABBOTT BALENTINE SCHOLARSHIP.—A scholarship of the value of seventy-five dollars was endowed by the Gamma Chapter of Alpha Omicron Pi, to be awarded to a woman member of the sophomore class to be selected by the Committe on Honors on recommendation of the chapter with the approval of the President. Both scholarship and individual need are to be considered in the award.

THE CLASS OF 1905 SCHOLARSHIP.—The income from a one thousand dollar bond, donated by members of the Class of 1905, shall be awarded to a man of the freshman class pursuing a regular curriculum, whose deportment is satisfactory, and who attains the highest rank in the mid-year examinations.

CARROL C. JONES SCHOLARSHIP.—The net income of a fund of one thousand dollars, bequeathed by Minnie E. Jones, of Solon, in memory of her son, Carrol C. Jones, of the Class of 1914, is awarded annually to the student who makes the greatest improvement in his college work during his or her freshman year.

THE PHI SIGMA SCHOLARSHIP.—A scholarship of thirty dollars is offered annually by the Phi Sigma Fraternity to a sophomore student on the basis of proficiency, interest, and general promise in biology and of general need. The award shall go toward payment of tuition and shall be made by the Phi Sigma Executive Committee in conference with the faculty of the Departments of Botany and Zoology.

THE DELTA DELTA DELTA SCHOLARSHIP.—A scholarship of fifty dollars, established by Alpha Kappa chapter of the Delta Delta Delta sorority, is awarded annually to that girl in the sophomore or junior class whom the Faculty Committee on Honors considers most deserving on a basis both of need and of scholarship.

OHIO ALUMNI ASSOCIATION SCHOLARSHIP.—A scholarship of the value of fifty dollars, established in 1934 by the Ohio Alumni Association, is awarded annually by the Committee on Honors, with the approval of the President, to a student whose character, scholarship, and need justify the award.

THE CHI OMEGA SOCIOLOGY PRIZE.—In accordance with its national policy, the Chi Omega Sorority offers annually a twenty-five dollar prize to the woman student in the sophomore or junior class who secures the highest grade in the beginners' course in sociology. Her general deportment and

interest in the study of sociology may also be considered in determining the award.

PRIZE OF THE CLASS OF 1873.—The income of one thousand dollars, the gift of Russell W. Eaton, of Brunswick, a member of the Class of 1873, is awarded annually to that member of the sophomore class who is able to show the greatest improvement in mechanical drawing during the first two years of his college course. It is expected that candidates for this prize shall have had no training in mechanical drawing previous to entering the University.

THE ALPHA OMICRON PI ALUMNAE PRIZE.—A prize of ten dollars, given by the Bangor Alumnae Chapter of Alpha Omicron Pi, is awarded annually to the woman student showing the greatest improvement in her work during her freshman year. The record at the Registrar's office, showing the comparison of grades of the fall semester with those of the spring semester, shall furnish the basis of award.

SIGMA MU SIGMA AWARD.—An award of twenty-five dollars is made annually by the honorary society Sigma Mu Sigma to a member of the current sophomore class who shall have completed a semester and a half of the introductory course in General Psychology, on a basis of proficiency, interest, and general promise in the subject. Nominations for the award shall be made to the president of the society by the instructors in the course when the spring midsemester grades are reported to the Registrar, and it becomes available upon the student's return to the University in the following semester.

THE PALE BLUE KEY AWARD.—An award of fifty dollars is given each year by the Pale Blue Key to some member of the freshman class who needs help. He must have shown promise in track athletics in his freshman year and have maintained a satisfactory scholarship standing. The award shall be in the hands of a committee composed of the president of the Pale Blue Key, the coach of track athletics, and a member of the faculty to be chosen by the club, subject to the approval of the President. The winner will be given the award upon his return to college in his sophomore year. Applications must be made in writing and sent to either the coach of track athletics or the president of the Pale Blue Key before May 1.

THE HENRY L. GRIFFIN PRIZE IN ENGLISH COMPOSITION.—A prize of ten dollars, in honor of the late Rev. Henry L. Griffin, of Bangor, is awarded by the Department of English for excellence in the freshman course in composition. The chief basis of the award is a competition in writing held during the month of April.

FRANKLIN DANFORTH PRIZE.—A prize of fifteen dollars, the gift of the Hon. Edward F. Danforth of Skowhegan, a graduate of the University of the Class of 1877, in memory of his father, Franklin Danforth, is awarded to that member of the senior class in the College of Agriculture who attains the highest standing throughout his curriculum.

GREEK CULTURE PRIZE.—A prize of fifteen dollars, the gift of the Hon. Edward F. Danforth, of Skowhegan, a graduate of the University in the Class of 1897, is awarded annually to that member of the senior class who shall have given evidence of the best appreciation of the spirit of Greek culture. The award is made on recommendation of the Professor of Ancient Civilization.

THE SPANISH CLUB PRIZE.—A prize of ten dollars is awarded annually by the Círculo Español for excellence in Elementary Spanish to a student of the freshman class, on the basis of a competitive examination.

THE ROBERT C. HAMLET PRIZE.—In accordance with the will of Robert Crosby Hamlet, a graduate of the University in the Class of 1925, a fund was left in the keeping of the University of Maine Foundation, the income of which is to provide an annual prize for that student in the University who shall have written the best original play during the year of award. The judges shall be the Dean of the College of Arts and Sciences, the head of the Department of English, and the president of the Maine Masque. The first award will be offered in the spring of 1936.

THE CLASS OF 1908 COMMENCEMENT CUP.—A cup, donated by the Class of 1908 alumni, is awarded to that graduate class, the largest percentage of whose members register during Commencement Week.

THE FRATERNITY SCHOLARSHIP CUP.—The 1910 Senior Skulls Society presented to the University a cup to be awarded in turn at each Commencement to that fraternity having the highest standard in scholarship for the preceding calendar year. The cup was to become the permanent property of the fraternity to which it should be awarded the greatest number of times through an eleven-year period. The award was renewed in 1921 for an eleven-year period by the 1921 Skulls, and in 1932 by the 1932 Skulls. The first cup was awarded in 1921 to Phi Eta Kappa and the second in 1932 to Lambda Chi Alpha.

THE PAN-HELLENIC SORORITY CUP.—A scholarship cup presented by the Pan-Hellenic Council is awarded in turn at each Commencement to the sorority having the highest scholarship standing, on terms similar to those of the Fraternity Scholarship Cup. The first cup was awarded in 1933 to Delta Zeta.

FRESHMAN SCHOLARSHIP CUP.—A cup is awarded by the University each spring to that secondary school in Maine having three or more of its graduates in full standing in the freshman class, whose freshman representatives as a group shall have attained the highest scholastic standing for the fall semester preceding. The award was made first in 1931, to Fort Kent High School, in 1932 to Boothbay Harbor High School, in 1933 to Deering High School, and in 1934 to South Portland High School.

THE WASHINGTON ALUMNI ASSOCIATION WATCH.—The Alumni Association of Washington, D. C., presents annually a watch to the male member of the graduating class who, in the opinion of the students and the University administration, has done the most for the University during his curriculum. This award is made as the result of a secret ballot by the students, passed upon by the President and the Administrative Committee.

PORTLAND ALUMNAE ASSOCIATION WATCH.—The Portland Club of University of Maine Women presents annually a watch to the woman member of the graduating class who, in the opinion of the students and the University administration, has done the most for the University during her curriculum. This award is made as the result of a secret ballot by the students, passed upon by the President and the Administrative Committee.

AGRICULTURAL CLUB MEMBERSHIP CUP.—A cup furnished by the Agricultural Club is engraved each year with the numerals of that undergraduate class which can show the best record of membership in the club.

THE CHARLES RICE CUP.—The Kappa Sigma Fraternity presented in 1921 a cup in honor of Charles Anthony Rice, of the Class of 1917, who was killed in service, to be held for one year by the team winning the Intramural Track Championship.

THE INTRAMURAL PLAQUES.—The Intramural Athletic Association donates each year a plaque to the fraternity making the best showing in each major intramural sport, and a special plaque to that fraternity which makes the best performance in all the sports.

STUDENT REGULATIONS

It is assumed that all students entering the University are willing to subscribe to the following: *A student is expected to show, both within and without the University, respect for order, morality, and the rights of others, and such sense of personal honor as is demanded of good citizens.*

The quota of regular studies for each student varies from a minimum of fourteen hours to a maximum of seventeen hours in the College of Arts and Sciences, from a minimum of fourteen hours to a maximum of eighteen hours in the School of Education, and from a minimum of seventeen hours to a maximum of twenty-two hours in the College of Technology and the College of Agriculture except that in the Department of Home Economics the limits are fourteen hours and nineteen hours. In the application of this rule, two or three hours of laboratory work count as one hour.

Each student is expected to be present at every college exercise for which he is registered.

Detailed information about the regulations affecting students is contained in a pamphlet which may be obtained at the office of the Registrar.

Use of Automobiles by Freshmen

Freshmen are not allowed to bring automobiles or motorcycles upon the campus except those who use them to commute daily from their homes.

DEGREES

The degree of Bachelor of Arts (B.A.), with specification of the major subject, is conferred upon all students who complete a curriculum in the College of Arts and Sciences.

The degree of Bachelor of Science (B.S.) in the curriculum pursued is conferred upon students who complete the work of four years in the Colleges of Agriculture or Technology according to the requirements prescribed by those Colleges and the University.

The degree of Bachelor of Arts in Education (B.A. in Ed.), or Bachelor of Science in Education (B.S. in Ed.) is conferred upon students who complete the prescribed work in the School of Education.

A minimum residence of one year is required for the attainment of any bachelor's degree. This regulation refers to the senior year. No student will be recommended for a degree who, having been reported to the Committee on Student's Use of English of his college, shall have failed to satisfy the requirements of the committtee.

The degrees of Master of Arts (M.A.), Master of Science (M.S.), Master of Arts in Education (M.A. in Ed.), and Master of Science in Education (M.S. in Ed.) are granted for one year's graduate work completed with distinction.

DEGREES WITH DISTINCTION

Degrees with distinction are conferred at Commencement for the following attainments in rank:

Seniors in the Colleges of Agriculture and Technology having an average grade of 3.50 or above are graduated with highest distinction, 3.25 to 3.49 with high distinction, and 3.00 to 3.24 with distinction.

Seniors in the College of Arts and Sciences and the School of Education having an average grade of 3.75 or above are graduated with highest distinction, 3.50 to 3.74 with high distinction, and 3.25 to 3.49 with distinction.

The average grade is based on the work of the first three and one-half years, which must include three years of resident study at the University of Maine for students in the Colleges of Agriculture, Arts and Sciences, and Technology and two years in the School of Education for students who have transferred from other institutions. Candidates in the Colleges of Agriculture, Arts and Sciences, and Technology must have completed seven-eighths and in the School of Education three-fourths of the required hours at the end of the fall semester of the senior year. Candidates must take their senior year at the University of Maine.

THESES

Theses shall be printed, or typewritten in black record, unless the subject matter prevents, and the paper used shall be a standard thesis paper, 8 x 10 1-2 inches, which may be procured at the University Store. Care should be taken to have a margin of one inch on the inner edge, at least one-half inch on the outer edge, one and one-half inches at the top, and one inch at the bottom of the page.

If drawings accompany the thesis, they may be bound in with the rest of the pages or placed in a pocket on the inside of the back cover; or if too many for this, they may be bound separately according to personal instructions of the head of the department.

A draft of all undergraduate theses must be passed to the major instructor before May 1.

Complete instructions may be found in a pamphlet entitled "Degrees and Theses."

Organization of the University

The University is divided for purposes of administration by the Trustees into two divisions, the academic and the financial. The former is divided into the Colleges of Agriculture, Arts and Sciences, and Technology, the School of Education, and the Maine Agricultural Experiment Station. The policies of the University as a unit are determined by the Board of Trustees, the administrative officers, and the general faculty, but each division regulates those affairs which concern itself alone. In addition to the faculties of the colleges there are the Faculty of Graduate Study and the Faculty of the Summer Session.

College of Agriculture

Curricula in Agricultural Economics and Farm Management, Agricultural Education, Agronomy and Agricultural Engineering, Animal Husbandry, Bacteriology, Biological and Agricultural Chemistry, Botany, Dairy Husbandry, Dairy Technology, Entomology, Forestry, Home Economics, Horticulture, and Poultry Husbandry.

Two-Year Course in Agriculture.

Short Courses in Agriculture.

Farm and Home Week.

Extension Lecture Courses.

College of Arts and Sciences

Major subjects may be selected according to definite departments (Chemistry, Classics, Economics and Sociology, English, German, History and Government, Mathematics and Astronomy, Philosophy, Physics, Psychology, Public Speaking, Romance Languages, and Zoology) or according to definite areas of pre-professional interest such as medicine, law, social work, politics, and journalism.

School of Education

Professional training is offered for superintendents, supervisors and principals, and teachers of academic subjects in the secondary schools. The degrees of Master of Arts in Education and Master of Science in Education are offered.

College of Technology

Curricula in Chemical Engineering, Chemistry, Civil Engineering, Electrical Engineering, General Engineering, and Mechanical Engineering.

Faculty of Graduate Study

Courses leading to the degrees of Master of Arts and Master of Science have been organized in a considerable number of departments.

Maine Agricultural Experiment Station

Offices and principal laboratories at Orono; Highmoor Farm at Monmouth; Aroostook Farm at Presque Isle.

Summer Session

A session of six weeks is maintained for teachers and college students. Work is offered at present in sixteen departments.

College of Agriculture

FACULTY OF INSTRUCTION

ARTHUR LOWELL DEERING, B.S., Sc.D., *Dean*
LAMERT SEYMOUR CORBETT, M.S., *Professor of Animal Industry*
HERBERT STAPLES HILL, A.B., *Professor of Agricultural Education*
CHARLES HENRY MERCHANT, Ph.D., *Professor of Agricultural Economics and Farm Management*
JAMES HOWARD WARING, Ph.D., *Professor of Horticulture*
PEARL STUART GREENE, A.M., *Professor of Home Economics*
FERDINAND HENRY STEINMETZ, Ph.D., *Professor of Botany and Entomology*
*MAURICE DANIEL JONES, M.S., *Professor of Agricultural Economics and Farm Management*
ELMER REEVE HITCHNER, Ph.D., *Professor of Bacteriology*
LLEWELLYN MORSE DORSEY, M.S., *Professor of Dairy Husbandry*
HARRY WOODBURY SMITH, Ph.D., *Professor of Biological and Agricultural Chemistry*
MARION DEYOE SWEETMAN, Ph.D., *Professor of Home Economics*
DWIGHT BURGESS DEMERITT, M.F., *Professor of Forestry*
JOSEPH ANTHONY CHUCKA, Ph.D., *Professor of Agronomy and Agricultural Engineering*
JOHN ROBERT SMYTH, M.S., *Associate Professor of Poultry Husbandry*
ALLEN WRIGHT GOODSPEED, M.F., *Associate Professor of Forestry*
GEORGE FARRINGTON DOW, M.S., *Associate Professor of Agricultural Economics and Farm Management*
CHAUNCEY WALLACE LORD CHAPMAN, M.S., *Assistant Professor of Forestry*
LEIGH PHILBROOK GARDNER, M.S., *Assistant Professor of Poultry Husbandry*
HAROLD CLAYTON SWIFT, M.S., *Assistant Professor of Agronomy*
CHARLES ORVILLE DIRKS, M.S., *Assistant Professor of Entomology*
GEORGE PETER STEINBAUER, Ph.D., *Assistant Professor of Botany*
MARGUERITE KUTH MUSGRAVE, A.M., *Assistant Professor of Home Economics*
MONROE EDWARD FREEMAN, Ph.D., *Assistant Professor of Biological and Agricultural Chemistry*
ROBERT IRVING ASHMAN, M.F., *Assistant Professor of Forestry*
HOWE WIGGIN HALL, M.S., *Assistant Professor of Animal Industry*

* On leave of absence to November 30, 1934.

FAY HYLAND, M.S., *Assistant Professor of Botany*
HELENE HEYE, M.S., *Assistant Professor of Home Economics*
JOHN FRANKLIN WITTER, D.V.M., *Assistant Professor of Animal Pathology*
STEPHEN MARTIN RALEIGH, Ph.D., *Assistant Professor of Agronomy*
ROGER CLAPP, M.S., *Assistant Professor of Horticulture*
RICHARD MCVAY RILEY, M.S., *Assistant Professor of Horticulture*
BEULAH ELIZABETH OSGOOD, A.M., *Instructor in Home Economics*
GLADYS MARIE GOULD, B.S., *Part-Time Instructor in Home Economics in Charge of Student Teaching*
MABEL LANCASTER STEWART, B.S., *Instructor in Home Economics*
FRED PERLEY LORING, B.S., *Director of Short Courses*
†LAWRENCE ALFRED CHATTO, B.S., *Acting Instructor in Agricultural Economics and Farm Management*
GARNET EDWARD DAVIS, B.S., *Graduate Fellow in Dairy Husbandry*
ARNOLD EVANS HOOK, B.S., *Graduate Fellow in Bacteriology*
CLIFFORD EGERTON LLOYD, B.S., *Graduate Fellow in Botany and Entomology*

GENERAL INFORMATION

The College of Agriculture comprises the Departments of Agricultural Economics and Farm Management, Agricultural Education, Agronomy, Animal Industry, Bacteriology, Biological and Agricultural Chemistry, Botany and Entomology, Forestry, Home Economics, Horticulture, and Extension Service. This college offers to young men and women an opportunity to secure a broad education and thorough training in the sciences and technics relating to the major course of study they may elect to pursue. It aims to prepare them for lives of usefulness as citizens of the State and for effective service in their chosen vocations or professions.

More specific and detailed information concerning the purposes of each major course of study offered by the college will be found in the description of the various curricula.

The four-year curricula in the College of Agriculture require the completion of 147 credit hours with the exception of those of Forestry and Home Economics which comprise 153 and 128 hours respectively. In addition each student must accumulate a total of grade points equal to the number of hours required for graduation in the curriculum chosen. These grade points are computed by multiplying each hour of the letter grade by a factor as follows: A by 3, B by 2, C by 1, and D by 0. Upon the completion of the required

† Acting Instructor to November 30, 1934.

curriculum, with the necessary number of grade points, the student will be recommended for the degree of Bachelor of Science (B.S.).

On entering either a four-year curriculum in Agriculture or the Two-Year Agricultural Course a student is required to fill out a practical experience blank. Those who have not had experience in general farming are required to work during at least one summer vacation on some farm approved by the faculty of the college. Before receiving their degrees or certificates candidates must satisfy the faculty that they are familiar with the methods of conducting operations incident to general farming. This does not apply to students majoring in Botany, Bacteriology, Biological and Agricultural Chemistry, Entomology, Forestry, or Home Economics.

Physical training is required in each semester of the first two years. No credit toward a degree is allowed for this work. Physical training is not required in the two-year agricultural curriculum.

Students in agriculture who contemplate entering experiment station chemical work should elect the courses offered by the Department of Biological and Agricultural Chemistry covering the qualitative and quantitative chemical analysis of feeds, fertilizers, and dairy products. They should also elect a preparatory course in quantitative chemical analysis.

Students desiring to specialize in the botanical or entomological aspects of Forestry may offer freshman and sophomore years in Forestry as equivalent to the first two years' work in Agriculture and register in the curriculum in Botany or Entomology during the junior or senior years.

A star (*) before the time designated for a course indicates that three or sometimes more hours of actual work are required to obtain a credit of one hour; a dagger (†) indicates that two hours of actual work are required to obtain a credit of one hour.

REGULAR CURRICULA AND COURSES OF INSTRUCTION

The courses of instruction are organized as follows:

1. Four-Year Major Agriculture Curricula:
   Agricultural Economics and Farm Management, Agricultural Education, Agronomy and Agricultural Engineering, Animal Husbandry, Bacteriology, Biological and Agricultural Chemistry, Botany, Dairy Husbandry, Dairy Technology, Entomology, Horticulture, and Poultry Husbandry.
2. Four-Year Forestry Curriculum

3. Four-Year Home Economics Curriculum:
   Vocational Sequences
   1. Home Economics Education
   2. Extension-Home Demonstration or 4-H Club Work
   3. Foods and Nutrition
   4. Textiles and Clothing
   5. Development and Training
   6. Special Sequences: Home Economics Journalism, Household Equipment, Social Service, and others formulated to fit individual cases
4. The Two-Year Course in Agriculture
5. Short Courses in Agriculture
6. Farm and Home Week
7. Extension Lecture Courses

THE FOUR-YEAR AGRICULTURAL CURRICULA

The four-year agricultural curricula are designed for those who wish to engage in the business of farming; for those contemplating the special fields of agricultural economics and farm management, agronomy and agricultural engineering, animal husbandry, bacteriology, biological and agricultural chemistry, botany, dairy husbandry, dairy technology, entomology, horticulture, and poultry husbandry; for those desiring to enter Federal or State agricultural research work; for those planning to prepare themselves for the teaching of agriculture and the allied sciences in secondary schools and colleges; and for those seeking to fit themselves to become agricultural extension agents or specialists in any of the various phases of agriculture. In addition to the specific fields mentioned above there are many other opportunities open to the college trained man in the agricultural and associated industries.

Certain studies are fundamental to all work in agricultural lines, and for this reason as many of these subjects as possible are offered in the first year, during which the student is necessarily given no choice of subjects. Beginning with the sophomore year each student should start specialization in one of the following major curricula: Agricultural Economics and Farm Management, Agricultural Education, Agronomy and Agricultural Engineering, Animal Husbandry, Bacteriology, Biological and Agricultural Chemistry, Botany, Dairy Husbandry, Dairy Technology, Entomology, Horticulture, or Poultry Husbandry; and at the beginning of the junior year he must establish a definite major course of study to be followed until the requirements for graduation shall have been satisfied.

It should be noted that each major curriculum allows a student a number of elective hours. The elective subjects are selected with the advice of the major instructor. In view of the fact that the economic aspects of the agricultural industry have become so vitally important, it is suggested that the student elect subjects in the field of agricultural economics in addition to those which may be required in his major curriculum; particularly is it suggested that he obtain as much information as he possibly can on the marketing of agricultural products. In the case of those students majoring in Agricultural Economics opportunity is offered in the way of elective hours to obtain training in such of the agricultural production subjects as may be desired to furnish a basic production background.

Honor Course in Agriculture

Any student who has obtained an average grade of at least 3.25 in the courses offered by his major department during the first three years of his college course may register for honor courses in his major department or in an allied department during his senior year providing his average grade in such allied department is at least 3.25 in all subjects taken in that department. Such courses may be substituted for any elective course, the total number of credit hours not to exceed four. Such honor courses shall be designed especially to promote initiative and organizing ability in the student. The scope of such courses shall constitute a broad survey in the field selected for study and shall in no way be substituted for a thesis. The general plan shall be worked out by the head of the department in which the course is taken, and must be approved by the head of the student's major department.

Curriculum for the Freshman Year for All Students Taking Four-Year Curricula in Agriculture

Fall Semester				*Spring Semester*			
No.		Subject	Cr. Hours	No.		Subject	Cr. Hours
Ag	11	Field Crops, 2 †2	3	An	2	Types of Live Stock, 2 †2	3
Ch	5	Inorganic Chemistry, 2 †4	4	Bt	2	General Botany, 2 †4	4
Eh	1	Composition	3	Ch	6	Inorganic Chemistry, 2 †4	4
Mt	1	Military, †3	1½	Eh	2	Composition	3
Ph	1	Types, Breeds, Mgt. of Poultry, 2 †2	3	Ht	2	Tree Fruit Production, 2 †2	3
Zo	1	General Zoology, 2 †4	4	Mt	2	Military, †3	1½
Pt	1	Physical Education, 2	0	Pt	2	Physical Education, 2	0
			18½				18½

Curriculum for Students Specializing in Agricultural Economics and Farm Management

The curriculum in Agricultural Economics and Farm Management is planned to give the student a broad, comprehensive training in the economic principles of the production and marketing of agricultural products. The training in crops and livestock production, provided in this curriculum, is essential for a clear and proper understanding of the application of the principles of agricultural economics. The student may choose from the elective hours a sufficient amount of work in another department to prepare himself for a position in Agricultural Economics and Farm Management dealing with a particular group of agricultural products. The student upon completing this curriculum of study may engage in some phase of one of the main divisions in the field, such as: agricultural economics, farm management, agricultural marketing including cooperative marketing, agricultural statistics, or agricultural finance. Any one of these divisions offers many opportunities to the graduate.

SOPHOMORE YEAR

Fall Semester				*Spring Semester*		
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3		Ag 14	Sweet Corn, Beans, and Peas, 1 †2	
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4			or	2
Bt 45	General Genetics	3		Ag 16	Forage and Pasture Crops, 1 †2	
Dh 1	General Dairying, 2 †2	3		Bc 8	Agricultural Chemistry	2
Es 1a	Principles of Economics	3		Fm 48	Agricultural Economics	3
Mt 3	Military, †3	2		Mt 4	Military, †3	2
Pt 3	Physical Education, 2	0		Pt 4	Physical Education, 2	0
					Elective	10
		18				19

JUNIOR YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours
*Ag 15	Potato Production, 2 †2	3		Fm 52	Farm Accounting, 1 *6	
By 3	Bacteriology	2		Fm 62	Agricultural Business Accounting, 2 *3	3
Eh 5	Technical Composition	2		Fm 76	Agr. Marketing	3
Fm 73	Adv. Agr. Economics	3			Elective	12
Fm 75	Agricultural Statistics, 1 *3	2				
Fm 79	Cooperative Marketing	2				
	Elective	8 or 5				
		19				18

SENIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Fm 77	Agricultural Finance	2	Fm 74	Farm Management, 3 *3	4
Fm 81	Current Economic Problems	1	Fm 82	Current Economic Problems	1
Fm 83	Thesis	3	Fm 84	Thesis	3
Fm 87	Agricultural Prices	2	†	Agr. Marketing	2
	Agr. Marketing	2		Elective	8 or 10
	Elective	8			
		18			18

*Not required if Ag 14 or Ag 16 was taken in Sophomore year.

†Not required if taken in Fall.

Curriculum for Students Specializing in Agricultural Education

In recent years there has grown a need in this state and a majority of the other states for young men especially trained to conduct agricultural courses in secondary schools. The Federal government, recognizing the importance of teaching agriculture in secondary schools, has through the Smith-Hughes Act made it possible for school boards to obtain Federal aid in this work. In order to receive this aid the teacher employed must be trained at an agricultural college following a specific agricultural education curriculum or teacher-training course, as it is called. There are two such teacher-training courses in the College of Agriculture. When these requirements have been met, the graduate may become a candidate for appointment under the Smith-Hughes provisions as a teacher of agricultural subjects. It is a wise policy in any event for a student contemplating a career of teaching to follow the major agricultural teacher-training curriculum given below. For those students wishing to specialize in some other major curriculum but at the same time elect enough of the teacher-training curriculum to render themselves eligible to Smith-Hughes teaching positions, the following electives should be taken provided they are not required in their major curricula: Education 59 or Education 78; Agricultural Education 1 or 2; Agricultural Education 3; Agricultural Education 6; Farm Management 74; Dairy Husbandry 1; and Agronomy 34.

Students who elect either of the teacher-training courses must have had at least two years of practical farm work since their fourteenth birthdays.

One of these years must include year-round experience. Experience on the home farm while attending school satisfies the requirement. Those who do not meet this requirement of practical experience will be allowed to take the course only with the understanding that they will be expected to get this experience before they will be allowed to teach.

SOPHOMORE YEAR

Fall Semester

No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4
Bc 1	Organic Chemistry, 2 †2	3
En 21	Gen'l Entomology, 2 †4	4
Ht 1	Commercial Fruit Handling, 2 †2	3
Mt 3	Military, †3	2
Pt 3	Physical Education, 2	0
		19

Spring Semester

No.	Subject	Cr. Hours
Bc 2	Biochemistry, 3 †4	5
Fm 48	Agricultural Economics	3
Mt 4	Military, †3	2
Pt 4	Physical Education, 2	0
	Elective	9
		19

JUNIOR YEAR

No.	Subject	Cr. Hours
Ag 33	Farm Structures, 2 *3	3
An 5	Anatomy of Domestic Animals, 2 †2	3
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 1	General Dairying, 2 †2	3
Ed 59	Prin. Secondary Education	3
Eh 5	Technical Composition	2
		19

No.	Subject	Cr. Hours
Ag 36	Farm Machinery and Power, 2 *3	3
An 6	Physiology of Domestic Animals	3
Bc 8	Agricultural Chemistry	2
Ed 78	Principles and Methods of Teaching in Secondary Schools	3
Ht 20	Vegetable Gardening, 2 †2	3
	Elective	4
		18

SENIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ae 3	Special Methods in Teaching Agriculture, 2 †2	3	Ae 4	Practice Teaching	4
Ag 71	Drainage and Land Reclamation, 2 *3	3	Ae 6	Special Methods in Teaching Agriculture	2
An 7	Animal Hygiene	2	Ag 6	Soils and Fertilizers	2
Fm 73	Advanced Agr. Economics	3	Ag 34	Farm Shop, †4	2
	Elective	7	Fm 52	Farm Accounting, 1 *6	3
			Fm 74	Farm Management, 3 *3	4
		18			17

Curriculum for Students Specializing in Agronomy and Agricultural Engineering

Agronomy in a large sense is a study of the principles underlying modern methods of crop production, plant breeding, adaptation and care of the soil, the source and use of fertilizer materials, the management of the farm, and various phases of agricultural engineering. This curriculum provides a well-rounded training in these subjects, and presents opportunity also for elective studies in stock raising, fruit and vegetable growing, economics, botany, zoology, bacteriology, and kindred subjects.

The graduate having followed this curriculum will find numerous fields of activity open to him; the more common of which are farming for himself, farm management positions, agricultural extension work, experiment-station investigational work, agricultural teaching, and opportunities in the various fertilizer and agricultural machinery industries.

SOPHOMORE YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 1	Soils, 2 *3	3		Ag 16	Forage and Pasture Crops, 1 †2	2	
Ag 5	Soil Formation, Erosion and Conservation	3		Bc 2	Biochemistry, 3 †4	5	
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4		Bc 8	Agricultural Chemistry	2	
Bc 1	Organic Chemistry, 2 †2	3		Fm 48	Agricultural Economics	3	
En 21	Gen'l Entomology, 2 †4	4		Mt 4	Military, †3	2	
Mt 3	Military, †3	2		Pt 4	Physical Education, 2	0	
Pt 3	Physical Education, 2	0			Elective	5	
		19				19	

JUNIOR YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 15	Potato Production, 2 †2	3		Ag 6	Soils and Fertilizers	2	
Ag 81	Seminar	1		Ag 30	Agricultural Engineering, 2 *3	3	
Bt 53	Plant Physiology, 2 †4	4		Ag 82	Seminar	1	
By 1	Bacteriology, †6	3		Bt 30	Plant Ecology, 1 †2	2	
By 3	Bacteriology	2		Bt 56	Plant Pathology, 2 †4	4	
Eh 5	Technical Composition	2		Fm 76	Agr. Marketing	3	
	Elective	3			Elective	3	
		18				18	

SENIOR YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 81	Seminar	1		Ag 82	Seminar	1	
Bt 45	General Genetics	3		Fm 74	Farm Management, 3 *3	4	
By 55	Bacteriology (Soil), 1 †4	3			Elective	13	
	Elective	11					
		18				18	

Curricula for Students Specializing in Animal Husbandry, Dairy Husbandry, Dairy Technology, or Poultry Husbandry

SOPHOMORE YEAR

No.	Subject	Cr. Hours
Ag 1	Soils, 2 *3	3
An 3	Care, Feed, Mgt. of Live Stock, 3 †2	4
Bc 1	Organic Chemistry, 2 †2	3
Dh 1	General Dairying, 2 †2	3
En 21	Gen'l Entomology, 2 †4	4
Mt 3	Military, †3	2
Pt 3	Physical Education, 2	0
		19

No.	Subject	Cr. Hours
Ag 16	Forage and Pasture Crops, 1 †2	2
Bc 2	Biochemistry, 3 †4	5
Fm 48	Agricultural Economics	3
Mt 4	Military, †3	2
Pt 4	Physical Education, 2	0
	Elective	7
		19

ANIMAL HUSBANDRY

The curriculum in Animal Husbandry is so arranged that the student receives a comprehensive training in animal breeding, feeding, and management, consideration being given to the four chief groups of farm animals, cattle, horses, swine, and sheep. Because of the importance of crops to the maintenance of farm animals, this curriculum embraces subjects relating to crop production and farm management. The student on completion of this curriculum may engage in the business of animal breeding, furthering the promotion of pure bred livestock utilization; he may enter special phases of animal industry, such as Federal extension, control and investigational lines; he may become the superintendent of an animal breeding establishment; he may engage in college or university teaching of Animal Husbandry; or he may enter into any one of the great allied industries of animal industry, such as the meat packing business or the commercial feed business. The training he has received has furnished him with the necessary fundamental equipment to enable him to succeed.

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
An 5	Anatomy of Domestic Animals, 2 †2	3	An 6	Physiology of Domestic Animals	3
Bc 9	Animal Biochemistry	2	An 42	Adv. Live Stock Judging and Mgt., †2	1
Bt 45	General Genetics	3	An 44	Adv. Live Stock Feeding	2
By 1	Bacteriology, †6	3	By 52	Bacteriology, 1 †4	3
By 3	Bacteriology	2		Elective	9
Eh 5	Technical Composition	2			
	Elective	3			
		18			18

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ag 35	Drainage and Land Reclamation, 2 *3	3	Ag 6	Soils and Fertilizers	2
An 7	Animal Hygiene	2	Ag 36	Farm Machinery and Power, 2 *3	3
An 55	Animal Nutrition	2	An 60	Adv. Animal Breeding, 1 †2	2
An 63	Seminar	1	An 64	Seminar	1
	Elective	10	Fm 52	Farm Accounting, 1 *6	3
				Elective	7
		18			18

DAIRY HUSBANDRY AND DAIRY TECHNOLOGY

These curricula are more specialized than that for Animal Husbandry in that dairy production and dairy manufactures are dealt with more specifically. The student pursuing one or the other of these curricula prepares himself to follow the business of dairy farming from the standpoint of efficient dairy-cattle breeding and efficient milk production, or some other phase of the dairy industry such as the market-milk business, butter manufacturing, cheese manufacturing, condensed and powdered milk industry, and ice-cream manufacturing, each of which is constantly adding to its personnel young men who have received training similar to that offered in the Dairy Husbandry and Dairy Technology curricula. In addition to the foregoing there are many

opportunities to follow special lines of endeavor, Federal, state, and commercial, all of which require specialized training in dairy production and dairy manufactures.

DAIRY HUSBANDRY

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
An 5	Anatomy of Domestic Animals, 2 †2	3
Bc 9	Animal Biochemistry	2
Bt 45	General Genetics	3
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 5	Market Milk, 3 †2	4
Eh 5	Technical Composition	2
		19

Spring Semester

No.	Subject	Cr. Hours
An 6	Physiology of Domestic Animals	3
An 42	Adv. Live Stock Judging and Mgt., †2	1
An 44	Adv. Live Stock Feeding	2
By 52	Bacteriology, 1 †4	3
Dh 2	Butter Making, 1 †4	3
	Elective	2
		17

SENIOR YEAR

No.	Subject	Cr. Hours
Ag 35	Drainage and Land Reclamation, 2 *3	3
An 7	Animal Hygiene	2
An 55	Animal Nutrition	2
An 63	Seminar	1
Dh 3	Cheese Making, 2 *6	4
	Elective	6
		18

No.	Subject	Cr. Hours
Ag 6	Soils and Fertilizers	2
Ag 36	Farm Machinery and Power, 2 *3	3
An 60	Adv. Animal Breeding, 1 †2	2
An 64	Seminar	1
By 54	Bacteriology (Dairy), 1 †4	3
Fm 52	Farm Accounting, 1 *6	3
	Elective	4
		18

DAIRY TECHNOLOGY

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 5	Market Milk, 3 †2	4
Eh 5	Technical Composition	2
	Elective	7
		18

Spring Semester

No.	Subject	Cr. Hours
By 54	Bacteriology (Dairy), 1 †4	3
Dh 2	Butter Making, 1 †4	3
Dh 4	Condensed Milk, 2 *3	3
Dh 6	Dairy Products Judging, †2	1
Fm 76	Agricultural Marketing	3
	Elective	5
		18

SENIOR YEAR

No.	Subject	Cr. Hours
Dh 3	Cheese Making, 2 *6	4
Dh 51	Dairy Technology	2
Dh 55	Dairy Refrigeration	2
Dh 63	Adv. Dairy Products Testing, †2	1
Fm 85	Agr. Marketing (Dairy & Poultry Products)	2
	Elective	7
		18

No.	Subject	Cr. Hours
Dh 58	Ice Cream Making, 2 †4	4
Dh 64	Adv. Dairy Products Testing, †2	1
Dh 66	Dairy Machinery, †2	1
Fm 62	Agricultural Business Accounting, 2 *3	3
	Elective	9
		18

POULTRY HUSBANDRY

The poultry industry of the United States has come to be recognized as one of the highest-ranking agricultural industries and while it relies for its vastness on the widespread farm flock, nevertheless it offers abundant opportunities to men possessing special training in poultry breeding, feeding, and management. Commercial poultry raising calls for a specialized training in poultry husbandry and is becoming a business of large proportions. Many openings also occur in poultry extension work, either Federal or State, and

also in the poultry supplies business. The curriculum in Poultry Husbandry furnishes the necessary training for the student contemplating entrance into the fast-growing poultry industry.

JUNIOR YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
An 5	Anatomy of Domestic Animals, 2 †2	3		An 6	Physiology of Domestic Animals	3	
Bc 9	Animal Biochemistry	2		By 52	Bacteriology, 1 †4	3	
Bt 45	General Genetics	3		Fm 76	Agricultural Marketing	3	
By 1	Bacteriology, †6	3		Ph 2	Poultry Breeding	2	
By 3	Bacteriology	2			Elective	7	
Eh 5	Technical Composition	2					
Ph 3	Exhibition and Production Judging, 1 †2	2					
	Elective	1					
		18				18	

SENIOR YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 35	Drainage and Land Reclamation, 2 *3	3		Ag 6	Soils and Fertilizers	2	
Fm 85	Agricultural Marketing	2		Fm 52	Farm Accounting, 1 *6	3	
Ph 5	Poultry Feeding	2		Ph 4	Incubation and Brooding, 2 †2	3	
Ph 7	Poultry Literature	2		Ph 6	Poultry Farm Management, 1 †2	2	
	Elective	9		Ph 8	Poultry Diseases	2	
					Elective	6	
		18				18	

Curriculum for Students Specializing in Bacteriology

This curriculum is designed primarily for those students who desire to fit themselves for laboratory technicians or for research in the field of general or applied bacteriology. Stress is placed not only upon the agricultural phases of bacteriology, but also upon the sanitary and technical aspects. Students

interested in bacteriology as applied to agriculture will take the regular freshman curriculum in agriculture; others will be guided by the freshman curriculum as outlined below. Two years of German or its equivalent are required.

FRESHMAN YEAR

Fall Semester

No.		Subject	Cr. Hours
Ch	1	Inorganic Chemistry, 2 †4	4
Eh	1	Composition	3
Gm	1	1st Year German	5
Mt	1	Military, †3	1½
Zo	1	General Zoology, 2 †4	4
Pt	1	Physical Education, 2	0
		Elective	1
			18½

Spring Semester

No.		Subject	Cr. Hours
Ch	2	Inorganic Chemistry, 2 †4	4
Bt	2	General Botany, 2 †4	4
Eh	2	Composition	3
Gm	2	1st Year German	5
Mt	2	Military, †3	1½
Pt	2	Physical Education, 2	0
		Elective	1
			18½

SOPHOMORE YEAR

No.		Subject	Cr. Hours
Ag	1	Soils, 2 *3	3
Bc	1	Organic Chemistry, 2 †2	3
Ch	31	Qualitative Analysis, 2 †2, *6	5
Gm	3	Short Story	3
Mt	3	Military, †3	2
Pt	3	Physical Education, 2	0
		Elective	4
			20

No.		Subject	Cr. Hours
Bc	2	Biochemistry, 3 †4	5
Ch	40	Quantitative Analysis, 1 †2, *6	4
Gm	4	Short Story	3
Mt	4	Military, †3	2
Pt	4	Physical Education, 2	0
		Elective	6
			20

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
Bc 51	Biochemistry	3
Bt 53	Plant Physiology, 2 †4	4
By 1	Bacteriology, †6	3
By 3	Bacteriology	2
Dh 1	General Dairying, 2 †2 or Elective 3	3
	Elective	3
		19

Spring Semester

No.	Subject	Cr. Hours
Bc 64	Biochemical Laboratory Methods, †6	3
By 52	Bacteriology, 1 †4	3
By 54	Bacteriology (Dairy), 1 †4	3
	Elective	8
		17

SENIOR YEAR

No.	Subject	Cr. Hours
Bc 57	Biological Colloids	3
By 55	Bacteriology (Soil), 1 †4	3
By 61	Seminar	1
By 101	Problems in Bacteriology, †4 to †8	2 to 4
Ch 71b	Physical Chemistry, 3 †4	5
	Elective	1 to 3
		17

No.	Subject	Cr. Hours
By 62	Bacteriology Seminar	1
By 102	Problems in Bacteriology, †4 to †8	2 to 4
Ch 72b	Physical Chemistry, 3 †4	5
	Elective	7 to 9
		17

Curriculum for Students Specializing in Biological and Agricultural Chemistry

The curriculum in Biological and Agricultural Chemistry is designed to give the student an opportunity to specialize in chemistry of plant and animal life. With proper choice of electives under the direction of the major instructor students may also pursue special work in agricultural chemistry, particularly in chemistry of the soil and fertilizers.

SOPHOMORE YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 1	Soils, 2 *3	3		Bc 2	Biochemistry, 3 †4	5	
Bc 1	Organic Chemistry, 2 †2	3		Ch 40	Quantitative Analysis, 1 †2, *6	4	
Ch 31	Qualitative Analysis, 2 †2, *6	5		Gm 2	1st Year German	5	
Gm 1	1st Year German	5			or		
	or			Fr 4	Intermediate French		
Fr 3	Intermediate French			Mt 4	Military, †3	2	
Mt 3	Military, †3	2		Pt 4	Physical Education, 2	0	
Pt 3	Physical Education, 2	0			Elective	3	
		18				19	

JUNIOR YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Bc 9	Animal Biochemistry	2		Bc 64	Biochemical Laboratory Methods, †6	3	
By 1	Bacteriology, †6	3		By 52	Bacteriology, 1 †4	3	
By 3	Bacteriology	2		Ch 72b	Physical Chemistry, 3 †4	5	
Ch 71b	Physical Chemistry, 3 †4	5		Gm 16	Scientific German	2	
Gm 3	2nd Year German	3			Elective	1	3
	or				or		
Fr 5	Advanced French			Fr 6	Advanced French	3	
	Elective	4			Elective	4	
		19				18	

SENIOR YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Bc 57	Biological Colloids	3		Bc 102	Research, †8	4	
Bc 101	Research, †8	4			Elective	14	
	Elective	11					
		18				18	

Curricula for Students Specializing in Botany and Entomology

These curricula are designed for those preparing themselves to engage in teaching or to enter the field of research in either the pure or applied science of botany or entomology. Students interested in botany or entomology as applied to agriculture will take the regular freshman curriculum in agriculture. Others will be guided by the freshman curriculum outlined below. Two years of German, or its equivalent, are required.

Botany or Entomology

FRESHMAN YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ch 5	Inorganic Chemistry, 2 †4.	4		Bt 2	General Botany, 2 †4....	4	
Eh 1	Composition	3		Ch 6	Inorganic Chemistry, 2 †4	4	
Md 1	Fund. of Drafting, †4.....	2		Eh 2	Composition	3	
Ms 3	Algebra	2		Md 2	Elementary Machine Drafting, †4.....	2	
Ms 9	Trigonometry	2					
Mt 1	Military, †3.....	1½		Mt 2	Military, †3.....	1½	
Zo 3	Animal Biology, 2 †4.....	4		Zo 4	Animal Biology, 2 †4....	4	
Pt 1	Physical Education, 2....	0		Pt 2	Physical Education, 2...	0	
		18½				18½	

SOPHOMORE YEAR

No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Bt 33	Forest Botany, 2 †4.....	4		Bt 34	Forest Botany, 2 †4.....	4	
En 21	Gen'l Entomology, 2 †4...	4		En 24	Taxonomy of Insects I, 2 †4	4	
Gm 1	First Year German.....	5		Gm 2	First Year German.....	5	
Mt 3	Military, †3.....	2		Mt 4	Military, †3.....	2	
Pt 3	Physical Education, 2.....	0		Pt 4	Physical Education, 2...	0	
	Elective	3			Elective	3	
		18				18	

Botany

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bc 1	Organic Chemistry, 1 †2..	3	Bc 2	Biochemistry, 3 †4.....	5
Bt 35	Plant Anatomy, 2 †4.....	4	Bt 32	Plant Physiology, 2 †4..	4
By 3	Bacteriology	2	Eh 10	Modern Literature.....	2
By 5	Bacteriology, †2.....	1	Gm 16	Scientific German	2
Eh 5	Technical Composition....	2	Pb 2	Public Speaking.....	2
Gm 3	Short Story	3		Elective	4
	Elective	4			
		19			19

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bt 45	General Genetics.....	3	Bt 30	Plant Ecology, 1 †2.....	2
Bt 57	Taxonomy, 2 †4.....	4	Bt 46	Genetics Laboratory	2
Es 1a	Prin. of Economics	3	Bt 56	Plant Pathology, 2 †4...	4
	Elective	8	Fm 48	Agricultural Economics.	3
				Elective	7
		18			18

Entomology

JUNIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bc 1	Organic Chemistry, 1 †2..	3	Bc 2	Biochemistry, 2 †4.....	5
By 3	Bacteriology	2	Eh 10	Modern Literature.....	2
By 5	Bacteriology, †2.....	1	En 52	Taxonomy of Insects II,	
Eh 5	Technical Composition....	2		1 †4	3
En 51	Morphology of Insects,		Gm 16	Scientific German	2
	2 †4.....	4	Pb 2	Public Speaking.....	2
Gm 3	Short Story	3		Elective	5
	Elective	4			
		19			19

SENIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bt 57	Taxonomy, 2 †4	4	Bt 56	Plant Pathology, 2 †4	4
En 47	Problem in Entomology	3	En 46	Advanced Forest Ento	2
En 49	Economic Entomology, 2 †4	4	En 48	Problem in Entomology	3
Es 1a	Prin. of Economics	3	Fm 48	Agricultural Economics	3
	Elective	4		Elective	6
		18			18

Curriculum for Students Specializing in Horticulture

The curriculum in Horticulture is intended, not only to provide a good preparation for engaging directly in fruit growing, vegetable gardening, ornamental horticulture, or other horticultural industry, but also to make possible to the graduate a reasonably easy entrance into several professional occupations which may require the additional preparation of a period of intensive graduate study. Prominent among the positions occupied by graduates in horticulture are those of investigators in experiment stations, teachers in colleges and secondary schools, extension agents, and state and Federal employees in the investigational, inspection, and regulatory services.

The department will attempt so to administer the prescribed part of the curriculum and to advise students in the selection of elective courses that their individual capabilities may be developed and their interests encouraged to the fullest degree consistent with the belief that a liberal education should accompany and even take precedence over specialization in horticulture.

SOPHOMORE YEAR

Fall Semester				*Spring Semester*			
No.	Subject	Cr. Hours		No.	Subject	Cr. Hours	
Ag 1	Soils, 2 *3	3		Bc 2	Biochemistry, 3 †4	5	
Bc 1	Organic Chemistry, 2 †2	3		Bc 8	Agr. Chemistry	2	
En 21	Gen'l Entomology, 2 †4	4		Fm 48	Agricultural Economics	3	
Fm 75	Agr. Statistics, 1 *3	2		Mt 4	Military, †3	2	
Ms 1	Trigonometry	2	4*	Pt 4	Physical Education, 2	0	
Ms 3	College Algebra	2			Elective	7	
Mt 3	Military, †3	2					
Pt 3	Physical Education, 2	0					
	Elective	3					
		19				19	

*Elect two of the three courses.

JUNIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ag 35	Land Drainage and Reclamation, 2 *3	3	Bt 56	Plant Pathology, 2 †4	4
Bt 53	Plant Physiology, 2 †4	4	By 2	Bacteriology, †6	3
By 3	Bacteriology	2		Horticulture	6
Eh 5	Technical Composition	2		Elective	6
	Horticulture	3			
	Elective	5			
		19			19

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Bt 45	General Genetics	3	*Fm 74	Farm Management	4
	Horticulture	7		Horticulture	6
	Elective	7		Elective	7
		17			17

*In special cases some other course may be approved by the major instructor.

CURRICULUM IN FORESTRY

A four-year undergraduate curriculum in Forestry is offered and in addition four courses are open for graduate credit to students majoring in other curricula. The curriculum for this course follows. It is arranged to meet the requirements of the profession of forestry for forestry instruction in the United States. Completion of the curriculum leads to the degree of Bachelor of Science in Forestry. It will enable the graduate to qualify for technical and administrative positions in the profession, and will admit to advanced standing in postgraduate schools of forestry if further and more advanced work is desired. It will also render a student eligible for the Civil Service Examinations for the position of Junior Forester in the United States Forest Service, and other Federal bureaus employing foresters. Owing to the wide field covered by the curriculum it offers an excellent basis for a broad and liberal education.

The first two years are devoted very largely to fundamental and pretechnical subjects which are basic for a proper understanding of the more highly specialized work in technical subjects during the last two years. Instruction in the department consists of lectures, recitations, laboratory and field work, the latter consuming a considerable portion of the scheduled time.

A camp course of six weeks' practical experience is required of all men in the summer between the sophomore and junior years. This work is offered at a camp operated by the department, where students are able to observe large forest areas under permanent management and large private manufacturing plants specializing in the utilization of various kinds of forest products. A second camp course of eight weeks' practical experience is required of all seniors at camps owned and operated by the Forestry Department and located on Indian Township, near Princeton, Maine.

The forestry offices, classrooms, and drawing rooms are located in Winslow Hall with other departments of the College of Agriculture.

FRESHMAN YEAR

Fall Semester

No.	Subject	Cr. Hours
Ch 1	General Chemistry, 2 †4	4
Eh 1	Composition	3
Fy 1	Elements of Forestry	2
Md 1	Fund. of Drafting, †4	2
Ms 9	Trigonometry	2
Mt 1	Military, †3	1½
Zo 1	General Zoology, 2 †4	4
Fy 47a	Forestry Seminar, 1	0
Pt 1	Physical Education, 2	0
		18½

Spring Semester

No.	Subject	Cr. Hours
Bt 2	General Botany, 2 †4	4
Ch 2	General Chemistry, 2 †4	4
Eh 2	Composition	3
Fy 2	Elements of Forestry	2
Md 2a	Drafting, †4	2
Ms 10	Trigonometry and Its Application	2
Mt 2	Military, †3	1½
Fy 48a	Forestry Seminar, 1	0
Pt 2	Physical Education, 2	0
		18½

SOPHOMORE YEAR

No.	Subject	Cr. Hours
Ag 5	Soil Formation and Conservation	3
Bt 33	Forest Botany, 2 †4	4
Ce 1	Plane Surveying	3
Ce 3	Field Work, Plotting, *9	3
Es 1b	Principles of Economics	2
Fy 3	Logging	2
Mt 3	Military, †3	2
Fy 47b	Forestry Seminar, 1	0
Pt 3	Physical Education, 2	0
		19

No.	Subject	Cr. Hours
Bt 34	Forest Botany, 2 †4	4
Eh 10	Modern Literature	2
En 22	Forest Entomology, 2 †4	4
Es 2b	Principles of Economics	2
Fy 4	Administration and Protection	4
Mt 4	Military, †3	2
Fy 48b	Forestry Seminar, 1	0
Pt 4	Physical Education, 2	0
		18

SUMMER CAMP

No.	Subject	Cr. Hours
Ce 7s	R. R. and Highways	2
Fy 35s	Silviculture	2
Fy 37s	Forest Mensuration	1
Fy 39s	Forest Products	1
		6

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ag 3	Soils (Forest), 2 *3	3	Bt 32	Plant Physiology, 2 †4	4
Bt 35	Plant Anatomy, 2 †4	4	Fy 6	Forest Mensuration, 1 *3	3
Eh 5	Technical Composition	2	Fy 8	Silvics	2
Fm 65	Forest Accounting, 1 *3	3	Fy 10	Nursery Practice, last 9 weeks, *6	1
Fy 5	Forest Mensuration, 1 *3	3	Fy 12	Seeding and Planting	2
Fy 47c	Forestry Seminar, 1	0	Ce 6	Land Surveying, 1 †4, last 6 weeks	3
Ht 5	Landscape Gardening, *3	3	Fy 48c	Forestry Seminar, 1	0
				Elective	4
		18			19

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
	First 9 weeks		Bt 42	Forest Pathology, 2 †4	4
Fy 7	Lumber Manufacture	2	Fy 14	Forest Products	2
Fy 9	Wood Preservation	1	Fy 52	Policy and Economics	4
Fy 51	Regional Silviculture	2	Fy 16	Wood Technology, †2	2
Fy 53	Forest Finance, 3 †2	2	Fy 48d	Forestry Seminar, 1	0
Fy 55	Forest Management	2		Elective	6
Fy 47d	Forestry Seminar, 1	0			
	Last 9 weeks				
Fy 41	Practice of Forestry, *48	9			
		18			18

CURRICULA IN HOME ECONOMICS

The Department of Home Economics offers curricula based on a consideration of the problems of the contemporary home and responsibilities of the modern home maker. The basic curriculum requires foundation work in the physical and social sciences, and Home Economics courses applying these sciences to problems of the home. In addition the student is required to complete a sequence of fifteen or more hours based on interest in a specialized

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
By 3	Bacteriology	2	He 10	Sanitation	2
By 5	Bacteriology	1	He 14	The Pre-School Child	3
Es 41	General Sociology	3		Sequence and Electives	11
	Sequence and Electives	10			
		16			16

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 11	Household Management	4	*He 22	Household Admin.	3
Ee 5	Household Equipment	3	*He 70	Survey Examination	1
	Sequence and Electives	9		Sequence and Electives	12
		16			16

*May be taken in the fall as He 21 and He 69.

Sequences

Home Economics Education. 47 hours.

This sequence fulfills the requirements for the Maine Professional Secondary Certificate necessary for teaching in the high schools of the state, and qualifies the student for teaching home economics and certain science courses in Maine high schools. She also is eligible, after a year of teaching experience, for the vocational certificate which qualifies for teaching in the schools which offer vocational programs with Federal support.

Requirements are as follows:

Bc 5	Biochemistry	4
Ed 77	Methods	3
Ed —	Education	3
He 7, 8	Clothing Construction	4

particular vocation. These sequences are listed the limited time of classroom and laboratory to the techniques necessary to success in a vocation. ble provision during her vacations, or during the e kinds and degrees of skill essential to beginning

n in its total of 128 hours, 18 to 40 hours of of the University for which the student is ade- tives may be used to strengthen the individual's tional preparation.

riculum in Home Economics

students majoring in the department.

FRESHMAN YEAR

Cr. Hours	No.	Subject	Cr. Hours
..... 4	Bc 4	Organic Chemistry	4
..... 3	Eh 2	Composition	3
..... 3	Gc 2	Intro. to Soc. Sci.	3
nomics 3	He 2	Clothing Selection Problems	3
..... 3	He 4	House Furn. and Dec.	3
2..... 0	Pe 2	Physical Education, 2	0
16			16

Spring Semester

SOPHOMORE YEAR

Cr. Hours	No.	Subject	Cr. Hours
4	He 6	Foods, 2 ↑4	4
..... 3	Py 2	General Psychology	3
..... 9	Zo 12	Human Physiology	5
2..... 0		Sequence and Electives	4
	Pe 4	Physical Education, 2	0
16			16

JUNIOR YEAR

Fall Semester

No.	Subject	Cr. Hours
By 3	Bacteriology	2
By 5	Bacteriology	1
Es 41	General Sociology	3
	Sequence and Electives	10
		16

Spring Semester

No.	Subject	Cr. Hours
He 10	Sanitation	2
He 14	The Pre-School Child	3
	Sequence and Electives	11
		16

SENIOR YEAR

No.	Subject	Cr. Hours
He 11	Household Management	4
Ee 5	Household Equipment	3
	Sequence and Electives	9
		16

No.	Subject	Cr. Hours
*He 22	Household Admin.	3
*He 70	Survey Examination	1
	Sequence and Electives	12
		16

*May be taken in the fall as He 21 and He 69.

Sequences

HOME ECONOMICS EDUCATION. 47 hours.

This sequence fulfills the requirements for the Maine Professional Secondary Certificate necessary for teaching in the high schools of the state, and qualifies the student for teaching home economics and certain science courses in Maine high schools. She also is eligible, after a year of teaching experience, for the vocational certificate which qualifies for teaching in the schools which offer vocational programs with Federal support.

Requirements are as follows:

Bc 5	Biochemistry	4
Ed 77	Methods	3
Ed —	Education	3
He 7, 8	Clothing Construction	4

subject-matter field or in a particular vocation. These sequences are listed below. As it is impossible in the limited time of classroom and laboratory to develop to a point of skill all the techniques necessary to success in a vocation the student is expected to make provision during her vacations, or during the school year, for developing the kinds and degrees of skill essential to beginning the vocation she has selected.

Each curriculum includes in its total of 128 hours, 18 to 40 hours of electives in any department of the University for which the student is adequately prepared. These electives may be used to strengthen the individual general education or her vocational preparation.

Basic Curriculum in Home Economics

Required of all students majoring in the department.

FRESHMAN YEAR

Fall Semester				*Spring Semester*			
No.		Subject	Cr. Hours	No.		Subject	Cr. Hours
Ch	5	Inorganic Chemistry	4	Bc	4	Organic Chemistry	
Eh	1	Composition	3	Eh	2	Composition	
Gc	1	Intro. to Soc. Sci.	3	Gc	2	Intro. to Soc. Sci.	
He	1	Intro. to Home Economics	3	He	2	Clothing Selection Problems	
He	3	Design	3	He	4	House Furn. and Dec.	
Pe	1	Physical Education, 2	0	Pe	2	Physical Education, 2	
			16				1

SOPHOMORE YEAR

No.		Subject	Cr. Hours	No.		Subject	Cr. Hours
He	5	Foods, 2 †4	4	He	6	Foods, 2 †4	
Py	1	General Psychology	3	Py	2	General Psychology	

subject-matter field or in a particular vocation. These sequences are listed below. As it is impossible in the limited time of classroom and laboratory to develop to a point of skill all the techniques necessary to success in a vocation, the student is expected to make provision during her vacations, or during the school year, for developing the kinds and degrees of skill essential to beginning the vocation she has selected.

Each curriculum includes in its total of 128 hours, 18 to 40 hours of electives in any department of the University for which the student is adequately prepared. These electives may be used to strengthen the individual's general education or her vocational preparation.

Basic Curriculum in Home Economics

Required of all students majoring in the department.

FRESHMAN YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
Ch 5	Inorganic Chemistry	4	Bc 4	Organic Chemistry	4
Eh 1	Composition	3	Eh 2	Composition	3
Gc 1	Intro. to Soc. Sci.	3	Gc 2	Intro. to Soc. Sci.	3
He 1	Intro. to Home Economics	3	He 2	Clothing Selection Problems	3
He 3	Design	3	He 4	House Furn. and Dec.	3
Pe 1	Physical Education, 2	0	Pe 2	Physical Education, 2	0
		16			16

SOPHOMORE YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 5	Foods, 2 †4	4	He 6	Foods, 2 †4	4
Py 1	General Psychology	3	Py 2	General Psychology	3
Sequence and Electives		9	Zo 12	Human Physiology	5
Pe 3	Physical Education, 2	0	Sequence and Electives		4
			Pe 4	Physical Education, 2	0
		16			16

JUNIOR YEAR

Fall Semester			*Spring Semester*		
No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
By 3	Bacteriology	2	He 10	Sanitation	2
By 5	Bacteriology	1	He 14	The Pre-School Child	3
Es 41	General Sociology	3		Sequence and Electives	11
	Sequence and Electives	10			
		16			16

SENIOR YEAR

No.	Subject	Cr. Hours	No.	Subject	Cr. Hours
He 11	Household Management	4	*He 22	Household Admin.	3
Ee 5	Household Equipment	3	*He 70	Survey Examination	1
	Sequence and Electives	9		Sequence and Electives	12
		16			16

*May be taken in the fall as He 21 and He 69.

Sequences

HOME ECONOMICS EDUCATION. 47 hours.

This sequence fulfills the requirements for the Maine Professional Secondary Certificate necessary for teaching in the high schools of the state, and qualifies the student for teaching home economics and certain science courses in Maine high schools. She also is eligible, after a year of teaching experience, for the vocational certificate which qualifies for teaching in the schools which offer vocational programs with Federal support.

Requirements are as follows:

Bc 5	Biochemistry	4
Ed 77	Methods	3
Ed —	Education	3
He 7, 8	Clothing Construction	4

He 51, 52	Advanced Clothing	6
He 56	Home Economics Education	3
He 59, (60)	Special Problems	2
He 63	Nutrition	2
He 66	Dietetics	2
He 71, (72)	Supervised Teaching	3
He 81, (82)	Institutional Management	3
Pb 1, (2)	Public Speaking	2

There is a demand for teachers prepared and certified to handle other high-school subjects in combination with Home Economics. Students who take this sequence are advised that it may be wise to choose their electives, in order to prepare themselves for certification in an additional subject. Pj 2, 4, Summer Project, is also recommended.

EXTENSION TEACHING. 28 hours.

This sequence prepares the student for work as a home demonstration agent or a 4-H Club agent.

Bc 5	Biochemistry	4
Ed 77	Methods	3
He 7, 8	Clothing Construction	4
He 51, 52	Advanced Clothing	6
He 59, (60)	Special Problems	2
He 63	Nutrition	2
He 65	Dietetics	2
He 81	Institutional Management	3
Pb 1, (2)	Public Speaking	2

Electives are recommended in journalism, horticulture, and additional home economics, education and social science. Since the sequence requirement is very similar to the Home Economics education sequence, a student may complete both.

FOOD AND NUTRITION. 19 hours.

This sequence is offered for students preparing for positions as hospital dietitians, Red Cross nutritionists, research workers in foods and nutrition, or home economists in commercial foods work. It meets the requirement of the American Dietetics Association for admission to student dietitianship in hospitals offering a Class A training course.

Bc 5	Biochemistry	4
He 63	Nutrition	2
He 65	Dietetics	2
*He 81, 83	Institutional Management	6
*He 67	Diet in Abnormal Conditions	2
*Ed 77, (78)	Methods	3

*For students preparing for commercial foods positions or for research, appropriate substitutes may be made for *starred courses.

TEXTILE AND CLOTHING SEQUENCE. 16 hours.

For students interested in the clothing, textile, or decoration field, as stylists, designers, buyers, or advertising copy writers.

He 7, 8	Clothing Construction	4
He 17	Applied Design	2
He 51, 52	Advanced Clothing	6
He 61	History of Costume	1
At	Art Courses	3

Students who select this sequence are recommended to include as electives such subjects as projects and special problems in clothing, and courses in journalism, accounting, drafting, public speaking, psychology, and medieval history.

CHILD DEVELOPMENT. 19 hours.

For students preparing for work in the rapidly expanding fields of nursery school and parental education.

Bc 5	Biochemistry	4
Ed 43, (44)	Character Education	3
He 59,(60)	Special Problems in Nursery School	2
He 63	Nutrition	2
He 65	Dietetics	2
Py 67, 71, 72, 81	(Six hours selected).	6

Students are advised to include courses in the appreciation of art and music, and additional zoology, English, and education and sociology. Arrangements are made for a selected student each year to do one semester's work in

this field at the Merrill-Palmer School, Detroit, Michigan. The work will be accepted as applying on basic and sequence requirements.

Other Sequences

For students whose needs are not met by these sequences, others may be arranged. They will consist of selected advanced Home Economics courses, and related work in other departments.

Special Students in Agriculture

Persons not candidates for a degree who desire to take special studies may be permitted to do so, if, upon examination, they give satisfactory evidence that they are prepared to pursue them. This privilege is intended only for students of unusual maturity (at least twenty-one years of age) or previous advancement in particular subjects, and not for those who are incompetent to pursue a regular course. If they subsequently desire to become candidates for a degree, they will be required to meet all the entrance requirements.

The annual expenses for courses of one year or more are the same as those for students in the four-year curricula.

TWO-YEAR COURSE IN AGRICULTURE

This is a course of training for young men who wish to become practical farmers, farm superintendents, dairymen, poultrymen, fruit-growers, or gardeners, but who cannot devote time to full high school or college training. Open to women.

The same equipment is used as in the four-year curricula, but the work is more elementary in nature. Most of the classes are separate and distinct from the four-year classes.

Students who have satisfactorily completed two years of high-school work are eligible for registration.

There are no entrance examinations required of those who desire to enter the Two-Year Course.

On completion of the course a certificate is awarded those who have satisfactorily met the requiremnts.

Curriculum for Two-Year Course in Agriculture

FIRST YEAR

Fall Semester

Subject	Hours
Animal Husbandry, 2 †2	3
Business Arithmetic	2
English	2
Farm Botany, 1 †2	2
Farm Crops, 2 †2	3
Forge Work, *3	1
Fruit Handling, 2 †2	3
Poultry Husbandry, 2 †2	3
	19

Spring Semester

Subject	Hours
Carpentry, †4	2
Dairy Husbandry, 2 †4	4
English	2
Farm Economics	2
Fruit Growing, 2 †2	3
Poultry Husbandry, 2 †2	3
Soils and Fertilizers, 3 *3	4
	20

SECOND YEAR

Subject	Hours
Animal Husbandry, 2 †2	3
Animal Husbandry (Common Diseases of Farm Animals)	3
English	2
Farm Engineering and Mechanics, 2 *3	3
Farm Insects, 1 †2	2
Farm Management, 2 *3	3
Poultry Husbandry	2
Vegetable Growing, 2 †2	3
	21

Subject	Hours
Animal Husbandry, 3 †2	4
English	2
Farm Crops, 2 †2	3
Farm Machinery, 2 *3	3
Forestry	2
Marketing Farm Products	3
Small Fruit Culture and Plant Propagation, 2 †2	3
	20

A description of subjects offered will be found on page 138.

SHORT COURSES IN AGRICULTURE

Short Courses in Agriculture are offered to the large number of young men and women and adults who are engaged or about to engage in agricultural or homemaking pursuits and who desire to devote a short time during the

winter months to the securing of definite instruction along the line of their special interests.

Courses of three weeks' duration are available in Dairy Production, Poultry Raising, Potato Production, and other subjects. Courses of shorter duration in other specialized agricultural subjects are also available.

Applicants for admission must be at least sixteen years of age and have had a good common school education. Information concerning short courses may be secured by addressing the Director of Short Courses, College of Agriculture.

FARM AND HOME WEEK

There are a large number of people who cannot come to the college for a great length of time, but who desire a few days of practical instruction. To reach and accommodate these, "Farm and Home Week" is held. Lectures on practical agricultural subjects are given morning, afternoon, and evening. Practical demonstrations occupy a part of each afternoon. Besides the practical subjects discussed, one or more sessions are given up to problems of rural betterment. Considerable emphasis is placed on agricultural marketing problems peculiar to Maine. The homemaking program includes the various phases of home management and is of interest to both rural and urban homemakers. Dates and programs may be secured each year by addressing the College of Agriculture.

THE EXTENSION SERVICE

The Extension Service is organized as a department of the College of Agriculture. It operates under the provisions of the Smith-Lever and Capper-Ketcham Acts, receiving its funds from State and Federal sources.

Its personnel is made up of two groups of agents. One group, the County Extension Agents, consists of agricultural agents, home demonstration agents, and club agents, having their headquarters within the counties in which they serve. The other group, the State Agent force, consists of a limited number of specialists and leaders having their headquarters at the University but working with and assisting the County Extension Agents.

The Extension Service through these men and women gives direct assistance to people living on the farms and in the rural and urban homes of this state. The Farm Bureau, an organization having a membership of more than 14,000 men and women, coöperates with the Extension Service in the determination and development of its county and community programs of work.

Extension Lecture Courses

Lectures in these courses are given under the auspices of granges, clubs, societies, and other gatherings by the members of the agricultural faculty.

A complete list of the lectures will be forwarded on request.

Correspondence Service

It is recognized that a letter is a poor substitute for a personal conference in dealing with perplexing problems with which people are constantly confronted in the vocations of agriculture, forestry, and home economics, but the teachers in all departments of the college are always ready to furnish information dealing with these problems and thus render the greatest possible service to the people of the State. The College of Agriculture, therefore, welcomes inquiries on practical agricultural, forestry, and home economics topics. Extension bulletins dealing with different phases of these subjects are published at frequent intervals throughout the year and will be sent without cost to persons applying for them. A list of bulletins and circulars available for distribution will be forwarded on request.

Departments of Instruction

NOTE.—A star (*) before the time designated for a course indicates that three or sometimes more hours of actual work are required to obtain credit for one hour; a dagger (†) indicates that two hours are required to obtain this credit.

Courses designated by an odd number are given in the fall semester; those designated by an even number, in the spring semester.

Courses numbered 1-50 are for undergraduates only; courses numbered 51-100 are for graduates and undergraduates; courses numbered above 100 are primarily for graduates.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

PROFESSOR MERCHANT; PROFESSOR JONES; ASSOCIATE PROFESSOR DOW

48. AGRICULTURAL ECONOMICS.—A general introductory course in the principles of economics as applied to agriculture. The following subjects are considered: Development of commercial agriculture, price making forces, production, land tenure, land policies, farm capital, credit, farm labor, marketing, foreign trade, tariff, taxation, and farm income. This course is intended to give a broad fundamental training in the subject, and for those majoring in the department a foundation for further study. *Three hours a week. Credit, three hours.* MR. JONES

52. FARM ACCOUNTING.—All forms of farm records; farm inventories, cash accounts, single-enterprise cost accounts, complete farm cost accounting system, and miscellaneous records. Special emphasis is given to the interpretation of results and their practical application in the management of farms. Classroom, *one hour a week;* laboratory, **six hours a week. Credit, three hours.* MR. JONES

62. AGRICULTURAL BUSINESS ACCOUNTING.—This course includes accounting methods for different types of farm business organizations such as coöperative marketing associations, creameries, cheese factories, Grange stores, and other similar organizations. Principles of accounting, problems of valuation, analysis of cost and income factors, and profit and loss statements of

various agricultural businesses are included. The accounts of several business organizations will be studied with special reference to the analysis of the business. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Jones

65. Forest Accounting.—This course includes accounting methods for the different types of logging and lumbering operations. It involves problems in cost and income factors, and profit and loss statements of various kinds of forest operations. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Jones

73. Advanced Agricultural Economics.—An advanced course in the more important economic problems in agriculture, such as, farm labor; farm machinery; land tenure; rent and systems of renting; risk; price fluctuations; speculation; insurance; protective tariff; foreign competition; county agent and farm bureau; and State and Federal aid. Prerequisite, Course 48. *Three hours a week. Credit, three hours.* Mr. Jones

74. Farm Management.—Types of farming; farming as a business; size of business; balance; production rates; labor efficiency; crop rotations; machinery; farm layout; building arrangement; farm credit and its uses; choosing and buying a farm; ways of starting to farm; and study of farm organization and management of specific farms in the vicinity. Classroom, *three hours a week;* laboratory, **three hours a week. Credit, four hours.* Mr. Jones

75. Agricultural Statistics.—A course in principles involved in collection, analysis, and interpretation of agricultural statistics. The laboratory work consists of practical problems in frequency distribution; averages; measurements of dispersion; measurements of trends; seasonal variations, and cyclical fluctuations; simple index numbers; simple linear and non-linear correlations; and standard and probable errors. Classroom, *one hour a week;* laboratory, **three hours a week. Credit, two hours.* Mr. Merchant

76. Agricultural Marketing.—Marketing of the more important agricultural products. The first part of the course deals with the economic principles of present marketing structure and its operation. The latter part involves the study of distribution and marketing of potatoes, apples, wheat, wool, hay, peaches, tobacco, truck crops, dairy products, poultry and poultry products, beef cattle, sheep, and hogs. The marketing of the more important agricultural products produced in Maine is emphasized. One week is devoted to a study of the principles of coöperative marketing. *Three hours a week. Credit, three hours.* Mr. Merchant

77. Agricultural Finance.—The farmers' credit needs including short term, intermediate, and long term credit are considered. Sources of

credit available to farmers and conditions under which loans are made. Special attention is given to the study of the Federal Reserve System, Farm Credit Administration (Land Banks, Intermediate Credit Banks, Banks for Coöperatives, Production Credit Corporations, and Emergency Credit), store credit, and the place of mortgage and insurance companies in furnishing farm credit. The material offered in the course is considered from the standpoint of Maine farmers and from a national basis. *Two hours a week. Credit, two hours.*

MR. MERCHANT

78. MARKETING POTATOES.—A specialized course in the marketing of potatoes giving special attention to practices in New England. Production, trends in production, regional competition, grades, containers, storage, transportation, finance, sales methods including coöperative marketing, trend in consumption, price relationships, and the cost of marketing of both table stock and seed potatoes are topics considered in this course. *Three hours a week. Credit, three hours.* MR. LIBBY

79. COOPERATIVE MARKETING.—Principles involved in coöperative organizations including the more important factors affecting the efficiency and success of coöperative organization, such as: volume of business, capital and finance, management and price policies. The history, organization, and management of coöperative associations marketing the more important agricultural products. *Two hours a week. Credit, two hours.* MR. DOW

81, 82. CURRENT ECONOMIC PROBLEMS.—Individual study of some of the more important current economic problems in agriculture. In the fall semester problems in marketing, agricultural credit, and agricultural statistics are considered. Problems in the field of agricultural economics and farm management are given attention in the spring semester. Open to senior students who have had considerable work in the department. *One hour a week. Credit, one hour.* MR. MERCHANT, MR. DOW

83, 84. THESIS.—All senior major students of the department are required to prepare a comprehensive thesis on a problem in agricultural economics, farm management, marketing, finance, and statistics or prices. **Six hours a week. Credit, three hours.* MR. MERCHANT

85. AGRICULTURAL MARKETING (DAIRY AND POULTRY PRODUCTS).—A specialized course in the economic factors involved in marketing dairy and poultry products in New England. Production; regional competition; grades; containers; storage; transportation; finance; sales methods; foreign trade; tariff; surplus; demand, price, and methods of price determination and the costs of marketing are considered. *Two hours a week. Credit, two hours.*

MR. DOW

86. Agricultural Marketing (Apples and Small Fruits).—A spcialized course in the economic factors involved in marketing apples and small fruits with special emphasis to New England. The topics considered are production, varieties, regional competition, grades, containers, storage, transportation, finance, sales methods and the costs of marketing. *Two hours a week. Credit, two hours.* Mr. Dow

87. Agricultural Prices.—Prices of agricultural commodities produced in Maine and competing areas. The underlying factors causing price changes, including long-time trends, seasonal variations, and cyclical fluctuations. Prerequisite, Course 75. *Two hours a week. Credit, two hours.* Mr. Jones

91. Land Utilization.—Utilization of the land area for various purposes such as for agriculture, forestry, recreation, and industry, giving primary attention to agriculture. Physical factors and economic conditions determining utilization of farm land, production areas for important farm commodities, shifts taking place in these areas, trends in population and consumption. Land problems of the United States and some foreign countries. Land utilization programs. *Two hours a week. Credit, two hours.* Mr. Jones

92. Rural Tax Problems.—National, state, and local problems connected with rural taxation. The effect of increased tax burdens on farmers. Growth of public expenditures; sources of public revenues; the general property tax and its administration. How income, inheritance, and gasoline taxes affect farmers. Tax reform proposals. Problems involved in an equitable distribution of the tax burden. *Two hours a week. Credit, two hours.* Mr. Jones

101. Production Costs.—Cost of producing important farm commodities in Maine and in competing areas; relation of cost of production to price; and efficiency of production under varying economic conditions. Prerequisite, Course 52. *Time and credit hours arranged.* Mr. Jones

102. Advanced Agricultural Statistics.—A continuation of Course 75 giving special attention to the methods and practical application of correlation analysis involving two or more variables; multiple correlation; and linear and curvilinear relationships. Prerequisite, Course 75. *Time and credit hours arranged.* Given in alternate years; given in 1936-37. Mr. Merchant

103. Advanced Farm Management.—A continuation of Course 74 with special emphasis on the organization and management of specified types of farms under certain economic conditions, farm prices, and labor efficiency. The student is given an opportunity for study along some line in which he has a special interest. Prerequisite, Course 74. *Time and credit hours arranged.* Mr. Jones

104. Advanced Agricultural Marketing.—Advanced work in the marketing of a specific agricultural commodity. Special emphasis is given to marketing potatoes, apples, poultry, eggs, milk, butter, and cheese. Problem method is followed. Prerequisite, permission to register. *Time and credit hours arranged.* Given in alternate years; given in 1935-36. Mr. Merchant

AGRICULTURAL EDUCATION

Professor Hill

1, 2. Practice Teaching.—Seniors who are taking a minor in agricultural education are expected to do some directed teaching in an approved school. This work may be done in either the fall or spring semester and either one or two hours credit may be earned. *Time and credit hours arranged.*

3. Special Methods in Teaching Agriculture.—The following topics are given consideration: Aims of vocational agricultural education; the Smith-Hughes and George-Reed Acts; the agricultural curriculum; program making; building the course of study; making teaching plans for the year; selecting teaching methods and devices; making lesson plans; teaching the lesson; room and equipment; texts and references; budgeting department needs; publicity, exhibits, community work; part-time and evening work; Future Farmers of America. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.*

4. Practice Teaching.—During the first six weeks of the spring semester the seniors are expected to do directed teaching in an approved school. They will hand in daily lesson plans and will report on how these work out. While engaged in this work, they are given an allowance to pay for their traveling expenses and board. *Credit, four hours.*

6. Special Methods in Teaching Agriculture.—Selection of projects; project plans; project records; project problems; project supervision; farm shop work; records and reports; work of the vocational agriculture teacher; current events in agricultural education; history of agricultural education. Classroom, *two hours a week. Credit, two hours.*

AGRONOMY AND AGRICULTURAL ENGINEERING

Professor Chucka; Assistant Professor Swift; Assistant Professor Raleigh; Assistant Professor Libby

Soils and Fertilizers

1. Soils.—Origin, types, physical and chemical properties of soils and their relation to crop production. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Libby

3. Soils (Forest).—Origin, types, physical and chemical properties of soils as related to forests. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

5. Soil Formation, Erosion and Conservation.—Soil-forming rocks and minerals, agencies involved in soil formation; causes, types and extent of soil erosion; principles and methods of soil conservation. Classroom, *three hours a week. Credit, three hours.* Mr. Chucka

6. Soils and Fertilizers.—Physical and chemical composition of soils and fertilizers as related to time and method of application, residual effects of fertilizers, fertilizer injury and fertilizer placement. Classroom, *two hours a week. Credit, two hours.* Mr. Chucka

51. Soil Fertility.—Principles involved in the improvement and maintenance of soil fertility through the use of lime, stable manures, green manures, and commercial fertilizers. Classroom, *two hours a week. Credit, two hours.* Mr. Chucka

52. Soil Classification, Surveying and Mapping.—Theories, methods, and uses of soil classification, surveying, and mapping. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

54. Soil Analysis.—Principles, methods, and practical value of the various field and laboratory methods of soil analysis. Prerequisites, Courses 1 and 6. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Chucka, Mr. Libby

Crops

11. Field Crops.—A course dealing with the principal field crops of the United States with special reference to crops important in New England. Consideration is given to general culture, use, and their adaptation. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Raleigh

13. Weed Identification and Control.—Characteristics of weeds, their sources, method of reproduction, dissemination, migration, and methods of control. Laboratory, †*four hours a week. Credit, two hours.* Mr. Raleigh

14. Sweet Corn, Beans, and Peas.—The production of sweet corn, beans, and peas for canning purposes. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Raleigh

15. Potato Production.—A general study of all factors involved in the production of potatoes. Varieties, seed selection, preparation of land, planting, fertilization, spraying, harvesting, storing, grading, and marketing. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Libby

16. Forage and Pasture Crops.—Grasses, legumes, and root crops, their management and uses for forage and pasture. Prerequisite, Course 11. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Raleigh

60. Crop Improvement.—Principles and methods involved in field-crop improvement and methods of testing new varieties. Prerequisite, Botany 45. *Three hours a week. Credit, three hours.* Mr. Raleigh

62. Seed Potato Production.—A specialized study of the factors involved in seed potato production emphasizing selection of foundation seed stock, tuber unit planting, potato diseases, roguing, certification and development, and testing of new varieties. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Libby

*78. Marketing Potatoes.—A specialized course in the marketing of potatoes giving special attention to practices in New England. Production, trends in production, regional competition, grades, containers, storage, transportation, finance, sales methods including cooperative marketing, trend in consumption, price relationships, and the cost of marketing of both table stock and seed potatoes are topics considered in this course. *Three hours a week. Credit, three hours.* Mr. Libby

Agricultural Engineering

30. Agricultural Engineering.—A general course covering briefly all phases of agricultural engineering. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

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* The description of this course also appears under the Department of Agricultural Economics and Farm Management and should be registered for under the designation, Fm 78.

33. Farm Structures.—Planning, designing, and the construction of farm buildings; water systems; heating systems; sewage disposal; and the use of concrete on the farm. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

34. Farm Shop.—Training in the care and use of tools and equipment for ordinary construction and repair work found necessary on the farm. Laboratory, †*four hours a week. Credit, two hours.* Mr. Swift

35. Drainage and Land Reclamation.—A course covering the principles and practices of surveying, mapping, and leveling on the farm; improving and reclaiming farm lands. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

36. Farm Machinery and Power.—Simpler laws of mechanics as applied to farm machinery; the operation, adjustment, care, and efficiency of the more important farm machines; the application of power to farm operations and the operation, care, and repair of various forms of motors used for agricultural purposes. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* Mr. Swift

Agronomy and Agricultural Engineering (General)

81, 82. Seminar.—Study of recent literature, problems and experiments pertaining to soils, crops, and agricultural engineering. For juniors and seniors majoring in Agronomy. *One hour a week. Credit, one hour.*
Members of the Departmental Staff

83, 84. Special Problems in Agronomy and Agricultural Engineering.—*Credit arranged.* Members of the Departmental Staff

85, 86. Thesis.—*Credit arranged.*
Members of the Departmental Staff

ANIMAL INDUSTRY

Professor Corbett; Professor Dorsey; Associate Professor Smyth; Assistant Professor Gardner; Assistant Professor Hall; Assistant Professor Witter; Mr. Davis

Animal Husbandry

2. Types of Live Stock.—History, development, and characteristics of cattle, sheep, swine, and horses; correct types in the classes of farm animals

ganization, and economic aspects. Prerequisite, Course 1. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* Mr. Dorsey

6. Judging Milk and Milk Products.—Study and practice of methods employed in scoring and judging milk and milk products. Prerequisite, Course 1. Laboratory, †*two hours a week. Credit, one hour.* Mr. Davis

51. Dairy Technology.—Milk products and by-products, methods of manufacture and processing, and scrutiny of recent literature relating to advances in dairy technology. Lectures and assigned readings. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* Mr. Dorsey

53, 54. Problems in Dairy Husbandry.—*Credit arranged.* Mr. Dorsey

55. Dairy Refrigeration.—Principles of refrigeration, refrigeration machinery and equipment, and applications of refrigeration to milk and milk products. *Two hours a week. Credit, two hours.* Mr. Dorsey

58. Ice Cream Making.—Manufacture of ice cream and ices. Prerequisites, Courses 51 and 55. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dorsey

63, 64. Advanced Dairy Products Testing.—Various methods of testing dairy products and the practical application of such new tests as may be developed from time to time. Special attention is given to the Mojonnier test. Prerequisite, Course 51. Open to senior major students in the Department of Animal Industry and to graduate students. Laboratory, †*two or four hours a week. Credit, one or two hours.* Mr. Dorsey

66. Dairy Machinery.—Milk and milk products machinery, accessory machinery, and plant layout. Prerequisite, Course 51. Laboratory, †*two hours a week. Credit, one hour.* Mr. Dorsey

Poultry Husbandry

1. Types, Breeds, and Management of Poultry.—Origin and development of types, breeds, and varieties of fowl; general care, feed, and management of farm poultry; and marketing of poultry products. Laboratory exercises include practice in poultry management, poultry judging, and preparation of poultry products for market. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Smyth

3. Poultry Breeding.—Principles of breeding as applied to poultry inheritance of egg productivity; systems of breeding; and study of pedigrees and breeding results. Some time is given to a study of methods used by suc-

cessful poultry breeders. Prerequisite, Course 1. Classroom, *two hours a week. Credit, two hours.* Mr. Smyth

3. Exhibition and Production Poultry Judging.—Selection and mating of fancy and utility poultry. Laboratory practice in judging fancy and utility poultry, and a study of the standard requirements of the breeds. Prerequisite, Course 1. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Gardner

4. Incubation and Brooding.—Principles of incubation and brooding. Laboratory practice in incubator and brooder management. Prerequisite, Course 1. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Smyth

5. Poultry Feeding.—General principles of nutrition as applied to poultry; poultry feeds; calculating rations; estimating cost of feeds and feeding; and methods of feeding for economical production. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* Mr. Gardner

6. Poultry Farm Management.—The business of poultry farming; systems and operations in use on large poultry farms; planning of specialized poultry farms. In so far as is practicable, visits will be made to poultry farms. Prerequisites, Courses 1, 2, 3, and 5. Classroom, *one hour a week;* laboratory, †*two hours a week.* Mr. Gardner

7. Poultry Literature.—A study of literature giving the results of experimental work with poultry. Prerequisites, Courses 1, 2, and 3. *Two hours a week.* Mr. Smyth

8. Poultry Diseases.—Principles of hygiene and sanitation applied to the prevention and control of the diseases of poultry, including a detailed consideration of the pathological processes involved in the common diseases. *Two hours a week. Credit, two hours.* Mr. Witter

51, 52. Problems in Poultry Husbandry.—*Credit arranged.* Mr. Smyth

BACTERIOLOGY

Professor Hitchner; Mr. Hook

1. Bacteriology.—A laboratory course in general bacteriology. Open to all students. The work includes the preparation of the usual culture media and study of morphological and biological characteristics of typical bacteria. Some outside reading is required. Course 3 must be taken in conjunction. †*Six hours a week. Credit, three hours.* Mr. Hitchner, Mr. Hook

2. Bacteriology.—Similar to Course 1. Offered for students in the College of Technology and others who may elect it. Special emphasis is placed upon bacteriology of water and sewage. Prerequisite, Course 3. †*Six hours a week. Credit, three hours.* Mr. Hitchner, Mr. Hook

3. Bacteriology.—A lecture course open to all students. It must be elected by students taking Course 1. Subjects considered include the history of bacteriology; classification and biological characteristics of bacteria; bacteria in air, water, soil, and dairy products; relation of bacteria to health and disease; and immunity. *Two hours a week. Credit, two hours.*

Mr. Hitchner

5. Bacteriology.—An abbreviated laboratory course in general bacteriology. Demonstrations by the instructor and experiments conducted by the students in which many of the changes produced by bacteria in every day life are considered. Practical demonstrations of the relation of bacteria to disease, sanitation, food handling, and other economic phases are given. The aim is to develop appreciation of bacteriological technic. Course 3 must be taken in conjunction. †*Two hours a week. Credit, one hour.* Mr. Hitchner

52. Bacteriology.—Physiological, morphological, biochemical, and serological activities of bacteria; isolation and identification of pathogens together with animal inoculation and serological tests. Prerequisites, Courses 1 or 2, and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Hitchner

54. Bacteriology (Dairy).—Effect of pasteurization on milk bacteria; quantitative bacterial determination of butter and cheese; study of typical milk bacteria; use of special biochemic tests for quality of milk; and study of effect of separators, clarifiers, coolers, etc., on the bacterial content of milk and cream. Prerequisites, Courses 1 or 2, and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Hitchner

55. Bacteriology (Soil).—A theoretical and experimental consideration of the relationship of microörganisms and soil fertility. A study of the factors which influence the changes produced through microbial action. Prerequisites, Courses 1 or 2, and 3. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Hitchner

61, 62. Seminar.—Preparation and presentation of papers dealing with current researches and developments in the fields of bacteriology. *One hour a week. Credit, one hour.* Mr. Hitchner

101, 102. Bacteriology.—A laboratory course for students desiring to pursue some particular line of bacteriological investigation. Open only to students who have done considerable work in bacteriology. The kind of work

and the time are arranged to suit individual students. *Credit arranged.*

Mr. Hitchner

BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Professor Smith; Assistant Professor Freeman

Biochemistry

1. Organic Chemistry.—For agricultural students. A study of the aliphatic compounds; hydrocarbons, alcohols, acids, amines, amides, etc., and brief resumé of the more important aromatic compounds. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.*

Mr. Smith

2. Biochemistry.—Plant biochemistry, including a study of the physico-chemical reactions of plants. A detailed study of carbohydrates, fats, and proteins; glucosides; and enzymes. Prerequisite, Course 1. Classroom, *three hours a week;* laboratory, †*four hours a week. Credit, five hours.*

Mr. Smith

4. Organic Chemistry.—The aliphatic hydrocarbons, alcohols, acids, amines, amides, etc.; important aromatic compounds; and carbohydrates, fats, and proteins. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* Mr. Freeman

5. Biochemistry.—Physico-chemical reactions of plants and animals; chemistry of digestion; respiration; and blood and lymph. Prerequisite, Course 4. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.* Mr. Freeman

8. Agricultural Chemistry.—Chemistry of the soil elements; colloidal condition and its effect upon the soil; chemical relationship of fertilizing constituents; and synthetic methods of producing fertilizing ingredients. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* Mr. Smith

9. Biochemistry.—Animal biochemistry. Composition of the animal body; chemistry of digestion; assimilation and metabolism of foods; chemistry of blood and lymph; and elimination of waste product. Prerequisite, Course 2. *Two hours a week. Credit, two hours.* Mr. Smith

51. Biochemistry.—Detailed study of carbohydrates, fats and proteins; nature of enzymes and their effect upon food materials; chemical changes involved in digestion, assimilation, and absorption of foods; respiration; chemistry of the blood, including clinical methods of analysis; and elimination of waste material from the animal body. Prerequisite, Course 1 or 4. *Three hours a week. Credit, three hours.* Mr. Smith

53. Analysis of Agricultural and Related Products.—A course designed to familiarize the student with quantitative methods used in analysis of fertilizers, commercial feeds, and common foodstuffs such as bread, butter, milk, breakfast foods, etc. Alternative work will consist of qualitative and quantitative methods used in textile chemistry. The type of analytical work will be adapted to requirements of the student. Prerequisite, Course 1 or 4. Laboratory, †*four or* †*six hours a week. Credit, two or three hours.*

Mr. Freeman

57. Biological Colloids.—An introduction to colloidal chemistry with application and significance in biological systems. Open to junior, senior, and graduate students. Prerequisites, Courses 1 and 2 or 4 and 5. *Three hours a week. Credit, three hours.* Mr. Freeman

61. Advanced Biochemistry.—A complete consideration of the chemistry of carbohydrates, fats, and proteins with special reference to recent advances in these fields; methods used in biochemical research; special problems in plant and animal biochemistry. Prerequisite, Course 2 or 5. *Three hours a week. Credit, three hours.* Mr. Smith

62. Advanced Biochemistry.—A continuation of Course 61, with special reference to literature devoted to the subject matter. Prerequisite, Course 61. *Three hours a week. Credit, three hours.* Mr. Freeman

64. Biochemical Laboratory Methods.—Methods used in the biochemical laboratory for testing carbohydrates, fats, amino acids, proteins, enzymes; studies of the colloidal properties of biochemical material; H-Ion concentration measurement methods; and individual problems dealing with various phases of biochemical investigations. Prerequisite, Course 53. Laboratory, †*six hours a week. Credit, three hours.* Mr. Freeman

101, 102. Biochemical Research.—Problems dealing with various phases of biological or agricultural chemistry. Special problems may be selected by the student under direction and advice of the department. A comprehensive written summary is required. Open only to senior and graduate students. *Time and credit arranged.* Mr. Smith, Mr. Freeman

BOTANY AND ENTOMOLOGY

Professor Steinmetz; Assistant Professor Dirks; Assistant Professor Steinbauer; Assistant Professor Hyland; Mr. Lloyd

Botany

2. General Botany.—Fundamental principles of plant life, with special emphasis on life processes. Required of all students in the College

of Agriculture excepting those registered in Home Economics. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

Mr. Steinmetz and Assistants

29. General Cryptogamic Botany.—Orders of spore bearing plants, their structure, development, and economic importance. Given in alternate years. Prerequisites, Course 2 and the consent of the instructor. Classroom, *one hour a week;* laboratory and field, †*four hours a week. Credit, three hours.* Mr. Steinbauer

30. Plant Ecology.—A study of the environmental factors determining adaptations and distribution of plant life. Prerequisite, Course 2. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.*

Mr. Steinbauer

32. Plant Physiology.—For students in Forestry. Prerequisites, Course 2 and one year of chemistry. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Steinbauer

33. Forest Botany (Dendrology).—Lectures, laboratory, and field work on characteristics, habits, classification, and relationships of trees and native shrubs of North America. Prerequisite, Course 2. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

Mr. Hyland

34. Forest Botany (Physiography).—A systematic study of the trees of North America; a comprehensive study of range, distribution, soil requirements, and commercial importance of timber trees of the United States; and survey of forest areas of the world. Prerequisite, Course 33. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

Mr. Hyland

35. Plant Anatomy.—Tissues of leaves, roots, and stems of herbaceous and woody plants. Prerequisite, Course 2. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.*

Mr. Steinmetz, Mr. Hyland

42. Forest Pathology.—Principles of plant diseases, as applied to seedlings, nursery stock, and forest trees; destruction of timber by fungi; and methods of combating plant diseases and preserving wood products. Required of seniors in Forestry. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Steinmetz

43. Wood Identification.—Identification of commercial woods with the unaided eye, lens, and microscope. Open to students in chemical engineering, and to others by permission. Laboratory, **three hours a week. Credit, one hour.* Mr. Hyland

45. General Genetics.—Principles of genetics. Prerequisites, Zoology 1 and Course 2. Open to juniors and seniors. *Three hours a week. Credit, three hours.* Mr. Steinmetz

46. Genetics Laboratory.—Experiments and problems on kinds, causes, measurements, and inheritance of variations in plants and animals. Prerequisite, Course 45. Laboratory, †*four hours a week. Credit, two hours.* Mr. Steinmetz

53. Plant Physiology.—Classroom and laboratory work on the physiology of plants. Prerequisites, Course 2 and one year of chemistry. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Steinbauer

56. Plant Pathology.—Principles of plant diseases; their nature and causes; basis for control. Prerequisite, Course 2. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Steinmetz

57. Taxonomy of Vascular Plants.—Characteristics, identification, classification, and systematic position of representative species of flowering plants. Given in alternate years. Prerequisites, Course 2 and the consent of the instructor. Classroom, *two hours a week;* laboratory and field, †*four hours a week.* Mr. Steinmetz

59. General Mycology.—Morphology, identification, and classification of representative species of fungi. Given in alternate years. Prerequisites, Course 2 and consent of the instructor. Classroom, *two hours a week;* laboratory and field, †*four hours a week.* Mr. Steinmetz

Entomology

21. General Entomology.—Fundamental facts and principles of insect life, particularly in relation to agriculture; principles of insect control; characteristics of the orders and families of insects, with a study of their habits, life histories, and relations to plants and animals. An insect collection is required. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

22. Forest Entomology.—Principles of insect life with special reference to shade and forest trees. Structure, metamorphosis, life histories, injuries, classification, and methods of control are considered. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

40. Apiculture.—A practical course in the care of bees in relation to horticulture and general farming. The honeybee, its activities and habits; races of bees, diseases and enemies, and the production and marketing of

honey. Laboratory exercises include manipulations of bees and the making of hive equipment. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Mr. Dirks

46. Advanced Forest Entomology.—An intensive study of the important shade trees, forest and forest products; insects, their life histories and habits, injuries and methods of control. Prerequisite, Course 21 or 22. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* Given in 1933-34. Mr. Dirks

49. Economic Entomology.—An intensive study of the important insects of the orchard, garden, and farm; their life histories and habits, injuries, and methods of control. Prerequisite, Course 21 or 22. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

50. Morphology of Insects.—An introduction to the principles of insect morphology. The factors determining form and adaptations of typical insects. Prerequisite, Course 21 or 22. Classroom, *two hours a week;* laboratory, †*four hours a week. Credit, four hours.* Mr. Dirks

51. Taxonomy of Insects, I.—Methods of collecting, preparing, and mounting insects; principles of insect classification; practice in use of keys for the identification of common insects. Prerequisite, Course 21 or 22. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.* Mr. Dirks

52. Taxonomy of Insects, II.—Principles of wing venation; classification of the lepidoptera, diptera, and hymenoptera. Prerequisite, Course 51. Classroom, *one hour a week;* laboratory, †*four hours a week. Credit, three hours.*

Problem Courses

47, 48. Problems in Botany or Entomology.—Open to juniors and seniors who have special interest and qualification in botany or entomology. The approval of the head of the department and the written consent of the instructor concerned must be obtained before registering for this work. *Credit arranged.* Members of the Departmental Staff

103, 104. Problems in Genetics.—*Credit arranged.* Mr. Steinmetz

105, 106. Problems in Entomology.—*Credit arranged.* Mr. Dirks

107, 108. Problems in Botany.—*Credit arranged.* Mr. Steinmetz

FORESTRY

PROFESSOR DEMERITT; ASSOCIATE PROFESSOR GOODSPEED; ASSISTANT PROFESSOR CHAPMAN; ASSISTANT PROFESSOR ASHMAN

1. ELEMENTS OF FORESTRY.—Importance and scope of the field of forestry, general methods of cutting and reforestation applicable in different regions in the United States. Designed as a beginning course for foresters and a cultural course for others. Required of freshmen majoring in Forestry, and open to other students. *Two hours a week. Credit, two hours.*

MR. DEMERITT

2. ELEMENTS OF FORESTRY.—A continuation of Course 1, required of freshmen majoring in Forestry and open to other students. Prerequisite, Course 1. *Two hours a week. Credit, two hours.* MR. DEMERITT

3. LOGGING.—The lumber industry in the United States considered from an economic standpoint; an account of logging methods in different forest regions. Textbook and lectures. Forestry sophomores only. *Two hours a week. Credit, two hours.* MR. CHAPMAN

4. ADMINISTRATION AND PROTECTION.—Problems in the administration of national, state and private forest enterprises. Forest improvements, including trails, telephone lines, and look-out towers. Forest fire control. *Four hours a week. Credit, four hours.* MR. DEMERITT

5. FOREST MENSURATION.—Theory and application of measurements of logs, trees, and stands of timber. Classroom, *two hours a week.* Field work, **three hours a week. Credit, three hours.* MR. DEMERITT, MR. CHAPMAN

6. FOREST MENSURATION.—A continuation of Course 5. Theory and application of measurements of growth and yield. Classroom, *two hours a week;* field work, **three hours a week. Credit, three hours.*

MR. DEMERITT, MR. CHAPMAN

7. LUMBER MANUFACTURE.—Milling and marketing problems of the lumber industry in America. For Forestry seniors only. First half of semester. *Four hours a week. Credit, two hours.* MR. CHAPMAN

8. SILVICS.—The life factors determining the character and form of forest vegetation. The development of forest types and the silvical characteristics of stands. Prerequisites, Botany 33, 34. For Forestry juniors only. *Two hours a week. Credit, two hours.* MR. ASHMAN

9. WOOD PRESERVATION.—Durability and seasoning of native woods; preservatives in commercial use; and methods of operation and equipment of preserving plants. Special attention given to posts, ties, poles, paving-blocks,

and structural timbers. Prerequisites, Botany 33, 34, and 35. First half of semester. *Two hours a week. Credit, one hour.* MR. CHAPMAN

10. NURSERY PRACTICE.—To be taken in connection with Course 12. The study of forest-tree seed and seedlings; planting and transplanting in the State Forest Nursery; practice in field planting. Nursery management. Last nine weeks. **Six hours a week. Credit, one hour.*

MR. ASHMAN, MR. GOODSPEED

11. FOREST RECREATION.—Recreation from the viewpoint of the forester. Recreation planning in state and national forests and parks and on private estates. Brief consideration of game management in forestry. Summer camp administration. Forestry juniors and seniors only. *One hour a week. Credit, one hour.* MR. ASHMAN

12. SEEDING AND PLANTING.—Artificial regeneration and afforestation, in the practice of forestry. Forest nursery management. *Two hours a week. Credit, two hours.* MR. ASHMAN

14. FOREST PRODUCTS.—Forest products other than logs and lumber, such as pulp-wood, veneers, shingles, lath, tight and slack cooperage, hoops and headings, excelsior, vehicle woods, spool stock, turpentine, tannin, gums, syrups, dye-woods, and charcoal. Methods of utilization, markets, and values. *Two hours a week. Credit, two hours.* MR. CHAPMAN

16. WOOD TECHNOLOGY.—Identification and classification of the commercial woods of the United States based on simple lens inspection; the technical qualities of various species and their uses in the arts and trades. Prerequisite, Botany 33, 34, and 35. Classroom,*one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. GOODSPEED

18. PREPARATION AND DRAFTING OF MAPS.—Instruction in the correct drafting, preparation, and coloring of maps. The use of accepted conventional signs and symbols in mapping, and preparation of maps for reports and summaries of field surveys. Prerequisite, Drafting 1, 2. **Three hours a week. Credit, one hour.* MR. CHAPMAN

20. WOODLOT FORESTRY.—General principles of forestry, with special reference and application to farm woodlands, particularly in this region. Lectures and textbook work in elementary systems of cutting, estimating, protection, and reforestation. Especially for agricultural students. Open to all students. *Two hours a week. Credit, two hours.* MR. CHAPMAN

43, 44. SPECIAL PROBLEMS.—Original investigation in advanced forestry work, the subject to be chosen after consultation with the departmental staff. Open to high ranking juniors and seniors. *Credit arranged.*

MEMBERS OF THE DEPARTMENTAL STAFF

47, 48, a-d. Forestry Seminar.—Forestry students only. Discussion of forestry conditions and developments. Oral reports from upper classmen on practical experience. Lectures by forestry staff and professional foresters in the field. *One hour a week. No credit.*

Members of the Departmental Staff

51. Regional Silviculture.—Applied systems of silviculture and management considered in relation to commercially important timber species and forest types in the United States; the application of thinnings; methods of natural reproduction; silvicultural methods. First half semester. *Four hours a week. Credit, two hours.* Mr. Ashman

52. Policy and Economics.—Character, extent, and distribution of forest resources, national, state, private and foreign. Relation of government, corporations, and individuals to forest resources and applied forest management. Brief discussion of State and Federal forest laws. *Four hours a week. Credit, four hours.* Mr. Demeritt

53. Forest Finance.—Forest valuation and statics. The appraisal of values of stands of timber. Determination of returns from forests under management. Damage appraisal. First half semester. Classroom, *three hours a week.* Laboratory, †*two hours a week. Credit, two hours.*

Mr. Goodspeed

55. Forest Management.—Theory of the normal forest; forest organization and regulation for a sustained yield. Forest management plan calculations and preparation. First half semester. *Four hours a week. Credit, two hours.* Mr. Goodspeed

Courses in Camp

35s. Silviculture.—Sophomore year only. Character and form of forest vegetation and recommended cutting operations for different kinds of forest types. To secure high quality natural regeneration. Studies to be conducted on areas now operated by Government and private owners. **Sixteen hours a week. Credit, two hours.*

Members of the Departmental Staff

37s. Forest Mensuration.—Sophomore year only. Practical field work in the measurement of logs, individual trees and large stands of timber. Forestry instruments. **Eight hours a week. Credit, one hour.*

Members of the Departmental Staff

39s. Forest Products.—Sophomore year only. Study of forest products other than logs and lumber with particular reference to their manufacture. **Eight hours a week. Credit, one hour.*

Members of the Departmental Staff

41. Practice of Forestry.—Forestry seniors only. Business principles involved in the management of a forest area including the preparation of a complete working plan. Topographic maps and detailed estimate of stands are included in the plan. Second half semester. **Forty-eight hours a week. Credit, nine hours.* Mr. Ashman, Mr. Goodspeed

HOME ECONOMICS

Professor Greene; Professor Sweetman; Assistant Professor Musgrave; Assistant Professor Heye; Miss Osgood; Mrs. Stewart; Miss Gould

1. Survey.—A survey of the subject matter field of home economics, and the problems involved in preparation for professional work in the field. Classroom, *three hours a week. Credit, three hours.*

Miss Greene, Mrs. Stewart

2. Clothing Selection Problems.—A study of the economic, social, and health problems involved in the selection of clothing, including a detailed study of fabrics and fibers. Classroom, *three hours a week. Credit, three hours.* Miss Musgrave

3. Design.—A first course in art expression. The principles of design as they may be applied to house decoration, costume design, advertising and related subjects. Some technique in the use of color, line, balance, rhythm, emphasis, and proportion is acquired in the laboratory. Classroom, *one hour a week;* laboratory, *†four hours a week. Credit, three hours.*

Miss Musgrave

4. The House.—The importance of the house as a contributing factor in satisfying home life for the group and the individual. Standards for physical well-being, aesthetic satisfaction, social enjoyment, convenience, privacy and comfort, in relation to income. Selection of designs, materials, and finishes for houses and their furnishings. Field trips required. Classroom, *two hours a week;* laboratory, *†two hours a week. Credit, three hours.*

Miss Musgrave

5. Foods.—Nutritive value, principles of preparation, and buying of foods. Laboratory work in preparation of various types of foods. Prerequisite, Biochemistry 4. Classroom, *two hours a week;* laboratory, *†four hours a week. Credit, four hours.* Mrs. Sweetman, Miss Osgood

6. Foods.—A continuation of Course 5, including marketing studies, with field trips, and the planning and serving of meals. Classroom, *one hour*

a week; laboratory, †*six hours a week. Credit, four hours.*
Mrs. Sweetman, Miss Osgood

7, 8. Clothing Construction Problems.—A laboratory course combining the principles of clothing selection with the techniques of construction in the making of garments. Simple drafting, the use of patterns, fitting and finishes are included. Laboratory, †*four hours a week. Credit, two hours.* Mrs. Stewart, Miss Osgood

10. Sanitation and Public Health.—Health of the individual in relation to family and community responsibility. Includes housing problems such as ventilation, plumbing, water supply, and sewage disposal; school health problems; industrial hygiene; and a study of communicable diseases with emphasis on methods of control. *Two hours a week. Credit, two hours.*
Miss Greene

11. Household Management.—Homemaking as a profession. Standards and objectives for household management in the provision of health, financial solvency, contentment, and development of family members. Techniques of management of time, energy, and money to contribute to securing the values of family life. *Four hours a week. Credit, four hours.*
Miss Greene, Miss Heye

14. The Pre-School Child.—A study of conditions most favorable to optimum growth and development of children. Influence of physical environment and home relationships upon the physical, social, and mental development of children. Existing tendencies and problems. Effects of new social adjustments reflected in the home upon the welfare of children. Opportunity for observing and guiding activities of pre-school children is provided in a play school conducted the second half of the semester. Classroom and laboratory *as arranged. Credit, three hours.* Miss Heye

15. Millinery.—Principles of design and color are applied to millinery. A consideration of materials suitable to various purposes and the making of frames, coverings, and hats in the prevailing fashion. Open only to juniors and seniors. Laboratory, †*two hours a week. Credit, one hour.*
Miss Musgrave

17, (18) Applied Design.—Application of design principles to problems in textiles including batik, tie dyeing, applique, embroidery, and hand weaving. Prerequisite, Course 3. Laboratory, †*four hours a week. Credit, two hours.* Miss Musgrave

21, (22). Household Administration.—A senior laboratory course aiming to develop managerial ability by coördinating technical and laboratory training in conditions approximating home life. Students organize and execute activities of the Home Management House in which they live. Activi-

ties include marketing, the planning, preparing, and serving of meals, care of a young child, budgeting and accounting of finances, care of the house, and social management. *Credit, two or three hours.* MISS HEYE

25. ECONOMICS OF THE HOUSEHOLD.—The family as a unit for consumption including principles of food selection; clothing; shelter; and the use of the budget. Open to Arts and Sciences students, above freshman rank, only. *Three hours a week. Credit, three hours.* MISS GREENE, MISS HEYE

26. THE CONTEMPORARY HOME.—Functions of the home as an environment for human development; factors involved in successful homemaking; and the child in the home, his development and welfare. Open to Arts and Sciences students, above freshman rank, only. *Three hours a week. Credit, three hours.* MISS HEYE

51. ADVANCED CLOTHING.—Clothing economics including study fashion, retailing, and standards for consumer buying of clothing. Laboratory problems in selecting and constructing tailored coats and children's clothing. Prerequisites, Courses 2 and 3. Classroom, *one hour a week;* laboratory, *†four hours a week. Credit, three hours.* MISS MUSGRAVE

52a. ADVANCED CLOTHING AND COSTUME DESIGN.—A continuation of Course 51. Application of design principles in line, color, dark and light, and texture to costumes for the individual. Draping on the dress form and constructing informal and formal silk dresses. Laboratory, *†six hours a week. Credit, three hours.* MISS MUSGRAVE

52b. ADVANCED CLOTHING AND COSTUME DESIGN.—Design same as Course 52a. Laboratory problems in the study of commercial patterns, pattern construction, problems of fitting abnormal figures. Construction of a silk dress offers opportunity for practical application of this material and for details of finishes. Laboratory, *†six hours a week. Credit, three hours.* MISS OSGOOD

53. ADVANCED FOODS.—Application of biochemical methods in development of principles of food preparation. Prerequisites, Course 5, 6, and Biochemistry 4. *Credit as arranged, two or three hours.* MRS. SWEETMAN

56. HOME ECONOMICS EDUCATION.—Principles of teaching as applied to junior and senior high school home economics. Aims: selection of subject matter, and choice of method as exemplified in current literature, courses of study, and textbooks. Organization problems, equipment, budget, and classroom management are included. *Three hours a week. Credit, three hours.* MISS GREENE

57, 58. THESIS.—Undergraduate thesis in any one of the fields of home economics. *Credit arranged.* MEMBERS OF THE DEPARTMENTAL STAFF

59, 60, a-j. Special Problems.—Individual problems in the various fields of home economics, arranged to enable students to extend their command of subject matter, or develop techniques according to individual interests and needs. A student may register more than once for the course, but for no more than three hours in any one subdivision. *Credit, one to three hours,* in each subdivision.

59, 60a. Nutrition
59, 60b. Foods
59, 60c. Clothing and Textiles
59, 60d. Design
59, 60e. History of Costume
59, 60f. House Planning and Decoration
59, 60g. Child Development
59, 60h. Household Management
59, 60i. Home Economics Education
59, 60j. Institutional Management

Members of the Departmental Staff

61. History of Costume.—A survey of the development of costume of men and women from the peoples of antiquity, through the various periods of European history to the present time. Lectures, readings, written reports, and collection and classifying of illustrations. *One hour a week. Credit, one hour.* Miss Musgrave

63. Nutrition.—Principles involved in normal human nutrition at all ages. Prerequisite, Biochemistry 3 or Chemistry 51. *Two hours a week. Credit, two hours.* Mrs. Sweetman

65, (66). Dietetics.—Calculation and preparation of dietaries. Parallel or prerequisite, Course 63. Laboratory, †*four hours a week. Credit, two hours.* Miss Osgood

67, (68). Nutrition in Abnormal Conditions.—A study of the principles involved in adjusting diets in such diseases or other abnormal conditions as are benefited by variations from diets recommended for the normal person. Laboratory consists of demonstration of nutritional deficiences in animals. *Credit, two or three hours.* Mrs. Sweetman

69, (70). Survey Examination.—The student organizes and outlines the material in her basic curriculum and her sequence around its value to the individual, the homemaker, or the professional woman, reads as widely as possible to round out her comprehension, and is examined both orally and in writing on her grasp of the field as a whole, her command of details, and her ability to organize and present material effectively. *Credit, one or two hours.* Members of the Departmental Staff

71, (72). Supervised Teaching.—Directed teaching in home economics. Students teach classes in the junior and senior high school at Brewer. *Credit, three hours.* Miss Gould

81, (82). Institutional Management (Foods).—A study of the problems involved in the feeding of groups on a commercial basis, such as menu planning, time budgeting, the application of food preparation principles to large quantity cookery, use of power equipment, quality standards. A faculty lunchroom in Merrill Hall is operated as a laboratory for the course. Prerequisites, Course 5, 6, and Economics 1b. Classroom, *one hour a week;* laboratory, **six hours. Credit, three hours.* Mrs. Stewart

83, (84). Advanced Institutional Management (Foods).—A continuation of Course 81, 82, with emphasis on management and administrative problems such as selection of equipment, cost studies, and personnel. Laboratory may be taken without lecture. Prerequisite, Course 81, 82. Classroom, *two hours a week;* laboratory, **six hours. Credit, four hours.* Mrs. Stewart

102. Advanced Nutrition.—Methods of research in human nutrition and recent advances in the field. Prerequisite, Course 54. *Credit as arranged, two or three hours.* Mrs. Sweetman

HORTICULTURE

Professor Waring; Assistant Professor Clapp;
Assistant Professor Riley

Pomology

1. Commercial Fruit Handling.—The commercial apple industry and its methods in Maine and competing regions, with minor attention to other tree fruits. Laboratory exercises include grading and packing and visits to commercial-scale orchards, packing houses, and storage plants. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Waring

2. Tree Fruit Production.—Underlying principles and practical methods involved in planting and subsequent care of hardy orchard fruits, leading to the production of profitable crops. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* Mr. Waring

3. Systematic Pomology.—Important groups of tree and small fruits, together with practice in identification and judging of varieties. A trip to

important orchard districts or to the state fruit show may be arranged. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. WARING

10. SMALL FRUIT PRODUCTION.—Selection of varieties, and methods recommended for commercial production and handling of such fruits as strawberries, grapes, raspberries, blackberries, and blueberries. *Three hours a week. Credit, three hours.* MR. RILEY

56. ADVANCED POMOLOGY.—A course supplementary to Course 2, with emphasis on modern methods of orchard management, including disease and insect control. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. WARING

Vegetable Gardening

20. VEGETABLE GARDENING.—The best commercial practices; and the results of recent experimentation as applied to vegetable gardening. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

21. VEGETABLE CROPS.—Includes harvesting, marketing, and systematic study of types and varieties of vegetables; also storage and care of vegetables for seed production. Prerequisite, Course 20. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

55. VEGETABLE FORCING.—Culture of vegetables under glass, types of greenhouses, soil sterilization, fumigation, special fertility problems, and marketing. Prerequisite, Course 20. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. RILEY

Floriculture and Ornamental Horticulture

5. LANDSCAPE GARDENING.—Principles of landscape design and materials used in executing landscape plans. Special attention is given to the improvement of home grounds. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. CLAPP

7. COMMERCIAL FLORICULTURE.—Principles underlying the production of flowers under glass; special consideration of methods for important cut-flower crops. One or more half-day trips in the Bangor area may be arranged. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. CLAPP

8. GENERAL FLORICULTURE.—The culture and care of garden flowers and house plants, and the use of flowers in the home. Open to any student.

Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. CLAPP

54. LANDSCAPE GARDENING.—A continuation of Course 5 treating the development of irregular-surfaced areas, the farmstead, and large tracts; the design of recreational areas; and the professional phases of landscape architecture. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. CLAPP

General Courses

4. PLANT PROPAGATION.—Methods of propagating plants. Current literature on propagation is reviewed. A report on methods applicable to a particular branch of horticulture is required. Laboratory, †*four hours a week. Credit, two hours.* MR. CLAPP

11, 12. PROBLEMS IN HORTICULTURE.—Open to students who manifest special interest and the capacity for individual effort. The consent of the instructor under whom problem work is desired must be obtained in each case before registration. *Credit arranged.* These courses may be repeated for credit. MEMBERS OF THE DEPARTMENTAL STAFF

51, 52. SEMINAR.—Preparation of papers, followed by classroom presentation and discussion, dealing with a wide range of topics related to horticulture. *One hour a week. Credit, one hour.*

MR. WARING, MR. RILEY, MR. CLAPP

Graduate Courses

101, 102. HORTICULTURAL INVESTIGATIONS.—*Credit and hours arranged.* MEMBERS OF THE DEPARTMENTAL STAFF

103, 104. RESEARCH METHODS.—Application of scientific method and equipment to the attack and solution of horticultural problems, and preparation of manuscript for publication. *Credit and hours arranged.* MR. WARING

ALL DEPARTMENTS

SUMMER PROJECTS.—A student in the College of Agriculture desiring to carry out a field project during the summer recess under faculty direction may obtain credit for such work providing arrangement is properly made with the major department concerned and the project is successfully carried through to completion. Project work may be conducted during the summer

recesses between the sophomore and junior years, and junior and senior years. Sophomore-Junior Project is designated Pj 2 and limited to one hour credit. Junior-Senior Project is designated Pj 4 and may be one, two, or three hours credit. Complete details concerning project work may be obtained from heads of departments in which major curricula are offered.

TWO-YEAR COURSE IN AGRICULTURE

The significance of a star (*) or a dagger (†) in the description of a course is explained on page 110.

First Year—Fall Semester

ANIMAL HUSBANDRY—DAIRY PRODUCTION.—A general survey of the field of dairy production and economic reasons for growth of the dairy industry. Breeds of dairy cattle, and their care, feed, and management. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. HALL

BUSINESS ARITHMETIC.—A course in arithmetic based on the problems confronting the farmer in his business. *Two hours a week. Credit, two hours.* MR. LORING

ENGLISH.—Part of the time is devoted to a review of grammar and to the principles of effective writing, with attention also to spelling and punctuation. Weekly papers, chiefly expository, are required. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM BOTANY.—Plant structure and tissues in their relation to plant growth and development and to agricultural practices. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. STEINBAUER

FARM CROPS.—Practices in growing crops under field conditions. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RALEIGH

FORGE WORK.—Forging; welding; tool steel work. Laboratory, **three hours a week. Credit, one hour.* MR. DAVEE

FRUIT HANDLING.—Picking, packing, grading, storing, shipping, and marketing of fruit, particularly the apple. A survey is made of the principal apple producing regions and of the general status of the industry. A small amount of systematic study of fruits and some fruit judging are included. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

POULTRY HUSBANDRY.—Origin and development of types, breeds, and varieties of poultry; care, feed, and management; housing and house construction; breeding, incubation, and brooding; and marketing poultry products. Laboratory practice in judging poultry for exhibition and egg production. Judging, candling, grading, and packing eggs. Killing, picking, and packing poultry. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. GARDNER

First Year—Spring Semester

CARPENTRY.—Graded exercises in woodworking designed to familiarize the student with tools used in modern woodworking practice and to give him experience in working from dimensioned drawings. Laboratory, †*four hours a week. Credit, two hours.* MR. SWIFT

DAIRY HUSBANDRY—GENERAL DAIRYING.—Milk secretion and composition; testing of milk and milk products; sanitary production and handling of milk from farm to consumer; cream separation; and buttermaking. Classroom, *three hours a week;* laboratory, **three hours a week. Credit, four hours.* MR. DAVIS

ENGLISH.—A continuation of the work of the fall. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM ECONOMICS.—An elementary course in the principles of economics as applied to agriculture. The following subjects are considered: development of commercial agriculture, price making forces, production, land policies, farm credit, tariff, taxation, and agricultural organization. *Two hours a week. Credit, two hours.* MR. MERCHANT

FRUIT GROWING.—Principles and practices which should be followed in choosing an orchard site, and in the subsequent planting and culture, pest control, and other care leading to the production of profitable crops. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

POULTRY HUSBANDRY.—A continuation of the course given in the fall semester. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. GARDNER

SOILS AND FERTILIZERS.—Properties, management, and fertilization of soils in relation to fitting them for production of crops. Classroom, *three hours a week;* laboratory, **three hours a week. Credit, four hours.* MR. CHUCKA

Second Year—Fall Semester

ANIMAL HUSBANDRY—GENERAL ANIMAL HUSBANDRY.—Breeds, and care, feed, and management of horses, beef cattle, sheep, and swine. Labo-

ratory work in judging horses, sheep, and swine. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. HALL

ANIMAL HUSBANDRY—COMMON DISEASES OF FARM ANIMALS.—A general course including anatomy, physiology, hygiene, and sanitation. Methods for the prevention and control of the common diseases of domestic animals are given special attention. *Three hours a week. Credit, three hours.*
MR. WITTER

ENGLISH.—Instruction in practical uses of English, including business correspondence, with as much review of grammar as seems necessary. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM ENGINEERING AND MECHANICS.—Running farm lines, laying out drainage systems, and planning farm buildings and conveniences. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.*
MR. SWIFT

FARM INSECTS.—A practical study of insects in their economic relationships to farm plants and farm animals. Classroom, *one hour a week;* laboratory, †*two hours a week. Credit, two hours.* MR. DIRKS

FARM MANAGEMENT.—Factors that affect the profitable operation of the farm as a business unit including size of business; labor efficiency; crop rotation; farm layout; and production costs. Individual farming systems are studied. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. JONES

POULTRY HUSBANDRY—POULTRY MANAGEMENT.—A general consideration of poultry management with especial reference to sanitation and disease. *Two hours a week. Credit, two hours.* MR. GARDNER

VEGETABLE GROWING.—Production of vegetables for home use. Important commercial vegetables of New England. Handling of forcers, growing of seedlings, marketing, and other topics are included in as much detail as time will permit. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

Second Year—Spring Semester

ANIMAL HUSBANDRY—FEEDING LIVESTOCK.—General principles underlying feeding of livestock; composition and characteristics of feed stuffs; calculating rations; and the best practices in feeding farm animals. Classroom, *three hours a week;* laboratory, †*two hours a week. Credit, four hours.*
MR. HALL

ENGLISH.—A continuation, including reports, abstracts, and oral composition based on agricultural material. *Two hours a week. Credit, two hours.* ENGLISH DEPARTMENT

FARM CROPS.—Grass and forage plants, their culture and uses. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. RALEIGH

FARM MACHINERY.—A course given to acquaint the student with the machinery adapted to farm use. Classroom, *two hours a week;* laboratory, **three hours a week. Credit, three hours.* MR. SWIFT

MARKETING FARM PRODUCTS.—A course dealing with the economic problems in marketing farm products, with particular attention given to marketing Maine products, such as dairy and poultry products, apples, and potatoes. Time is also given to a study of the principles and methods of coöperative marketing. *Three hours a week. Credit, three hours.* MR. MERCHANT

FORESTRY.—The general principles of forestry with special reference and application to the farm woodlands, particularly in this region. Lectures and textbook work in elementary systems of cutting, estimating, protection, and reforestation. *Two hours a week. Credit, two hours.* MR. CHAPMAN

SMALL FRUIT CULTURE AND PLANT PROPAGATION.—Strawberries, raspberries, blackberries, blueberries, cranberries, grapes, and some other fruits of minor importance in the State. Production and disposal of the crops are considered. Instruction is given in general propagation of plants. Classroom, *two hours a week;* laboratory, †*two hours a week. Credit, three hours.* MR. RILEY

HONORS COURSE

Attention is called to the tutorial honors course which is open to superior students in agriculture and forestry who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section General Courses.

College of Arts and Sciences

FACULTY OF INSTRUCTION

JAMES MUILENBURG, Ph.D., *Dean*
JAMES NORRIS HART, C.E., Sc.D., Ph.D., *Professor of Mathematics and Astronomy*
JOHN HOMER HUDDILSTON, Ph.D., *Professor of Ancient Civilization and Lecturer on Art History*
GEORGE DAVIS CHASE, Ph.D., LL.D., *Professor of Classics*
ROY MERLE PETERSON, Ph.D., *Professor of Romance Languages*
ROBERT RUTHERFORD DRUMMOND, Ph.D., *Professor of German*
HARLEY RICHARD WILLARD, Ph.D., *Professor of Mathematics and Astronomy*
JOHN H ASHWORTH, Ph.D., *Professor of Economics and Sociology*
*CHARLES ANDREW BRAUTLECHT, Ph.D., *Professor of Chemistry and Chemical Engineering*
MILTON ELLIS, Ph.D., *Professor of English*
ALBERT LEWIS FITCH, Ph.D., *Professor of Physics*
FRANÇOIS JOSEPH KUENY, L. ès L., *Professor of Romance Languages*
MARK BAILEY, A.M., *Professor of Public Speaking*
CHARLES ALEXIUS DICKINSON, Ph.D., *Professor of Psychology*
†OLIN SILAS LUTES, Ph.D., *Professor of Education*
RONALD BARTLETT LEVINSON, Ph.D., *Professor of Philosophy*
ADELBERT WELLS SPRAGUE, A.M., *Professor of Music*
JOSEPH MAGEE MURRAY, Ph.D., *Professor of Zoology*
*BERTRAND FRENCH BRANN, S.M., *Associate Professor of Chemistry*
†AVA HARRIET CHADBOURNE, Ph.D., *Associate Professor of Education*
ALBERT AMES WHITMORE, M.A., *Associate Professor of History and Government*
NOAH ROSENBERGER BRYAN, Ph.D., *Associate Professor of Mathematics*
ALBERT MORTON TURNER, Ph.D., *Associate Professor of English and Comparative Literature*
MAYNARD FRED JORDAN, M.A., *Associate Professor of Mathematics and Astronomy*
CHARLES BURTON CROFUTT, Ph.D., *Associate Professor of Physics*

*Member of the faculty of the College of Technology.
†Member of the faculty of the School of Education.

George William Small, Ph.D., *Associate Professor of English*
Edward French Dow, Ph.D., *Associate Professor of History and Government*
Stanley Royal Ashby, Ph.D., *Associate Professor of English*
Walter Whitmore Chadbourne, M.B.A., *Associate Professor of Economics and Sociology*
Edward Newcomb Brush, Ph.D., *Associate Professor of Psychology*
George Baer Fundenburg, Ph.D., *Associate Professor of Romance Languages*
Warren Stanhope Lucas, M.A., *Assistant Professor of Mathematics*
Frances Elizabeth Arnold, M.A., *Assistant Professor of Romance Languages*
Marion Stephanie Buzzell, M.A., *Assistant Professor of Romance Languages*
Richard George Wood, Ph.D., *Assistant Professor of History and Government*
William Francis Scamman, M.A., *Assistant Professor of English*
Himy Benjamin Kirshen, A.M., *Assistant Professor of Economics and Sociology*
Ruth Crosby, Ph.D., *Assistant Professor of English*
Alfred Carleton Andrews, Ph.D., *Assistant Professor of Classics*
John Henry Magee, M.A., M.S., *Assistant Professor of Economics and Sociology*
Howard Lloyd Flewelling, Ph.D., *Assistant Professor of English*
Evelyn Faye Wilson, Ph.D., *Assistant Professor of History and Government*
Edith Elizabeth Mortensen, M.A., *Assistant Professor of Zoology*
John Frederick Klein, Ph.D., *Assistant Professor of German*
Charles Earl Packard, S.M., *Assistant Professor of Zoology*
Clarence Edwin Bennett, Ph.D., *Assistant Professor of Physics*
Donald MacLean Purdy, Ph.D., *Assistant Professor of Psychology*
Frederick Eugene Melder, M.A., *Assistant Professor of Economics and Sociology*
Percie Hopkins Turner, Ph.D., *Lecturer in English*
Herman Samuel Silverman, M.A., *Instructor in Mathematics*
Herschel Leonard Bricker, A.B., *Instructor in Public Speaking*
John Emmons Stewart, M.A., *Instructor in Mathematics*
Fred Lincoln Lamoreau, B.A., *Instructor in Mathematics and Astronomy*
James Moreland, M.A., *Instructor in English*
Delyte Wesley Morris, M.A., *Instructor in Public Speaking*
Henry Gruber Stetler, A.M., *Instructor in Economics and Sociology*
Carl Munro Flynn, M.A., *Instructor in Zoology*

Arthur Eugene Jensen, Ph.D., *Instructor in English*
Richard Wilder Merrill, M.A., *Instructor in German*
Edwin Kenneth Miles, Ph.D., *Instructor in German*
Clifford Nelson, Sc.D., *Instructor in Zoology*
Martha Jane Gibson, Ph.D., *Instructor in English*
Karl Davis Larson, Ph.D., *Instructor in Physics*
Gaylord Clark Leroy, M.A., *Instructor in English*
Harold Wave Whicker, B.A., *Instructor in English*
Rising Lake Morrow, Ph.D., *Part-Time Instructor in History and Government*
Howard Lewis Mendall, B.A., *Graduate Fellow in Zoology*
Roger Aylmer Allen, B.A., *Graduate Fellow in Physics*

PURPOSE

The situation in which our contemporary society finds itself defines in great measure the character and purpose of the College of Arts and Sciences. Our time, with its overwhelming social, economic, and intellectual stress, calls preëminently for men and women of critical intelligence, broad and sympathetic understanding of human needs, and determination of purpose. The College of Arts and Sciences seeks, therefore, to train and inspire loyal and competent citizens to meet the demands of the present crisis in history, and to enrich, within the limits of their ability and opportunity, the life of their respective communities.

In addition to the obvious value of the social sciences in meeting contemporary needs the college recognizes as indispensable the disinterested pursuit of knowledge and the free play of the mind in the region of literature and the other arts. It believes that no adequate and enduring human progress can be achieved if any essential part of human nature remains undeveloped.

Specifically, the College of Arts and Sciences conceives its task in terms of the particular needs of the various classes of students whose interest it seeks to serve. It offers, for example, a specific curriculum to those who contemplate entering the professional schools of medicine, dentistry, law, government, business, social work, and the arts. In collaboration with the School of Education, it offers specific training to prospective teachers.

In all cases, however, the College is aiming not merely at the production of useful skills and techniques but at the training of men and women who may be able and willing to turn their training toward socially desirable ends.

ADMISSION

The requirements for admission are given in full elsewhere in the catalog. They are practically the same as for other New England colleges and may

be met by a four-year preparatory course in a good high school or academy. Graduates of Maine normal schools who are also graduates of an approved high school will receive sophomore standing.

The regular admission requirements will be applied to all students who enter with advanced standing. Students must make up all entrance requirements before registering as juniors. Those who transfer from other colleges must make them up within a year.

GRADUATION REQUIREMENTS

Every candidate for the Bachelor of Arts degree is required to complete the following work: (a) Freshman English; (b) a basic course in Group II (see below); (c) a basic course in Group III; (d) a basic course in Group IV; (e) seven hours in Group V (for men students); (f) two years' work without credit in Group VI.

Eighteen to twenty-four hours must be completed in the major subject during the last two years, and 125 hours for graduation. Ninety-five of the hours required and three-fourths of the work in the major subject must be completed with a grade of C or above. If a student transfers from another institution three-fourths of all work done after transferring must be passed with a grade of C or better. Grades below C are not accepted from other institutions. Students who transfer to this college from other colleges of the University are required to complete 95 hours of C grade or better for graduation.

I. English Group.—This comprises the courses offered in the Departments of English and Public Speaking.

II. Foreign Language Group.—This comprises the courses in language and literature offered in the Departments of Classics, German, and Romance Languages.

III. Science and Mathematics Group.—This comprises the courses offered in mathematics and the biological and physical sciences, and includes those given by the Departments of Botany, Chemistry, Mathematics, Physics, and Zoology. These requirements may be satisfied by electing Zoology 1 and Botany 2, or Zoology 3, 4; Chemistry 1, 2; Mathematics 1, 3, 6, or 1, 2, 3, or 17, 18, 19, 20, or Course 1 in Mathematics, and Courses 15, 16 in Astronomy; Physics 1, 2.

IV. Social Science Group.—This comprises the courses offered in the Departments of Economics and Sociology, History and Government, Philosophy, and Psychology, and the courses in history, archeology, fine arts, Biblical literature, and music offered in other departments and not included in Group I.

V. Military Science and Tactics (for men), two years' work giving seven semester hours' credit.

VI. Physical Training, two years' work without credit. Women students also take Zoology 5 in the freshman year, for which two credits are given. These courses may not be counted toward the science requirements.

Students are expected to complete all the required work listed above by the end of their sophomore year.

No credit is given for less than one year's work in a beginning language. This rule applies to German 1, 2; Greek 5, 6; Italian 1, 2; Latin 1, 2; Spanish 1, 2; 1a, 2a.

FOREIGN LANGUAGE

If education is to be in any true sense liberal, it is necessary that a student should have living contact with some culture other than his own. He can in no better way gain a sympathetic understanding of another culture than through the medium of the language used by its best writers. For this reason every student in the College of Arts and Sciences is required before graduating to demonstrate that he has mastered one foreign language well enough to be able to read and understand it with some ease. It is recommended that the student, unless he has special reasons, continue with a language which he has already studied in high school. If he has settled upon his major subject when he enters the university, he should ascertain the specific language preference in that field. Students entering with three years of French or four years of Latin normally meet the requirement by completing an additional year in either of these languages. In general, whatever the choice, it is expected that the requirement will be met before the beginning of the third year. Courses in language should be taken continuously until the examination has been passed.

THE FIRST TWO YEARS

The first two years of the student's college course constitute a definite unity. On the one hand, they are in a very real sense a continuation of his preparatory school training and have the same general purpose of providing him some familiarity with the general streams of human knowledge, a broad and firm foundation of culture, and an adequate background for an understanding and appreciation of the needs of his community as well as competence to participate intelligently in its varied life. On the other hand, the first two years reach out toward the period of concentration with which the last two years are primarily occupied. They are designed to help the student to see

his chosen field in perspective, but they also seek to give him the necessary preparation for undertaking the studies of a distinctly advanced nature. In brief the first two years are definitely exploratory. Their objective is dispersion rather than concentration, intelligence over an extended area of knowledge rather than proficiency in one particular region.

With these general principles in mind, freshmen are expected to elect courses from each of the following groups:

I. English. English 1 and English 2 or 18 are definitely required unless the student is admitted by the department to a more advanced course.

II. Foreign Language: Greek, Latin, French, Spanish, Italian, German. Students who pass a reading test in a modern foreign language may be excused from this requirement.

III. Social Studies: American History, Orientation, Ancient Civilization, Masterpieces of Art, and Introduction to the Social Sciences.

IV. Natural Science and Mathematics: Chemistry, Physics, Zoology, Mathematics.

Military Science and Physical Training are required of all men unless they are physically disqualified. Physical Education and Hygiene must be taken by all women. For those students taking Military Science or Hygiene the maximum registration is fifteen hours *exclusive* of these two subjects; for others the maximum registration is sixteen hours. Individual guidance is given to all freshmen in the selection of their courses.

During the sophomore year the student continues his general interest in exploration, but he naturally becomes more definitely concerned over the selection of his major subject. He should, therefore, add at least two new major fields of learning to those taken during the freshman year. This should insure for him some likelihood of a wise decision regarding the area of his concentration because he will have had some experience in at least four different fields. Not more than six hours may normally be taken in one subject in either semester of the sophomore year. At the same time it is frequently wise to take more than one course in a prospective major subject, in order both to test one's actual interest and to satisfy preliminary requirements for advanced work.

Throughout the freshman and sophomore years the student is under the general supervision of the Dean of the College.

MAJOR SUBJECT

At some time in the second semester of the sophomore year, the student, in conference with the Dean, selects his major subject or field of chief academic interest, and outlines with his major adviser a tentative curriculum for his

two remaining years. This special field is chosen without reference to departmental boundaries, though it may coincide with some department or special curriculum in the College. The department in which the major subject chiefly falls becomes for administrative purposes the student's major department, and the head of that department is his major instructor. The latter is responsible for the student before the faculty and must approve the student's registration.

At the same time the student selects his major adviser. This is regularly either the major instructor or another member of the department whom he and the student agree upon, subject to the approval of the Dean. Besides assisting the student in outlining his curriculum, the major adviser also directs his pursuit of it, recommends or approves all changes made in it, and acts as the student's registering officer.

The major curriculum is the nucleus of related courses selected by the student as representing his chief field of interest or major subject. It is restricted to a maximum of twenty-four and a minimum of eighteen hours in the junior and senior years, but it is expected that the remaining courses will be chosen with reference to their affinity with it, except as certain otherwise unrelated courses are recognized as desirable for all students on account of their cultural or practical value. No elementary or introductory courses may be included in the major curriculum, though such exploratory courses may be taken, with the major adviser's approval. In general it is assumed that upperclass students will be engaging themselves with courses of an advanced nature which will toughen their intellectual fibre and furnish a real test of their abilities.

Students transferring from the Colleges of Technology and Agriculture to the College of Arts and Sciences will be required to do two full years' work in the College of Arts and Sciences before receiving the bachelor's degree, with the exception that students from the College of Technology may transfer after the junior year and be graduated in Arts after one year's work as major students in the Departments of Physics, Chemistry, or Mathematics; and students from the College of Agriculture may similarly transfer and be graduated as majors in the Department of Zoology.

Seniors shall be required to continue work in their major subject through their senior year.

COMPREHENSIVE EXAMINATIONS

In the spring semester of the senior year major students in many of the departments take a comprehensive examination in their major subject. The purpose of this examination is to provide the student with an opportunity to

demonstrate his knowledge of the salient features of his general field of study. It aims to make clear the unity of the field as a whole. It seeks definitely to counteract the easy tendency to separate courses from one another. It is, therefore, designed in such a way as to develop perspective and to encourage organization of materials as well as accuracy and range of knowledge. The student is thus able to evaluate his ability in the field of his major interest and to make a smooth transition to his professional and graduate work.

PROGRAM FOR SECONDARY SCHOOL TEACHERS LEADING TO A STATE CERTIFICATE

The College of Arts and Sciences has arranged a program for the professional training of secondary school teachers, which will entitle those who complete it to a Professional State Certificate for Secondary School Teachers. The program has been arranged in conference with the State Commissioner of Education and has his endorsement.

In addition to fulfilling the general requirements leading to the degree of Bachelor of Arts, the student is expected to complete six hours in Psychology 1, 2, twelve hours in Education in the junior and senior years, thirty approved hours in a major subject, and from fifteen to twenty approved hours in a minor field. The work in the minor field must have the approval of the heads of the departments in which this work falls as well as the head of the School of Education before the student will be recommended for certification in this field.

The prescribed work in Education includes three hours in the History of Education, three hours in Methods of Teaching, two hours in Educational Measurements, and four hours to be elected. As much as three hours in special methods courses given by other departments may be counted as part of the twelve hours required in Education.

The selection of major and minor subjects is designed to equip the student for teaching two or more subjects which are commonly taught together in the high school. Usual combinations are mathematics and science, French and Latin, English and history, English and French, history and Latin, English and Latin, and French and history. For the completion of this program a high standard of scholarship is required. All the prescribed work including major and minor subjects, must be of C grade or above. Upon completing this work the student will be recommended to the State Department of Education for a Professional Secondary Certificate, which will designate the major and minor subjects which he has pursued.

BACHELOR OF ARTS CURRICULA

The work in the College of Arts and Sciences leads to the degree of Bachelor of Arts (B.A.) The curricula demand 125 hours and are regularly completed in four years.

No outlines of the curricula in the College of Arts and Sciences are given in the catalog, but students may secure suggestive pre-professional and other curricula (e.g., law, medicine, dentistry, nursing, business, social work, government, teaching, theology) by applying to the Dean of the College or to the professor in charge of the department in which they are interested.

BANGOR THEOLOGICAL SEMINARY

Students in the College of Arts and Sciences have the privilege of registering for courses in Bangor Theological Seminary not to exceed five credit hours per semester, without payment of tuition charges, and a like privilege is extended by the College to students in the Seminary. The courses for which students may register must be approved by the Dean of the College, the President of the Seminary, and the instructors in the subjects concerned in both institutions. Such work may be counted toward graduation; but in order to avoid duplication of credits it is understood that all courses at the University of Maine which have been used by Seminary students for graduation credit at the Seminary, shall be cancelled at the University in case the student is admitted to junior standing as a candidate for the Bachelor of Arts degree.

TUTORIAL HONORS

A course in Tutorial Honors is open to superior students who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section General Courses.

Courses of Instruction

Courses designated by an odd number are given in the fall semester; those designated by an even number, in the spring semester.

Courses numbered 1-50 are for undergraduates only; courses numbered 51-100 are primarily for upperclassmen and graduates; courses numbered above 100 are primarily for graduates.

When a course is offered in the first semester and also repeated in the second, it is designated by two numbers, the second of which is in parenthesis.

INTRODUCTION TO THE CURRICULUM

The tabular arrangement of courses given on the following page serves to give the student a general view of the academic organization of the College of Arts and Sciences. At a glance the reader may observe the general outline of academic interests in the College as well as the affinity which the various subjects bear to one another. It is obvious at once, for example, that languages and literature belong in one group, but one gains something of the scope and meaning and use of language by noting how the ancient languages are followed by the modern foreign languages, these by Comparative Literature, and these in turn by English Literature, Dramatics, Speech, Composition, and Journalism. The importance of arrangement is equally great, if not so readily apparent, as one proceeds to examine the other divisions. Growing familiarity with these fields will make it increasingly clear that one subject by its very nature passes irresistibly and inevitably into another. The entering student will do well to study this table for its own sake as well as for purposes of convenience. The upperclassman will occasionally wish to view his education in a perspective beyond that of his own previous academic experience. It is hoped that this table will sometimes act as a corrective for too specialized training, sometimes as a visual demonstration of the essential unity of all knowledge, sometimes as a device for calling attention to intimate cultural and intellectual relationships. Of course, its most obvious use is to direct the student to where courses and subjects may be found.

ARRANGEMENT OF SUBJECTS ACCORDING TO DIVISION

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II. Social Sciences

1. Philosophy 172
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DIVISION I. LANGUAGES AND LITERATURE

BIBLICAL LITERATURE

DEAN MUILENBURG

51, 52. THE LITERATURE AND RELIGION OF THE ANCIENT HEBREWS.—A study of the development of Hebrew literature and religion in the light of its historical background, social environment, and literary form. The work is based upon a direct examination of the Bible itself. *Three hours a week.*

CLASSICS

PROFESSOR CHASE; PROFESSOR HUDDILSTON; ASSISTANT PROFESSOR ANDREWS

Greek

The work in Greek is arranged with the idea of presenting several phases of ancient culture. Such courses are offered as will prove serviceable to the student of average interests, who, not having studied the ancient languages in the fitting school, may desire to include in his college course some work bearing on the permanent contributions of early peoples to the civilization of ancient and modern times.

At present only one year of Greek language is offered, but more will be given if there is sufficient demand. Content and instruction aim at close correlation with the major fields of interest of individual students.

1, 2. BEGINNING GREEK.—Progressive development of the ability to read and understand classical Greek. Comprehension of selected and graded passages of Greek is emphasized from the start. The reading of the second semester is determined by the needs and desires of the students. Both semesters must be taken for credit. *Four hours a week.* MR. ANDREWS

3. GREEK LIFE AND CULTURE.—A brief study of important features of the Greek legacy in art, literature, religion, and philosophy. Textbook and lectures. *Two hours a week.* MR. HUDDILSTON

3a. GREEK LIFE AND CULTURE.—The same material is covered as in the preceding course but more stress is laid on the art and literature. Not open to those who have had Course 3. *Three hours a week.*

MR. HUDDILSTON

4. Greek Religion.—The development of religious thought among the Greeks from Homer down to the period of the Hellenistic philosophies. Lectures and assigned topics and discussions intended to provide an introduction to comparative religions. *Two hours a week.* Mr. Huddilston

51. Greek Literature.—A general survey which does not presuppose any knowledge of the Greek Language. While the course includes prose literature as well as poetry, the main attention is given to Homer and writers of the drama; considerable reading is done in English translation. Given in 1934-35. *Three hours a week.* Mr. Huddilston

Latin

The courses in Latin are planned with a double purpose—to give some understanding of the best that Rome achieved and to train students for high-school positions as teachers of Latin.

The first purpose is cultural. It introduces students to the forms of classic literature as exemplified by Cicero, Livy, Tacitus, and Pliny in prose, by Terence and Plautus in dramatic art, and by a selection from the masters of lyric poetry. In addition, the courses are planned to give an introduction to the thought of the leading minds at Rome with some appreciation of its permanent value, and a comprehension of the Roman Empire as a milestone in the advance of European civilization.

The courses also are designed to give such knowledge of the Latin language and methods of teaching as would be required of a well-trained secondary teacher.

Courses 1, 2, 3, 4 cover the regular high-school curriculum and are given only in case of sufficient demand.

1, 2. Beginning Latin.—Students in Arts and Sciences must take both semesters for credit. *Four hours a week.* Mr. Andrews

3. Cicero.—Selected orations from the greatest of the Roman orators. *Four hours a week.* Mr. Andrews

4. Vergil.—Selections from the *Aeneid,* the supreme poetic achievement of the Romans. *Four hours a week.* Mr. Andrews

5. Livy.—Selections from the *History of Rome.* Reading, with discussion of language and Roman history. *Three hours a week.* Mr. Chase

6. Cicero and Horace.—Reading of *De Senectute* of Cicero with some attention to his religious thought; study of the lyric poetry of Horace. *Three hours a week.* Mr. Chase

7, 8. Latin Composition.—Development of more accurate understanding of Latin through practice in writing. Functional grasp of forms and constructions is stressed. *One hour a week.* Mr. Andrews

9. Tacitus.—Reading and discussion of the *Agricola* and *Germania.* This course involves an introduction to the history of the Roman Empire. *Three hours a week.* Mr. Chase

10. Terence and Plautus.—A study of the development and characteristics of Roman comedy as seen in the *Phormio* of Terence and the *Captivi* and *Trinummus* of Plautus. *Three hours a week.* Mr. Chase

21, 22. Latin Composition.—Accurate knowledge of syntax is stressed in the first semester and Latin rhetoric in the second. Either semester is open to students who have completed Latin 7, 8. Essential for prospective teachers. *One hour a week.* Mr. Chase

23. The Younger Pliny.—Life and conditions in the Roman Empire as revealed by the letters of a Roman of the first century. *Three hours a week.* Mr. Andrews

24. Horace and Juvenal.—Roman satire and social life as disclosed by the writings of the great satirists. *Three hours a week.* Mr. Andrews

41, 42. Roman Private Life.—The manners, customs, social usages, and everyday life of the Romans. This course deals with their essentially human qualities. Discussion, reading, and reports. No knowledge of Latin is required, and either semester may be taken for credit. Open to members of the three upper classes. *Three hours a week.* Mr. Andrews

51, 52. Teachers' Course.—The objectives, content, and methods of the secondary school Latin curriculum. Discussion of principles, solution of problems, outside reading, and investigation of special topics. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Andrews

53, 54. Latin Literature.—A study of the development of the literature of the Romans through selected readings in prose and poetry with discussion of the style, technique, and characteristics of various writers and periods. Given in 1935-36 and alternate years.

57, 58. Roman Philosophy.—Readings from the *De Rerum Natura* of Lucretius and the philosophical writings of Cicero and Seneca. Discussion of the leading schools of ancient philosophy. *Three hours a week.* Mr. Chase

59, 60. Roman Rhetoric and Oratory.—Tacitus, *Dialogus de Oratoribus;* Cicero, selections from the *Brutus* and *De Oratore.* Given occasionally. *Three hours a week.* Mr. Chase

62. The Latin Language.—A historical study of Latin forms and inflections with a study of early inscriptions. Given in case of adequate demand. *Three hours a week.* Mr. Chase

107. Sanskrit.—Given in case of adequate demand. Mr. Chase

ROMANCE LANGUAGES

Professor Kueny, Chairman (1935-36); Professor Peterson; Associate Professor Fundenburg; Assistant Professor Arnold; Assistant Professor Buzzell

The Department of Romance Languages offers in its language courses the opportunity to perfect one's self in writing and speaking French, Italian, and Spanish. The structure and development of each language is set forth in the linguistic courses, while the customs and manners of the people are discussed in the classes in conversation. The chief literary works of each language are carefully read and interpreted and the student is encouraged to develop independence of critical judgment. The student is thus given an opportunity through first-hand acquaintance with the language and literature of a people to establish direct relationship with its culture.

Students concentrating in a single language are required to elect 22 hours in the junior and senior years. Students concentrating in the general field of Romance Languages may combine two or more of these languages, electing in the junior and senior years a total of 22 hours. In all cases 12 of these 22 hours must be in literature. French courses 21, 22, 25, 26 may not be included in the concentration work of the last two years, being primarily intended for sophomores.

Students not concentrating in Romance Languages, but expecting to teach them, will be recommended for the teacher's certificate if they elect 17 hours in this field, 8 in language and 9 in literature.

French

BASIC COURSES

These courses, intended for freshmen, are designed to teach the student to read at sight the French of representative authors. The material is chosen from outstanding French writers of the nineteenth century. Complete novels and stories of the romantic and realistic schools, including Hugo, Balzac, and Maupassant are read and discussed.

3, 4. Intermediate French.—Open to students who have offered two units of French as entrance requirements, and to those who have offered three units whose preparation proves inadequate for successful work in French 5, 6. In the latter case only two hours of credit are allowed. Regularly five hours credit. *Five hours a week* Mr. Kueny, Mr. Fundenburg, Miss Buzzell

5, 6. Advanced French.—Open to students offering three units of French as entrance requirements, and to exceptional students offering two units only. With less emphasis upon formal grammar, this course is meant to develop a habit of discriminating translation. *Three hours a week.*
Mr. Kueny, Mr. Fundenberg, Miss Buzzell

GENERAL LANGUAGE AND LITERATURE COURSES

7, 8. Elementary Conversation and Composition.—Open to students who have offered two units of French as entrance requirements. Grammar review, together with constant drill in spoken French in order to achieve correct and fluent speech. *Two hours a week.* Mr. Kueny, Miss Buzzell

8a. Elementary Conversation and Composition.—A second-semester course for exceptional students, covering by intensive study the same ground as French 7, 8. Admission by arrangement only. *Two hours a week.*
Mr. Kueny

9, 10. Advanced Conversation and Composition.—Through discussion of the customs and interests of every-day French life, the student is taught to speak fluently in colloquial French. *Two hours a week.* Mr. Kueny

17, 18. Readings in Contemporary French.—Open only to students who after completing Course 3, 4 or 5, 6 need additional preparation in order to pass the reading test. *Three hours a week.* Miss Buzzell

21. The Romantic Novel.—In this course is studied the renewal of French literary inspiration by Chateaubriand and Victor Hugo in the nineteenth century. *Three hours a week.* Miss Buzzell

22. The Realistic Novel.—Continuing French 53, this course traces the successive forms of art illustrated by Balzac, Flaubert, Maupassant, and more recent writers. *Three hours a week.* Miss Buzzell

25, 26. The French Theater of the Nineteenth Century.—This course seeks to enable the student to understand the works of the great dramatic artists of modern France from the point of view of the French public. An effort is made to develop independent criticism of both style and technique. *Three hours a week.* Mr. Fundenburg

57, 58. Advanced French Grammar.—A review of the fundamentals of grammar especially important in secondary-school instruction. Through practical exercises the student is taught to recognize and explain common difficulties confronting the teacher of elementary French. *Three hours a week.* Mr. Kueny

59, 60. French Essay Writing.—The student is taught to organize original material and to express himself clearly and logically in living French. *Three hours a week.* Mr. Kueny

Prerequisite for French 61, 63, 64 is one of the literary courses listed above, namely, 21, 22; or 25, 26. French 63, 64 is a prerequisite for Courses 73, 74 and 101, 102.

61. Modern French Poetry.—The poems of Victor Hugo and his contemporaries are studied in relation to the general Romantic Movement and the particular background of the times. The student is led to appreciate the beauty of poetic language and to read aloud with an adequate sense of the special character of French poetic rhythm. *Three hours a week.* Mr. Kueny

63, 64. French Classicism.—A study of the seventeenth century, the age which established the standards of perfection in form and in language ever since the characteristic of French literary production. *Three hours a week.* Mr. Fundenburg

73, 74. The Age of Voltaire.—A study of the appearance of modern critical thought and attitude in the literature of the eighteenth century. *Two hours a week.* Mr. Kueny

101. The Middle Ages.—The historical development of the French language and literature from the origins to the Renaissance. The text of the *Chanson de Roland* and extracts from the chroniclers are studied in detail, and a survey is made of the other medieval types. *Three hours a week.* Mr. Kueny

102. The Sixteenth Century.—A survey of the French Renaissance, emphasizing selections from Marot, Rabelais, Ronsard, and Montaigne. The introduction of ancient ideas into the French mind shown as a starting point for modern thought. *Three hours a week.* Mr. Kueny

Italian

1, 2. Elementary Italian.—A course for beginners, which includes a study of the basic principles of Italian grammar, pronunciation exercises, dictation, oral practice, and composition, with especial attention to the mastery of verb forms and pronouns. Reading is begun at an early date, and emphasis is laid upon the acquirement of an adequate vocabulary and facility in reading. *Three hours a week.* Mr. Peterson

3, 4. Modern Italian Prose.—Selections from representative authors of the nineteenth and twentieth centuries are studied in an endeavor to acquire a larger vocabulary and increased facility in reading. Review of the grammar, composition, and oral practice. Designed for second-year students. *Two hours a week.* Mr. Peterson

Course 52, Dante, may also be given when there is a sufficient demand for it.

Spanish

BASIC COURSES

1, 2. Elementary Spanish.—A course for beginners, which includes a study of the basic principles of Spanish grammar, pronunciation exercises, dictation, oral practice, and composition, with especial attention to the mastery of verb forms and pronouns. Reading is begun at an early date, and emphasis is laid upon the acquirement of an adequate vocabulary and facility in reading. *Four hours a week.* Miss Arnold

1a, 2a, 2b. Elementary Spanish.—This is similar in content to Course 1, 2 but extends through three semesters and includes a larger amount of reading. The class begins in the second semester and is continued through the following year. *Three hours a week.* Mr. Peterson

3, 4. Modern Spanish Prose.—The principal aim of this course is to secure facility in the reading and comprehension of ordinary Spanish prose of the modern period. Certain books—novels, short stories, and plays—are studied intensively while others are read more rapidly. Review of grammar, study of idioms, and oral practice. Designed for second-year students. *Three hours a week.* Mr. Peterson

5, 6. Elementary Conversation and Composition.—Stress is laid upon the acquisition of a practical vocabulary by means of exercises based upon Spanish newspapers. Study of the grammar and translation into Spanish. Designed for third-year students or for second-year students who are pursuing at the same time Course 3, 4. *Two hours a week.*

Miss Arnold, Mr. Peterson

9, 10. Rapid Reading Course.—A continuation of Course 3, 4 designed especially to promote facility in reading. The material read, consisting largely of narratives, will be limited to the modern period. *Two hours a week.*

Miss Arnold

23, 24. Advanced Conversation and Composition.—A continuation of Course 5, 6. Translation from English to Spanish, original compositions,

and oral work of different kinds to secure facility in expression, form the basis of this course. *Two hours a week.* Mr. Peterson

MORE ADVANCED COURSES

For courses numbered above 50, Courses 1, 2, 3, 4, and 9, 10 or the equivalent are prerequisite.

51, 52. The Novel and Drama.—Examples of the work of representative novelists and dramatists from the "Golden Age" of Spanish letters to the nineteenth century are read and discussed in class while others are assigned for outside reading. Lectures and reports on the development of the literary types studied. Given in 1934-35 and alternate years. *Three hours a week.* Miss Arnold

57, 58. History of Spanish Literature.—A study of the development of literature in Spain and Spanish America, and the reading of brief selections from the most important authors especially of the earlier periods. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Peterson

61, 62. Modern Literature.—Examples of the work of the most important writers of the nineteenth and twentieth centuries in Spain and Spanish America are studied in this course. Given in 1935-36 and alternate years. *Three hours a week.* Miss Arnold

The following courses for special reasons are occasionally substituted for some of those listed above: 7, Commercial Spanish; 67, Spanish-American Literature; 71, Old Spanish.

Attention is called to Course 65, 66, Latin-American History, listed under the Department of History and Government.

GERMAN

Professor Drummond; Assistant Professor Klein; Mr. Merrill; Dr. Miles

1, 2. First-Year German.—A course for beginners. Grammar, composition, translation, conversation. Credit is not given for less than a year's work to students registered in the College of Arts and Sciences. *Five hours a week.* Mr. Drummond, Mr. Klein, Mr. Merrill, Mr. Miles

3, 4. Short Story.—For students who have had Course 1, 2 or the equivalent. Translation, composition, grammar review. *Three hours a week.* Mr. Drummond, Mr. Merrill, Mr. Miles

5, 6. The Drama.—For students who have had Course 3, 4 or the equivalent. A study of the German drama including selections from such eighteenth and nineteenth century writers as Lessing, Schiller, Hebbel, Kleist, Hauptmann. Lectures and discussion. *Three hours a week.* Mr. Drummond

7, 8. The Novel.—For students who have had Course 5, 6 or the equivalent. Critical reading of novels by such authors as Goethe, Meyer, Ludwig, and Sudermann. Lectures and essays. *Three hours a week.* Mr. Klein

9. Teachers' Course.—For those who intend to teach German. Discussion of methods of teaching, the value of different texts, preparation of the lesson, classroom work, pronunciation, word-derivation, historical grammar. *Two hours a week.* Mr. Klein

11, 12. Rapid Reading Course.—For students who have had Course 3, 4, and have not passed the reading test. *Two hours a week.* Mr. Miles

13, 14. Elementary German Composition and Conversation.—For students who have had Course 1, 2 or the equivalent. *Two hours a week.* Mr. Merrill

15, 16. Scientific German.—Open only to students whose previous study of German will enable them to read scientific German with profit. *Two hours a week.* Mr. Klein

17, 18. Advanced German Conversation and Composition.—For students who have had Course 13, 14. *Two hours a week.* Mr. Klein

The following courses are given when there is sufficient demand.

51, 52. Studies in Eighteenth Century Literature.—Special attention is given to the life and works of Klopstock, Lessing, Wieland, Goethe, and Schiller. Critical study of assigned works, lectures, and discussions. *Two hours a week.* Mr. Drummond

53, 54. Goethe.—Lectures on the life and work of Goethe, with a critical study of Faust. *Two hours a week.* Mr. Drummond

55, 56. Studies in Nineteenth Century Literature.—The various literary movements of the nineteenth century; lectures, discussions, outside reading. *Two hours a week.* Mr. Klein

57, 58. Seminar.—A study of some special topic in German literature. *Two hours a week.* Mr. Drummond, Mr. Klein

59 (60). History of German Literature.—Lectures in German outlining the history of German literature. Recitations, outside reading. *Two hours a week,* fall or spring semester. Mr. Klein

The department is also prepared to give, when there is a demand, the following courses: 61, 62. Early New High German; 101, 102. Gothic: Introduction to the Study of Germanic Philology; 103, 104. Old High German; 105, 106. Middle High German.

ENGLISH LITERATURE AND COMPOSITION

Professor Ellis; Associate Professors Turner, Small, and Ashby; Assistant Professors Scamman, Crosby, and Flewelling; Mr. Moreland; Mr. Heilman; Dr. Jensen; Mr. Whicker; Miss Gibson; Mr. Leroy

The Department of English, through its courses in composition and rhetoric, assists the student in acquiring such mastery of written English as will enable him to communicate his ideas adequately for the needs of his curriculum and profession and of his various social relationships throughout life. The courses in literature offer him an opportunity of enlarging his intellectual horizon through an acquaintance with the best thought and expression of representative writers of the English-speaking people. For particular groups or individual students in the College of Arts and Sciences, the Department further provides teacher-training in secondary school English, an introduction to journalism or to creative writing, a general cultural background for the professions and business life, and a foundation for graduate study in English language and literature. For graduate students it furnishes curricula leading to the degree of Master of Arts in English.

Major Students

English major students may elect as their major subject any one of the following fields:

English Literature (including English History)
American Literature and History
Journalism
Composition and Rhetoric
The English Language
Comparative Literature

Dramatic Literature may be pursued as a major subject in English, in conjunction with the Department of Public Speaking. Other combinations may be selected with the approval of the head of the Department and the Dean.

All students planning to pursue major programs in English should have completed the prerequisite courses Eh 3, 4 and Eh 7, 8 or their equivalent, before the close of their sophomore year. The history of England, Public

Speaking, History of Philosophy, and an elementary knowledge of German are strongly recommended for all students planning to major in any subject in the general field of English. A grade of C or better is expected in Eh 3, 4, and in eighteen hours of the major curriculum.

The curriculum most commonly recommended for the student majoring in English Literature includes Eh 57, 58; Eh 43 or 44; Eh 53; Eh 67; a semester's advanced work in nineteenth century English literature; and a year's work in one of the advanced period or type courses in English or in Comparative Literature. Other courses in English or in other departments may be substituted on the recommendation of the major adviser.

The Department conducts a comprehensive major examination, oral and written, early in the final semester of the senior year, covering the student's courses in his major subject. An earlier written examination held near the end of the junior year tests the student's knowledge of rhetoric and the mechanics of writing and serves as a basis for the selection of approved senior tutors in connection with the Freshman Composition course.

Service Courses

Service courses offered by the Department for the Colleges of Agriculture and Technology include Eh 5 (6), Technical Composition, required of all students in Technology and in the Forestry and Agriculture curricula; and Eh 9 (10), Modern Literature, required of students in the Chemistry curricula, of Forestry sophomores, and Agricultural juniors in the Botany curriculum, and elective for all other Technology and Agriculture students.

Teacher Training

Students pursuing major curricula in other departments who intend to offer English as a second teaching subject in secondary schools should prepare themselves by taking courses Eh 3, 4; 7, 8; 57 or 58; 43 or 44; and 21 (22) when offered.

Freshman Year

All freshman students in the University, unless excused by the Department, are required to take Eh 1, Freshman Composition, in the fall semester, and Eh 22a or Eh 18 in the spring semester. Students who show special proficiency in the Freshman Week English tests are excused from taking the usual freshman courses and admitted to the honors course, Eh 11, 12.

Journalism Curriculum

A special program of courses for students interested in journalism or creative writing as a profession may be obtained on application to the Dean or the head of the Department.

1. Freshman Composition.—An intensive course in expository writing, for students in all colleges. Stress is placed upon correctness, clarity, and ease of expression and upon the organization of material. Frequent themes and conferences. Required of all freshmen not excused by the Department. *Three hours a week.*

Note: Freshmen who are particularly deficient in the fundamentals of grammar, sentence structure, and spelling are required to attend special tutoring groups in addition to the regular work of the course.

Mr. Turner (Chairman) and Members of the Department

2. Freshman Composition: Description and Narration.—Study and practice in writing chiefly of description and narrative, with some further study of exposition. Several works of literature are likewise read. *Three hours a week.*

Mr. Turner (Chairman) and Members of the Department

3, 4. History of English Literature.—A study of English literature from Chaucer's time to the present, tracing its historical development and acquainting the student with the chief writers and their work. Readings, recitations, and illustrated lectures. English 3, 4 or 11, 12 is prerequisite for all advanced courses in English literature. *Three hours a week.*

Mr. Jensen (Chairman), Mr. Flewelling, Mr. Heilman, Miss Gibson, Mr. Leroy

5 (6). Technical Composition.—A study of the forms of writing of greatest professional usefulness to engineers, agriculturists, and foresters. The forms of business correspondence, the construction of reports, and preparation of technical papers. *Not open to students in the College of Arts and Sciences. Two hours a week,* fall or spring semester. Mr. Scamman

7, 8. Second-Year Composition.—In the fall semester, weekly themes of the formal and informal essay types, with a study of the informal essay in English and American literature; in the spring, descriptive and narrative themes, with a study of the short story in America and England. Recommended for sophomores, especially for those who expect to select a major in the English field. *Three hours a week.*

Mr. Ellis (Chairman), Mr. Ashby, Mr. Flewelling, Mr. Whicker

9 (10). Modern Literature.—A study of specimens of literature of contemporary interest, with the design of cultivating the appreciation and enjoyment of good reading. *Not open to students in Arts and Sciences. Two hours a week,* fall or spring semester.

Mr. Scamman (Chairman), Mr. Moreland, Mr. Heilman

11, 12. Freshman Literature and Composition (Honors Course).—A survey of English literature to the end of the nineteenth century. Practice in theme writing of expository, descriptive, and narrative types. Open only to freshmen excused from English 1. *Three hours a week.*

Miss Crosby, Mr. Jensen

18. Literature for Freshmen.—The reading and study of works of literature representing the chief literary types: fiction, essays, poetry, and drama, with several exercises in composition. This course may be elected instead of or in addition to English 2 by freshmen who have completed English 1 with a grade better than C. *Three hours a week.*

Miss Crosby (Chairman), Mr. Whicker, Miss Gibson

21 (22). Teaching of English in the High School.—A consideration of the chief problems confronting the teacher of high-school English composition and literature. The presentation of the different literary types; essentials and methods in composition; choice of texts, sequence of literary readings, and other topics. Not given in 1934-35. *Two hours a week.*

23. News Writing and Reporting.—Training in the fundamentals of newspaper work through theory and practice. Open only to juniors and seniors who have completed with satisfactory grades freshman English and English 7. *Three hours a week.* Mr. Moreland

26. Newspapers in the Twentieth Century.—An intensive study of present-day American journalism, with emphasis on the forces which build newspapers and the power of such journals on the thinking of the nation. A brief study of the historical backgrounds of American journalism will be included in the course. Prerequisite, English 23 or consent of the instructor. *Three hours a week.* Mr. Moreland

28. Mechanics of Editing.—Copy reading, headline writing, and page make-up, with a study of news values. Textbook and lectures. Prerequisite, English 23. Given in 1934-35 and alternate years. *Three hours a week.*

Mr. Moreland

29. Journalistic Writing.—A practical writing course for students, which covers departmental writing in newspapers, editorial planning, critical writing, and specialty writing. Prerequisite, English 23. *Three hours a week.* Mr. Moreland

30. The Country Newspaper.—A study of country journalism with a view to its improvement. Actual writing for weekly and semi-weekly papers of the State is required in the course. Prerequisite, English 23. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Moreland

43, 44. American Literature.—A survey course, based upon the study of the chief works of American poets and prose writers. Lectures, recitations, and assigned readings. *Three hours a week,* fall or spring semester,

Mr. Ellis

45, 46. Contemporary Literature.—A study of present-day tendencies and production in the different fields of literature. The fall semester is devoted to contemporary American literature, the spring to British. *Three hours a week.* Mr. Flewelling

47, 48. Nineteenth Century British Prose.—A course dealing with the chief prose writers, mainly non-fiction, of the nineteenth century, with especial attention to the ideas conveyed. The authors chiefly emphasized are Lamb, Hazlitt, De Quincey, Carlyle, Macaulay, Arnold, Ruskin, Newman, Huxley, and Stevenson. *Three hours a week.* Given for the first time in 1935-36.

For courses numbered above fifty, Eh 3, 4 (or 11, 12) is prerequisite, except that Dean's List students whose grades in English have been satisfactory may, with the instructor's permission, enroll for any course which follows. These courses, excepting Eh 77, 78, may, with the approval of the Graduate Faculty, be accepted for graduate credit for any qualified student who has already completed satisfactorily a full advanced course with the Department.

52. Anglo-Saxon.—A study of Anglo-Saxon grammar and reading of easy prose and poetry. Lectures on the literature of the Anglo-Saxon period. Given in 1936. *Three hours a week.* Mr. Small

53. Chaucer.—A study of selections from the *Canterbury Tales* and the chief minor poems, stressing the reading of Chaucer as poetry, his literary range and qualities, and the picture of his time given in his works. *Three hours a week.* Miss Crosby

55, 56. Nineteenth Century Poetry.—In the first half the poets of the English Romantic Movement—Wordsworth, Coleridge, Byron, Shelley, and Keats—are considered; in the second, those of the Victorian Age, especially Tennyson, Browning, Arnold, and the Pre-Raphaelites. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Turner, Mr. Flewelling

57, 58. Shakespeare.—A brief consideration of the English drama prior to Shakespeare, followed by a careful study of several of his most important plays and the reading of others. Attention is given to Elizabethan stage conditions and the dramatic work of Shakespeare's contemporaries. *Three hours a week.* Mr. Ellis, Mr. Small

61, 62. History of the English Drama.—The development of the drama in England from the miracle and mystery plays through the Elizabethan period. Subsequent tendencies in the Restoration and the eighteenth century, the nineteenth century closet drama, and the revival of the acting play in England and Ireland. Given in 1934-35. *Three hours a week.*
Mr. Ashby

63. Elizabethan Literature.—Non-dramatic poetry and prose of the sixteenth century, with particular attention to the poetry of Spenser. Not given in 1934-35. *Three hours a week.* Mr. Ashby

64. Milton and His Time.—Chief emphasis is laid upon the life and work of John Milton, studied against the background of the literature of the seventeenth century to the Restoration of the Stuarts. Not given in 1934-35. *Three hours a week.* Mr. Ashby

65, 66. Restoration and Eighteenth Century Literature.—A study of the evolution of neo-classicism and its transition into the early Romantic Movement, as shown in the poetry, fiction, and drama of the period. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Ashby

67. History of the English Language.—The origins of the language; its relation to other languages; the sources and development of the English vocabulary. *Two hours a week.* Mr. Small

71 (72). Advanced American Literature.—A study of some special field or period of American literature, conducted as a pro-seminar course. English 43, 44 or its equivalent is prerequisite. For the spring semester, 1935, the topic is American Literature, 1790-1850. *Three hours a week.* Mr. Ellis

73, 74. Literary Criticism (Comparative Literature).—A study of literary practices and standards from Aristotle to the present, including American criticism. The reading not only of works of criticism, but also of some of the recognized masterpieces of Continental literature to which critical principles have been most frequently applied. *Three hours a week.* Given in 1934-35. Mr. Ashby

75, 76. European Literature (Comparative Literature).—A survey of Continental European literature from Homer to the present, showing the relationship among the literatures of different epochs and countries. The first semester treats ancient and medieval literature and the Renaissance in Italy and Spain; the second, the literature from the Renaissance in France to modern times. No knowledge of foreign languages is required. Except by permission, students may not take English 76 without English 75. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Turner

77, 78. Creative Writing.—An advanced course for students who have shown exceptional interest and ability in some field of writing. The

types selected will vary in different years. Not accepted for graduate credit, unless by special permission from the Graduate Faculty. Prerequisite, completion of English 7 or 8 with honor grade. *Three hours a week.*

77 (78)a. The Short Story—Fall semester, 1934-35. Mr. Whicker

77 (78)b. The Familiar Essay.—Spring semester, 1935. Mr. Whicker

77 (78)c. Verse Writing. Mr. Ellis

77 (78)d. The One-Act Play.

77 (78)e. Feature Writing.

81, 82. The English Novel.—This course traces in the first semester the history of the English novel from the medieval prose romances to the death of Scott. Beginning with Dickens and Thackeray, the second semester treats the Victorian novel in considerable detail and makes some study of recent British Novelists. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Turner, Mr. Jenness

The following courses are offered only when there is sufficient demand: 59. The Romantic Movement; 60. Victorian Literature; 83. Middle English; 101, 102. Graduate Seminar; 103. Beowulf.

PUBLIC SPEAKING

Professor Bailey; Mr. Bricker; Mr. Morris

The primary function of the Department of Public Speaking is to assist the student in the art of formal and informal speech-making and to develop voice, poise, and aesthetic appreciation through courses in expression and dramatic art. Courses in Public Speaking and Debating offer a student exercise in the practical use of logical and effective expression, while courses in Expression and Dramatic Art develop the artistic side of speech and acquaint the student with the fundamentals of acting and stagecraft. Students are encouraged to express orally the best of literature and drama.

Students interested in public speaking as a practical art may major in Speech; those interested in public speaking as a fine art may major in Drama.

The necessary hours for a major are made up in Speech by the coöperation of the Departments of English, Philosophy, and Psychology; and in Drama by the coöperation of the Department of English.

Students who major in Speech are expected to write and deliver a forty-minute address before some civic organization.

Students who major in Drama may either give a recital of approved standard, or direct a dramatic production.

Speech Correction

0. Speech Correction.—Open to students with speech defects. The method of instruction is largely individual. *No credit.* Mr. Morris

Courses in Speaking

1 (2). Public Speaking.—This is a basic course in public speaking. The student is taught to organize material and to deliver short extemporaneous speeches. Sections are organized chiefly according to the college in which the student is enrolled, and each section is conducted according to the needs of the group. *Two hours a week.* Mr. Bailey, Mr. Bricker, Mr. Morris

3. Extempore Speaking.—Differs from Course 1 (2) primarily in its emphasis upon extemporaneous speaking. Course 3 is recommended to all students who can devote three hours to a speech course. *Three hours a week.* Mr. Bailey, Mr. Bricker, Mr. Morris

4. Debating.—Questions of state, national, and international importance as well as technological problems are debated in class. This course is designed primarily for Technology students, but one section is reserved as a foundation course for students in any college who wish to take advanced debating later. Students expecting to continue debating are advised to take this course as early in their college course as possible. Prerequisite, Course 1 (2) or 3. *Two hours a week.* Mr. Bricker, Mr. Morris

5 (6), 5a (6a). Persuasive Speech.—Methods of influencing audiences, the problem of vividness, and the psychology of speech. The meetings are conducted according to the rules of parliamentary law. Several original speeches are prepared and delivered by the members of the class. Prerequisite, Course 1 (2), or 3. *Two or three hours a week.* Mr. Bailey, Mr. Bricker, Mr. Morris

12. Business and Professional Speaking.—A course designed to help the student who plans to enter business or professional life. Attention is given to the sales talk, the after-dinner speech, the speech of explanation and demonstration, the conference discussion, and radio and telephone speaking. Opportunity is provided for the exceptional student to appear before business groups in neighboring towns. Prerequisite, four hours of speech courses. *Three hours a week.* Mr. Morris

19 (20). Advanced Debating.—A course designed to meet the need of the student who desires advanced work in debate or who wishes to direct or teach debating or take part in intercollegiate debate. An individual program

is worked out for each student enrolled. Prerequisite, four hours in speech courses and permission of the instructor. *Three hours a week.*

Mr. Bricker, Mr. Morris

45 (46). Advanced Public Speaking.—A study of representative orators in both England and America, an analysis of the structures of the oration and the rhetoric of oratory, a review of several historic debates and lyceum lectures, and the preparation and delivery of an original address. Prerequisite, four hours in speech courses. *Three hours a week.* Mr. Bailey

Courses in Expression

7, 7a. Interpretative Reading.—The oral interpretation of many selections from the best in English prose, poetry, and drama is carefully studied, and several readings are rendered from memory. The principles of effective reading and the correct use of the voice are especially emphasized. *Two or three hours a week.* Mr. Bailey

14, 14a. Advanced Reading.—A continuation of the principles of reading taken up in Course 7. More difficult readings are undertaken, including several of the great scenes from Shakespeare. Prerequisite, Course 7. *Two or three hours a week* (two hours class, one hour conference). Mr. Bailey

43 (44). Platform Reading.—The interpretation of an entire play. Open only to advanced students who have shown marked ability in expression and desire to do serious platform work. The consent of the head of the department is necessary for enrollment. Prerequisite, Course 7. *Two hours a week.* Mr. Bailey

48. Vocal Development.—The aims of this course are to improve the voice, and to give training in distinguishing correct and defective sounds. The approach is by breathing and vocal exercises, and nonsense dictation tests (the phonetic symbols of the International Phonetic Association are used). Prerequisite, Course 7. *Three hours a week.* Mr. Bricker

Theatre

25, 25a (26, 26a). Theatre.—The class is organized as a "producing" unit. Each phase of production including directing, acting, scene designing, costuming, stage lighting and make-up is emphasized to meet the need and to complete the study of the individual student. Lectures on both the history of the theatre and present-day movements, conferences, papers, and laboratory work constitute the fundamental requirements. As special individual programs are worked out and new plays are studied and produced each semester,

Theatre may be taken for two or three hours and may be repeated several times. The course has no prerequisite, and for purposes of registration is called 25 if taken for three hours in the fall semester and 25a if taken for two hours. In the spring semester the three-hour course is called 26 and the two-hour course 26a. Mr. Bailey, Mr. Bricker

DIVISION II. THE SOCIAL SCIENCES

PHILOSOPHY

PROFESSOR LEVINSON

Philosophy is the systematic attempt to think our way to the solution of those problems that arise when we ask such general questions as those concerning the meaning of the world, the origin and destiny of human life, its standards and values, the sources and limits of our genuine knowledge, the principles that underlie valid reasoning, and the sources and significance of the sense of beauty. While philosophy is ordinarily approached directly by way of the history of man's attempt to solve these problems (see Pl. 3, 4), or through a study of the principal problems or types of philosophy (see Pl. 5, 6), opportunity is offered to various classes of students to approach it from the standpoint of their work in other fields (see Pl. 1, 2; 51, 52).

1, 2. ORIENTATION.—An introduction to liberal education restricted to Arts freshmen. This course aims at assisting the student in making an intelligent choice of his major subject and electives by presenting an elementary account of the history and present conditions of the subjects treated by the various departments in the College of Arts and Sciences. Given in collaboration with other departments of the college. *Three hours a week.*

3. HISTORY OF ANCIENT PHILOSOPHY.—Greek thought from the beginning to the Christian era, with especial reference to the philosophy of Plato and Aristotle. *Three hours a week.*

4. HISTORY OF MEDIEVAL AND MODERN PHILOSOPHY.—The philosophy of the Christian church as expounded by St. Thomas Aquinas; the rise of experimental science and the major philosophical schools from Bacon to Whitehead. *Three hours a week.*

5, 6. PERSONAL PHILOSOPHY.—A constructive criticism of the student's body of beliefs in the light of an analytical survey of the principal types of philosophy, with a view to the tentative formulation by the student of his own philosophic creed. Designed as an alternative to Courses 3 and 4, but open by consent of the instructor to students who have taken either of these courses. Given in 1934-35 and alternate years. *Three hours a week.*

8. LOGIC.—Part one of the course analyzes the principles that govern the passage of the mind from premises to conclusions; following the recent trend, this analysis is developed in a language of symbols analogous to those employed in algebra. Part two deals with the methods of reasoning char-

acteristic of modern natural and social science. Given in 1935-36 and alternate years. *Two hours a week.*

10. Ethics.—An historical survey of various conceptions of the ends of life: tribal morality, the Greek view of life, Christianity, the ethics of evolution. The course concludes with a discussion of some of the ethical problems of our contemporary social order. Given in 1934-35 and alternate years. *Two hours a week.*

11, 12. Topics in Philosophy.—This course is restricted to a limited number of properly qualified upperclassmen, whose needs in philosophy are not satisfied by any of the other courses offered by the Department. Topics associated with the student's major subject will be studied through tutorial conferences, assigned readings, and reports. No work in philosophy is prerequisite. *Two or three hours a week.*

101, 102. Seminar.—An individually arranged program of tutorial instruction for students offering twelve hours of work in the Department, or the equivalent.

PSYCHOLOGY

Professor Dickinson; Associate Professor Brush; Assistant Professor Purdy

Psychology includes a study of mind and of modes of behavior. It offers the student an opportunity to acquaint himself at first hand with the fundamental laws of the psychophysical organism. Through a study of the child, the normal adult, and the abnormal individual, it enables him to gain an insight into personality development and the problems of human adjustment. Through experience with psychological tests and the techniques of testing he comes to a more practical understanding of intelligence.

In its ramifications Psychology borders upon the natural as well as the social sciences. It is most closely allied, however, with Education, Zoology, Economics, Sociology, and Philosophy.

1, 2. General Psychology.—A basic course designed to give a general introduction to the field of psychology. A brief treatment of the structure and functioning of the nervous system, followed by a systematic survey of such topics as sensation, perception, behavior, motivation, learning and memory, thinking, imagination, intelligence, and personality. Some of the special fields of psychology—animal, child, social, abnormal, applied, etc.—are briefly outlined. An eclectic point of view is maintained with respect to the current

psychological "schools." A weekly period in the laboratory emphasizes the experimental aspects of the subject. *Three hours a week.*

Mr. Dickinson, Mr. Brush, Mr. Purdy

3. Applied Psychology.—Psychology applied to business, industry, advertising, salesmanship, and other fields. The application of psychological methods and tests in the selection and training of workers. For Technology students in Mechanical Engineering. *Three hours a week.* Mr. Brush

5, 6. Applied Psychology.—An introduction to general psychology followed by a consideration of the various factors influencing human efficiency: the psychology of vision and audition with emphasis on their relations to technological problems; the application of psychological methods and tests to the selection and training of workers; further applications of psychology to industry, business, advertising, salesmanship, and other fields. For Technology students in Electrical Engineering. *Three hours a week.* Mr. Purdy

12. Advertising.—A course designed to acquaint the student with the psychological principles involved in advertising. Practical application of these principles in rewriting advertisements appearing in newspaper and magazine advertising, and the developing of an advertising campaign in relation to an actual product. Prerequisite, Psychology 1, or permission of the instructor. *Three hours a week.* Mr. Dickinson

66. Educational Psychology.—In this course certain phases of psychology which are particularly important for educational theory and practice are selected for detailed consideration. Among the topics treated are mental inheritance, learning, memory, study methods, transfer of training, individual differences and their measurement. Prerequisite, Psychology 1, 2. *Three hours a week.* Mr. Brush

67. Psychology of Childhood.—A study of the mental growth of the child to six years of age. Native equipment, environmental influences, the development of motor and behavior patterns, speech, inference, judgment, and the like are given consideration. Modern experimental techniques of child study are discussed. To illustrate the development of motor and behavior patterns, 8000 feet of motion pictures, filmed by the instructor, are available. These films depict development in three children from six hours of age through the periods of creeping and walking. Prerequisite, Psychology 1, 2, with a grade of C or better. *Three hours a week.* Mr. Dickinson

69, 70. Experimental Psychology.—For majors and others interested in the subject of psychology. The first semester aims to acquaint the student with methods in the qualitative study of experimental problems and orient him in the objective approach to problems. In the second semester emphasis is placed upon quantitative methods and the statistical treatment of social-

psychological data. Prerequisite, Psychology 1, 2. *Three hours a week.*
MR. PURDY

71, 72. ABNORMAL PSYCHOLOGY AND MENTAL HYGIENE.—A study of mental abnormalities and of the normal mentality, with a view to a better understanding of educational practice and the problems of human adjustment. Through the courtesy and coöperation of Dr. C. J. Hedin, superintendent, five clinics are conducted at the Bangor State Hospital. These clinics are scheduled on Tuesday afternoons from two to four. The exact dates are set at the beginning of the semester. Attendance at the clinics is required. In the first semester various phases of the abnormal are studied, while in the second semester the emphasis is placed upon a consideration of the normal individual. Prerequisite, Psychology 1, 2, with a grade of C or better. *Three hours a week.* MR. DICKINSON

75. SOCIAL PSYCHOLOGY.—In this course an attempt is made to familiarize the student with the three general trends in the study of social psychology: (1) the relations of the individual to social institutions; (2) the innate constitution of the individual as the basis of social phenomena; and (3) the present experimental methodology and its results in the study of the development of social responses in the individual. Such topics as instinct, emotions, development of personality, development of language, custom, mores, legends, and propaganda are studied. Prerequisite, Psychology 1, 2, with a grade of C or better. *Three hours a week.* MR. BRUSH

81, 82. MENTAL MEASUREMENT.—Training in the use of the more commonly used psychometric methods, with opportunity for their application to practical or research problems. During the first semester the emphasis is upon the technical training, during the second upon the application to problems. The technical training is supplemented by readings, discussions, and lectures. Open only to a limited number of qualified students. Primarily for seniors and graduate students who plan to enter the teaching profession, social service, or personnel work. Prerequisite, Psychology 1, 2. *Three hours a week.* MR. BRUSH

91, 92. PROBLEMS IN PSYCHOLOGY.—Primarily for graduate students and seniors with a rank of B or better. The self-active student has here an opportunity to select and attack particular psychological problems with the benefit of criticism and suggestions from the instructor at stated intervals. Admission by consent of the instructor. *Hours arranged.* MR. DICKINSON

93, 94. SEMINAR IN PSYCHOLOGY.—Advanced work for graduate students and psychology majors and others who are interested in and fitted for it. In successive semesters the subject matter includes: History of Psychology; Systems and Schools of Psychology; Current Psychological Experi-

mental Literature; etc. Required of all Psychology majors; prerequisite for others, permission of the instructor. *Two hours a week.* Mr. Dickinson

96. Survey Seminar.—To enable senior majors in the Department of Psychology to prepare themselves for the Department's comprehensive written and oral examinations. *Two hours a week.*

Mr. Dickinson, Mr. Brush, Mr. Purdy

101, 102. Graduate Thesis. Mr. Dickinson, Mr. Brush, Mr. Purdy

ECONOMICS AND SOCIOLOGY

Professor Ashworth; Associate Professor Chadbourne; Assistant Professor Kirshen; Assistant Professor Melder; Assistant Professor Magee; Mr. Stetler

Economics

It is the purpose of this department to assist the student to an understanding of the way in which society produces and regulates its wealth. The function of money, the relation between capital and labor, questions of public finance, these are representative of the sort of problems that distinguish the social science of economics, but its scope includes all that facilitates a broad human understanding of the control of wealth. It should thus be clear that the study of economics provides a foundation for good citizenship and not merely a technique for business success.

1a, 2a. Principles of Economics.—From the viewpoint of subject matter this course may be divided into two parts: (1) a study of the fundamental characteristics and institutions of modern economic society, including such topics as specialization, large scale production, machine industry, competition, monopoly, prices, credit, foreign trade, foreign exchange, and distribution of wealth; (2) the application of principles to such economic problems as population, capital and labor, labor legislation, transportation, public expenditures, and taxation. *Three hours a week.* Mr. Ashworth

1b, 2b. Principles of Economics.—Similar to Course 1a, 2a. This is a short course for students in Technology and Agriculture. *Two hours a week.* Mr. Melder, Mr. Kirshen

9, 10. Accounting.—This course aims to give the student that general knowledge of the principles of accounting which every business person should possess. Since it does not presume any knowledge of double-entry

bookkeeping, a considerable part of the first semester's work is devoted to fundamental principles. Balance sheets and income statements, depreciation, reserves, sinking funds, partnership, and corporation problems are the principal topics of the second semester. *Three hours a week.* MR. CHADBOURNE

16. BUSINESS LAW.—This course aims to give the student knowledge and appreciation of the basic legal principles guiding, expanding, and limiting business transactions. The nature and theories of law, the enforcement of law, contracts, agency, and bailments are given special consideration. For juniors and seniors in Technology and Agriculture only. *Three hours a week.* MR. KIRSHEN

51. CORPORATION FINANCE.—This course treats the corporation in a possible life-cycle of organization, operation, failure, or reorganization. Forms of business organization, corporate securities, intercorporate relations, management and control are considered. Special emphasis is given to the use of securities in distributing both corporate funds and control to stockholders, bondholders, and the corporate managers. Juniors and seniors only. *Three hours a week.* MR. KIRSHEN

52. SOCIAL CONTROL OF INDUSTRY.—This course deals with the extension of government control over business activities for the purpose of (1) social welfare, (2) economic reform, (3) business recovery. *Three hours a week.* MR. ASHWORTH

53. MONEY AND BANKING.—The monetary and banking systems of the United States and other countries; special emphasis on the relation of banking to business. Juniors and seniors only. *Three hours a week.* MR. CHADBOURNE

54. INVESTMENTS AND INVESTMENT BANKING.—The course deals with the methods of selection of investments. The different types of securities and their relative merits are analyzed. The proper types of investments for dependents, the business and professional classes, and institutions are studied. An investigation is also made of the social and practical aspects of the investment banking business. Suggested preparation, Courses 1a, 2a; 51, and 53. *Three hours a week.* MR. CHADBOURNE

55, 56. BUSINESS LAW.—This course aims to give the student knowledge and appreciation of the basic legal principles guiding, expanding, and limiting business transactions. The nature and theories of law, the enforcement of law, contracts, agency, damages, negotiable instruments, guaranty, and suretyship are considered in cases. Lectures and class discussions. More detailed and advanced than Course 16. Juniors and seniors only. *Three hours a week.* MR. MAGEE

57, 58. Insurance.—Problems of risk are considered with the purpose of indicating the contribution of insurance to their solution. A study of the theory of insurance and the fundamental doctrines of insurance law precedes a detailed examination of the principal coverages in the fields of life, fire, casualty, and marine insurance, and corporate bonding. The course has for its purpose the equipping of the student with such knowledge as will enable him to weigh and compare economic risks and make correct insurance decisions. It is designed entirely to assist the purchaser of insurance, and does not undertake to train the individual for the insurance business. *Three hours a week.*

Mr. Magee

71. Public Finance.—The following topics will be considered: government activities and government expenditures; taxation and tax systems; budgets and other means of regulating and controlling government spending; current problems of taxation. Juniors and seniors only. *Three hours a week.*

Mr. Ashworth

72. Labor Problems.—This course begins with the Industrial Revolution but is essentially a study of (1) organized labor and its policies, such as collective bargaining, the closed shop, the strike, the boycott, picketing, restriction of work, short work-day, and restriction of entrance to a trade; (2) labor legislation dealing with child labor, women in industry, the long work day, low wages, unemployment, and working conditions; (3) employer attempts to solve the problem of employer and employee relationship, employee representation, profit sharing, employee stock ownership and gain sharing; (4) the settlement of industrial disputes—arbitration, mediation, compulsory investigation, and judicial settlement. Juniors and seniors only. *Three hours a week.* Mr. Melder

73. Labor Problems.—Similar to Course 72. For Technology students. *Three hours a week.* Mr. Melder

101, 102. Seminar. The Departmental Staff

Sociology

The sociology curriculum focuses the student's attention upon social relationships as phenomena capable of objective, critical analysis. This is achieved through study of (1) the structure and function of society—of which the family, social stratification, and social codes are typical; (2) social disorganization—of which crime, poverty and war are typical; and (3) the dynamics of social change, or how society adjusts itself to natural, technological, and social changes. Sociology is bounded on the one hand by zoology, psychology, and anthropology; on the other hand by economics, history, and philosophy.

1, 2. Principles of Sociology.—An introductory course designed to equip the student with a basic, systematic knowledge of the structure and functioning of human society. The community, social stratification, unorganized, unspecialized and specialized groups, social codes, relation of the environment to the social order, and the processes of social change are considered. Prerequisite for other courses in sociology. *Three hours a week.* Mr. Stetler

61. Social Pathology: Poverty and Dependency.—A study of typical varieties of social maladjustment other than crime and juvenile delinquency. Widowhood, desertion, divorce, illegitimacy, prostitution, maldistribution of wealth, poverty, public and private methods of poor-relief, unemployment, child labor, old age insecurity, and war are considered. *Three hours a week.* Prerequisite, Course 1, 2 or permission of instructor. Mr. Stetler

62. Social Pathology: Criminology.—A study of the characteristics, causes, and relief of crime, including mental, physical, economic and social factors; case studies of juvenile delinquents and criminals; the relation of race, nationality, age, and sex to crime; police systems; socialized court procedure; theories and forms of punishment and rehabilitation; modern methods of crime prevention. Field trips for scientific observation of these phenomena. Prerequisite, Course 1, 2 or permission of the instructor. *Three hours a week.* Mr. Stetler

81, 82. The Family.—A study of the family as a unit of social organization in its primitive, historical, and modern aspects. Consideration of the patriarchal unit, and of the influence of Christianity and the Industrial Revolution upon marriage and the family is followed by an analysis of the modern family including size, basic social and economic conditions, interaction, family tensions, the companionate marriage, and family disorganization. Prerequisite, Course 1, 2. Given in 1934-35 and alternate years. *Two hours a week.* Mr. Stetler

87. Social Evolution and Social Change.—Analysis of the evolutionary aspects of associations, institutions, and mores in human society. Consideration of progress, civilization, culture, and theories of social change. Special emphasis upon the fundamental problems of social causation. Given in 1935-36 and alternate years. Prerquisite, Course 1, 2. *Two hours a week.* Mr. Stetler

88. Population and Race.—A study of the factors involved in the composition, growth, and control of population; analysis of birth and death rates, influence of standards of living, qualitative and quantitative aspects, and theories of population; special consideration of racial theories and fundamental racial problems. Prerequisite, Course 1, 2 or permission of the instructor. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Stetler

91. Development of Economic Thought.—The course considers the development of economic ideas from early times to the middle of the nineteenth century, at which time the subject became a comparatively clearly defined set of principles and doctrines. Special attention is given to the development of the mercantilist, physiocratic, classical, nationalist, historical, and socialist schools of political economy. Seniors only. *Two hours a week.*

Mr. Melder

92. Development of Economic Thought.—The evolution of economic theory from the middle of the nineteenth century to the present. The new approach of the Austrian school is used as a background for the development of the neo-classical school. Contemporary developments in theory by European and American economists are investigated in their relation to certain movements of the times such as the growth of corporations, and the rise of political and economic dictatorships. Seniors only. *Two hours a week.*

Mr. Melder

HISTORY AND GOVERNMENT

Associate Professor Dow; Associate Professor Whitmore; Assistant Professor Wood; Assistant Professor Wilson; Dr. Morrow

Coöperating members of the Department:

Dr. Huddilston, Professor of Ancient Civilization

Dr. Peterson, Lecturer in Latin-American History

History

History includes in one continuous narrative the story of mankind so far as it is known. Courses offered by the Department of History and Government are limited to selected periods which seem significant for the present generation. History is more than "past politics"—it includes economic, social, intellectual, artistic, and scientific events. It deals with ages, races, and social movements, attempting to interpret its materials in such a way as to throw light on our present complex civilization and the future course of events.

Students may elect a major in history, or in government. They may combine history and government courses, or include work in related fields, such as economics, sociology, English, philosophy, and psychology. Courses numbered above fifty are not open to freshmen or sophomores. Major students are given a comprehensive examination near the end of their senior year, after completing Courses 97 and 98.

Teacher Training

Students majoring in other departments who intend to teach history, civics, or social science, should follow a program approved by the Department. The following courses comprise a satisfactory minor: 3, 4, or 31, 32; 11, 12, or 17, 18; 97; four credit hours chosen from courses numbered above fifty.

1, 2. Ancient Civilization.—This course has to do with the achievements of the Greeks and Romans in laying the foundations of Western life and thought. Some examination is made of Egyptian and Eastern civilization as the background of classical life and action. An important part of the course lies in the emphasis that is given to the Greek thought and Roman rule in the midst of which Christianity sprang up. Textbook, lectures, and notebook. *Three hours a week.* Mr. Huddilston

3, 4. United States History.—From the organization of the new government in 1789 to recent years. The work will cover such topics as the development of democracy, growth of the West, slavery and sectionalism, the Civil War, reconstruction, social status of the negro, the making of modern America, industrialization, imperialism, Theodore Roosevelt, Woodrow Wilson. Open only to freshmen except by consent of the instructor. *Three hours a week.* Mr. Whitmore, Mr. Morrow

11, 12. European History.—A survey of Europe from the decline of Rome to the present time, designed to show how modern Europe came into existence in its political, social, and economic aspects. Brief attention is also given to the most important cultural developments. The work of the first semester will include such subjects as the rise of the Christian church, the medieval empire, the origins and growth of national states, the rise of towns and the beginnings of capitalism, and the Protestant and Catholic reformations. In the second semester the evolution of the Western State System, the "revolutions" which lie at the basis of modern social and economic life, the unification of Germany and Italy, the genesis of the World War, and the problems of the post-war period will be studied. *Three hours a week.* Miss Wilson

17, 18. History of England.—From earliest times to the present. The political aspects are emphasized, with some attention to social and economic factors. Stress is placed upon the development of parliamentary government and the evolution of modern England and the British Commonwealth of Nations. *Three hours a week.* Mr. Wood

21 (22). Current World Problems.—A course designed for those who wish to be intelligently informed on world affairs, but do not make history their major subject. Lectures and discussions on outstanding problems of history, government, and politics. Open to all students in the University except freshmen. *Two hours a week.* Members of the Department

53. The French Revolution.—This course is a study of a revolutionary epoch. An analysis of the "Age of Enlightenment" forms an introduction to the destruction of the Old Regime, the achievements of the Constituent Assembly, the conflicts of the Convention, the Terror, and the reaction of Thermidor. The rise of Napoleon, the founding of the Empire and its collapse are studied with a view to their permanent effect upon the modern world. Prerequisite, Course 11, 12. *Three hours a week.* Miss Wilson

54. Europe Since 1870.—The causes of the World War are sought in a study of nationalism, imperialism, and the international anarchy which these engendered. The peace treaties are studied as the origin of current problems. The revolutions following the war, especially the Russian Revolution, the rise of fascism and Hitlerism are analyzed with a view to determining new trends in Europe. Prerequisite, Course 11, 12. *Three hours a week.*
Miss Wilson

55, 56. Ancient History.—The work of the first semester centers on the nations of the Near East whose civilization culminated before 500 B.C., such as Assyria and Babylonia. Special attention is given to the contributions of Egyptian, Babylonian, Hittite, and Cretan cultures. The second semester follows the Mediterranean, passing in review important factors in Phoenician, Greek, and Roman history. Only students majoring in history may take this course except on arrangement with the instructor. Investigation of assigned topics, special reports, and discussions. *Three hours a week.*
Mr. Huddilston

57. American Colonial History, 1607-1688.—The founding and the political, social, and economic development of the colonies in the seventeenth century. English colonial policy of the Commonwealth and the Restoration periods. Permission of the instructor required. *Two hours a week.*
Mr. Whitmore

59. Social and Industrial History of England.—This course begins with the manorial system and comes down to the present, with emphasis on the economic revolution and the nineteenth century. The breakdown of the feudal system, rise of the guilds, overseas expansion, the agrarian revolution, free trade, chartism, the rise of the labor party, etc. Prerequisite, six hours of history or economics. *Two hours a week.* Mr. Wood

60. Social and Industrial History of the United States.—A study of economic and social movements in the United States from the colonial period to the present. Included are such topics as colonial production and commerce; agricultural development in the South and West; commerce, labor, and the farmer in the machine age. Prerequisite, same as for Course 59. *Two hours a week.* Mr. Wood

62. Maritime History of the United States.—Ships and trade from Colonial days to the present, with emphasis on shipbuilding and shipping in New England, New York, and Maryland. The following topics are illustrative: ships and great ship builders; evolution from wood to iron and steel ships; California and the clippers; the effect of the Civil War and the World War on our merchant marine. Permission of the instructor required. *Two hours a week.* Mr. Whitmore

64. Canadian History.—Beginning with the period of early French colonization, and stressing the French background in Canadian life, the political and economic development of Canada is traced to the present. Prerequisite, one course in American history, or permission of the instructor. *Two hours a week.* Mr. Wood

65, 66. Latin-American History.—The colonization, formation, and development of the Latin-American republics with special attention to Mexico and the Argentine Republic. Emphasis on the salient features of their civilization, problems and possibilities, and relations with foreign nations. Prerequisites, a year each of United States and European history, or other work which may be considered an equivalent. Not given in 1935-36. *Two hours a week.* Mr. Peterson

79, 80. The Cultural and Intellectual History of Europe from the Fourth to the Sixteenth Century.—This course follows the declines and advances of civilization from the end of the Roman period to the beginning of modern times. Such subjects will be considered as the science, religion, and philosophy of the transition period; contacts with Mohammedan civilization; the scientific renaissance; the rise of the universities; art and architecture; the Italian renaissance. Each student will select one subject for special study. Prerequisite, Course 11, or permission of the instructor. Not given in 1935-36. *Three hours a week.* Miss Wilson

81, 82. The Far East.—An account of the history, politics, and international relations of the leading nations of Asia, leading to an appraisal of the present situation in the Far East. Special attention is given to China, Japan, and Russia in Asia. Prerequisite, six hours of history. *Three hours a week.*

97. Historical Material.—A course designed to aid the student in research and historical writing, through a study of the theory and the mechanics of original investigation. Primarily intended for history majors, it also offers practical training for seniors in English and the social sciences. The student's ability to make an original study of some subject will be tested by a term paper. *Three hours a week.* Mr. Wood

98. SEMINAR.—This course is designed to round out the work of students majoring or concentrating in history and government, and also to aid them in developing one or more special interests to carry with them in after life. Individual and group conferences are held and special work assigned to fit the needs of each student. *Three hours a week.*

MEMBERS OF THE DEPARTMENT

Government

The study of government covers the making and enforcing of laws and the administration of public affairs. It is concerned with the origin of government, with its development and functioning and with the possibilities for improvement. The student devotes more time to the effects of an all-pervading social enterprise than he does to the mechanism of state machinery. He observes and evaluates facts and attempts to form objective opinions, to the end that government may become, in the words of Emerson, "the greatest science and service of mankind."

31. THE NATIONAL GOVERNMENT OF THE UNITED STATES.—The organization, powers, and activities of the Federal government. The primary purpose of this course is to aid the student to understand the working of his government and some of its vital problems. *Three hours a week.* MR. DOW

32. STATE AND LOCAL GOVERNMENT.—The first half-semester is devoted to state and local governments; this is followed by a study of national political parties. Party growth and functions, public opinion and propaganda, machines and bosses, voting, conventions and elections, these are illustrative topics. Special attention will be paid to present-day problems facing the major parties. A continuation of Course 31. *Three hours a week.* MR. DOW

34. MUNICIPAL GOVERNMENT AND ADMINISTRATION.—The relation of urban government to modern civilization. Lectures and discussions on such topics as mayor and city-manager forms of government, elections, graft and bosses, city planning, zoning, law enforcement, traffic, fire protection, parks, schools. Spring semester. *Three hours a week.* MR. DOW

35. COMPARATIVE GOVERNMENT.—A study of governments, political parties, and current problems in the leading nations of the world, with the emphasis on Europe, England, and the Dominions. Fall semester. *Three hours a week.* MR. DOW

73. INTERNATIONAL RELATIONS.—A survey of the problems of international life arising out of nationalism, imperialism, race conflicts, etc. How these problems are met by treaties, conferences, and such agencies as the

Permanent Court and the League of Nations. Prerequisite, six hours of history. *Three hours a week.* Mr. Morrow

74. American Foreign Relations.—The relations of the United States to the outside world. Such policies will be examined as the Monroe Doctrine, Pan-Americanism, and the "Open Door." Attention will be paid to our attitude on the acquisition of territory, arbitration, limitation of armaments, the League of Nations. Prerequisite, Course 3, 4, or 31, or 73. *Three hours a week.* Mr. Morrow

77, 78. The Middle Ages.—This course provides a more advanced study of the period from 500 to 1500 than can be undertaken in Course 11, 12. Emphasis will be given to a study of medieval institutions: feudalism, the Church, the Empire, and medieval monarchy. Special attention will be paid to social and economic matters and their relation to cultural developments. The eastward expansion of the German people, Slavic Europe and its connections with the West, and the westward advance of Asiatic peoples will be studied as an introduction to modern problems in the Near East. Prerequisite, Course 11, 12. *Three hours a week.* Miss Wilson

83, 84. The American Constitution.—The origin and development of our constitution and courts, from the framing of the historic document to the latest amendment. The lives of famous judges; court organization and procedure; regulation of commerce; protection of life, liberty and property—these are some of the subjects studied. Non-technical and intended for the general student as well as those who are preparing for law schools. Open to students who have had Courses 3, 4, or 31, 32. Not given in 1935-36. *Three hours a week.* Mr. Dow

87, 88. International Law.—Historical and non-technical treatment of such matters as the development of international law, discovery and occupation of territory, recognition of governments, maritime law, arbitration, land and sea warfare. For general and pre-legal students who have had six hours of history. *Three hours a week.* Mr. Dow

99, 100. Political Theory.—A survey of the classics of political theory from Plato to the present day. Reading, lectures, and discussion of Aristotle, Machiavelli, Paine, Rousseau, Jefferson, Mill, Spencer, Laski, and others. Given in case of sufficient demand. *Three hours a week.* Mr. Dow

ART HISTORY

Professor Huddilston

1, 2. Masterpieces of Art.—A general course covering the most distinctive values of art in the great periods, with special regard to architec-

ture as a key to the spirit of the ages. Lectures and interpretations from photographs. Not open to students who have taken Courses 3 or 4. *Two hours a week.*

3. Renaissance Art.—Mainly a study of the Florentine and Venetian painters. Given in 1935-36. *Three hours a week.*

4. Art in America.—A course of lectures on the relation of the fine arts to national culture and spirit. Designed to throw light on the history of the United States and to stimulate a broader interest in art appreciation particularly as affecting the public mind and reflecting national spirit. Open to all students except freshmen. *Three hours a week.*

5. Greek Art.—A course on the understanding and enjoyment of architecture and sculpture as developed by the ancient Greeks. Fundamental for art appreciation. Textbook, lectures, and photographs. Given in 1934-35 and alternate years. *Three hours a week.*

MUSIC

Professor Sprague

The objective of the music curriculum is two-fold. Certain subjects offered are aesthetic and cultural in character, designed as music's contribution toward a well-rounded college education, the aim being to make understanding and discriminative listeners. Other subjects are designed to broaden the knowledge and technique of active musicians, both professional and avocational, as a cultural influence upon modern life.

3, 4. Music Appreciation.—A study of the masterpieces of music from the standpoint of the listener, analytical rather than historical. The vital forces and personalities in the development of the art are noted briefly, but the chief stress is laid upon the music itself. The evolution of form traced from the folk-song to the symphony. Lectures, illustrations, prescribed readings, reports. *Two hours a week.*

5, 6. Introductory Harmony.—The grammar of music, basic to an understanding of music structure, the foundation of the art of composition; a study of the conditions under which tones sound together and progress in combination; the invention and harmonization of melodies. A knowledge of notation is required. *Two hours a week.*

7, 8. Advanced Harmony.—Supplementary to Course 5, 6 and designed to apply to the more advanced problems of tone combination the training already obtained. Emphasis placed upon harmonic analysis, melody writ-

ing, and composition in the simpler forms. Assigned problems. Given in 1935-36 and alternate years. *Two hours a week.*

9, 10. COUNTERPOINT.—The art of combining melodies, a correlative with Harmony as the material of composition. Freedom and facility of expression in all the forms of music writing is developed through its study and practice. Original work is the chief aim of the course. Course 5, 6 a prereq uisite. Given in 1934-35 and alternate years. *Two hours a week.*

11, 12. MUSIC IN THE NINETEENTH CENTURY.—A survey of the rise of Romanticism, including the evolution of the modern orchestra and its attendant art products, the symphonic poem and the music drama. Analysis of master works; prescribed readings and reports. Given in 1935-36 and alternate years. *Two hours a week.*

13, 14. ORCHESTRATION.—A study of the modern symphony orchestra, its instrumental individualities and groupings; analysis of representative works through score-reading, phonographic records, and attendance at concerts. Assigned readings in history and theory; practical scoring, with performance of successful class work. Candidates must satisfy the instructor of the proper degree of musicianship. Given in 1934-35 and alternate years. *Two hours a week.*

25, 26. UNIVERSITY CHORUS.—The history, development, and interpretation of choral music, with application to the ensemble study and public performance of representative compositions. A satisfactory test of musical aptitude and permission of the director of music a prerequisite. *Two hours a week. One credit hour.*

51. INTERPRETATION AND CONDUCTING.—A consideration of the problems of organizing bodies of singers and players, of time-beating, of program building, and of interpretation as applied to the rehearsal and performance of choral and orchestral music. Membership in the University cho us, orchestra, or band a prerequisite. Open to juniors and seniors of sufficient talent. *Two hours a week.*

Applied Music Study

Students desiring further applied music study may obtain both instrumental and vocal instruction at the Northern Conservatory of Music in Bangor. The University approves and encourages the aim of students to develop talent in musical performance as an adjunct of a college education and an asset in life.

DIVISION III. MATHEMATICS AND THE NATURAL SCIENCES

MATHEMATICS

Professor Hart; Professor Willard; Associate Professor Bryan; Associate Professor Jordan; Assistant Professor Lucas; Mr. Silverman; Mr. Stewart; Mr. Lamoreau

In general, the function of the Department of Mathematics is two-fold. On the one hand it acts as a service department for the College of Technology and to a lesser extent for the College of Agriculture. In this capacity it strives to give the students of those colleges training in mathematics sufficient to enable them to carry forward successfully their technical studies.

On the other hand the department offers courses to students who are interested in mathematics as a preparation for the profession of teaching. It gives training to this class of students so that they are prepared to do graduate work in mathematics or to teach the subject in any preparatory or high school. The department also supplies adequate mathematical foundation for students in the College of Arts and Sciences who are interested in the application of mathematics to the study of the physical, biological, and social sciences.

Students whose major subject is mathematics are required to take Courses 1, 2 (unless offered for admission), 3, 5, 6, 7, 8, and to elect other courses to a total of forty hours. At least twelve hours must be chosen from Courses 51, 52, 53, 54, 56, 61, 63, 64, and Astronomy 15, 16, 59, and 60. Mechanics 51 and 52 may be substituted for ten hours of the above group. Astronomy 11 may be taken as a mathematics elective. Students majoring in mathematics who intend to teach are advised to elect Courses 26, 63, and 64 as well as several courses in physics.

1. Trigonometry.—The trigonometric functions, radian measure, functions of two or more angles, logarithms, trigonometric equations, inverse functions, solution of right and oblique triangles. *Two hours a week.*

Mr. Willard, Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Silverman, Mr. Stewart, Mr. Lamoreau

2 (21). Solid Geometry.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems. Open to all freshmen who did not offer solid geometry for admission. *Three hours a week.* Mr. Silverman

3. College Algebra.—A brief review of radicals, the theory of exponents, logarithms, quadratic equations, the binomial theorem, determinants, theory of equations. *Two hours a week.*

Mr. Willard, Mr. Bryan, Mr. Silverman, Mr. Stewart, Mr. Lamoreau

5. Advanced Algebra.—Topics in college algebra not covered in Course 3. Open to students who have taken Courses 1, 2, and 3, and to freshmen with especially good high-school preparation. *Three hours a week.*

Mr. Lucas

6. Analytic Geometry.—The point, line, circle, and conic sections; higher plane curves; elements of solid analytic geometry. Open to students who have had Courses 1 and 3; the equivalent of Course 2 is desirable. *Four hours a week.*

Mr. Willard, Mr. Bryan, Mr. Silverman, Mr. Stewart, Mr. Lamoreau

7. Calculus.—Differentiation of the elementary forms of algebraic and transcendental functions, successive differentiation, differentials, rates, maxima and minima, expansion of functions, series. Open to students who have taken Courses 1, 3, and 6. *Five hours a week.*

Mr. Willard, Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Stewart, Mr. Lamoreau

8. Calculus.—A continuation of Course 7. Integration of the elementary forms; integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.*

Mr. Willard, Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Stewart, Mr. Lamoreau

9, 10. Trigonometry and Its Applications.—A course in trigonometry given to freshmen in Forestry. This course is similar to Course 1 but is considerably more extensive and contains more applications. *Two hours a week.* Mr. Bryan, Mr. Jordan, Mr. Lucas, Mr. Lamoreau

13. Spherical Trigonometry.—An elementary course with problems and applications to spherical astronomy. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Silverman

17. Mathematical Theory of Investment.—A study of interest, both simple and compound, present value, discount, and annuities. Throughout the course numerous problems are solved to illustrate the theory and to fix the principles involved. *Two hours a week.*

Mr. Silverman, Mr. Stewart

18. Mathematical Theory of Investment.—A continuation of Course 17. A study of amortization, the valuation of bonds, sinking funds and depreciation, building and loan associations; also the theory of probability and its application to life annuities and certain problems connected with life insurance. *Two hours a week.* Mr. Stewart

19, 20. The Theory of Statistics.—The mathematical part of elementary statistics covering the following topics: tabulation and graphic representation of data; averages and variability; the normal probability distribution; simple and multiple correlation, correlation ratio, intraclass correlation, measuring relationship of qualitative data; chi-square test; index numbers. Prerequisite, Courses 1, 3 and 6. Given in 1934-35 and alternate years. *Two hours a week.* Mr. Bryan

26. College Geometry.—An elementary course in modern synthetic geometry. The nine-point circle, harmonic section, poles and polars, Ceva's theorem, Menelaus's theorem are among the topics considered. Emphasis is placed on the solution of original exercises. *Three hours a week.* Mr. Lucas

51. Advanced Analytic Geometry.—Review of the fundamentals of Course 6; advanced theory of the conic sections; the general equation of the second degree in two variables; transformation of coördinates; polar coördinates; higher plane curves. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Hart

52. Solid Analytic Geometry.—An introductory course. Among the topics considered are coördinates in three-dimensional space; lines and planes; types, classification, and properties of quadric surfaces; transformation of coördinates. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Hart

53, 54. Advanced Calculus.—Continuation of Course 7, 8. Partial differentiation and its applications; application of calculus to solid geometry; series, including power series and Fourier series; double and triple integration, line integrals; complex numbers, hyperbolic functions. *Three hours a week.* Mr. Lucas

56. Differential Equations.—A course in the solution of ordinary differential equations and their applications. Emphasis is laid on the methods used in solving equations of the common types. Open to students who have taken Course 7, 8. *Three hours a week.* Mr. Willard

61. History of Mathematics.—This course covers the important developments in mathematics from the beginnings of the subject to the present time. In addition to the factual content of the course, special attention is given to the development of various branches of mathematics; such as geometry,

trigonometry, algebra, analytic geometry, and the calculus. Certain topics of general interest are considered; such as the number concept, theory of numbers, and the establishing of graduate mathematics in America. Lectures, reference studies, and recitations. Prerequisites, Courses 1, 3, 6, 7. Courses 2, 26, 8 and a reading knowledge of French and German are desirable. Certain of the above prerequisites may be waived in the case of an experienced teacher who desires to take this course. Such students should consult with the head of the department. Given in 1934-35 and alternate years. *Two hours a week.*

MR. BRYAN

63, 64. TEACHERS COURSE IN MATHEMATICS.—This course is designed to give opportunity for the study of the kind of mathematics suitable for the secondary school from the point of view of modern mathematics. It includes a consideration of the continuity of the subject matter of secondary school mathematics, and of the selection of topics for the curriculum and their arrangement and presentation. Current topics also are discussed; such topics include professionalized subject matter, reports of important committees, and the teaching of secondary school mathematics in other countries. Through conferences, students who so desire may make a study of the teaching of college mathematics. Lectures, recitations, and individual studies. Prerequisites, Courses 1, 3, 6, 7. Certain of the above prerequisites may be waived in the case of an experienced teacher who desires to take this course. Such students should consult with the head of the department. Given in 1935-36 and alternate years. *Three hours a week.* MR. BRYAN

68. THEORY OF NUMBERS.—A study of the elements of the theory of algebraic numbers. The discussions will consider the divisibility of integers, congruences, and quadratic residues in the rational realm. Given in 1934-35. *Three hours a week.* MR. BRYAN

73, 74. ADVANCED STATISTICS.—Derivations of formulas, proofs of propositions, discussions of preferential methods of correlation and of procedure, investigations by individuals and by groups. Prerequisite, Course 19, 20. Not given in 1934-35. *Three hours a week.* MR. BRYAN

The department is also prepared to give the following courses, which may be offered when there is sufficient demand: 65. THEORY OF EQUATIONS; 66. MODERN PROJECTIVE GEOMETRY; 71, 72. MODERN HIGHER ALGEBRA; 101. THEORY OF FUNCTIONS OF A COMPLEX VARIABLE; 102. ELLIPTIC FUNCTIONS; 105. VECTOR ANALYSIS; 109. CELESTIAL MECHANICS; 110. HYDRODYNAMICS; 115. THEORY OF FUNCTIONS OF REAL VARIABLES; 116. FOURIER'S SERIES; 117. THEORY OF SUBSTITUTION GROUPS AND OF ALGEBRAIC FIELDS; 118. THEORY OF TRANSFORMATION GROUPS (LIE THEORY); 119, 120. DIFFERENTIAL GEOMETRY.

ASTRONOMY

Professor Willard; Associate Professor Jordan; Mr. Lamoreau

The courses in astronomy aim to meet the demands of students seeking a knowledge of the subject for purposes of general culture, and for technical or professional uses. Opportunity is offered for students to acquire such information as will enable them to appreciate more fully the universe in which they live. Courses may be selected which provide instruction in instrumental astronomy and observatory practice.

10. Descriptive Astronomy. An elementary course. The textbook is supplemented by informal lectures, illustrated by lantern slides, drawings of celestial objects, and work in the observatory. Open to all students. *Three hours a week.* Mr. Jordan

11. Practical Astronomy.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes, and the establishment of meridian lines. Open to students who have taken Mathematics 1 and 3. *Two hours a week* with additional hours for observation.

Mr. Jordan, Mr. Lamoreau

15, 16. General Astronomy.—Designed for students in mathematics and physics and others wishing a more complete treatment of the subject than is possible in Course 10. Recitations, lectures, solution of problems, observations with instruments in the observatory. Open to sophomores, juniors, and seniors who have had Mathematics 1. Given in 1935-36 and alternate years. *Three hours a week.* Mr. Jordan

59, 60. Practical Astronomy.—The theory and use of the astronomical transit, zenith telescope, and equatorial; accurate determination of time and latitude. Open to students who have taken Mathematics 6, 7, 8, and Astronomy 10 or 15. Given in 1934-35 and alternate years. *Three hours a week.* Mr. Jordan

PHYSICS

Professor Fitch; Associate Professor Crofutt; Assistant Professor Bennett; Dr. Larsen; Mr. Allen

Physics is concerned primarily with energy and its transformations. The courses in this department are designed to lead the student to a clearer un-

derstanding of these transformations as they affect our modern life. They seek to explain the basis upon which our highly mechanized contemporary civilization rests.

1, 2. General Physics.—This course covers the fundamental relations in mechanics, sound, heat, electricity, magnetism, and light. It is required for all advanced work in the department and meets the requirement for entrance to engineering, medical, and dental schools. It is recommended to all students who wish a working knowledge of the subject of physics. There are no prerequisites except a knowledge of algebra and geometry. *Two lectures, three recitations, and one two-hour laboratory period a week. Five credit hours.* Mr. Bennett, Mr. Fitch, Mr. Crofutt, Mr. Larsen, Mr. Allen

10. Meteorology.—This is a study of the earth's atmosphere, its composition and movements. It includes a study of the atmospheric conditions accompanying changes in weather, a knowledge of which is essential for making weather predictions. A knowledge of high-school physics is assumed. *Three hours a week. Three credit hours.* Mr. Allen

15. History of Physics.—A study of the lives and theories of those men who have contributed most to the advancement of physics. Given in 1934-35 and alternate years. *Three hours a week. Three credit hours.* Mr. Fitch

21 (22). Mechanics and Heat Laboratory.—A laboratory course including problems in acceleration, moments of inertia, elasticity, viscosity, heat of combustion, thermal constants of materials, and pyrometry. The physical principles are stressed. Course 1, 2 is a prerequisite. *Four hours a week. Two credit hours.* Mr. Larsen

23, 24. Electrical Measurements.—A course in the theories and practices in the measurement of electrical and magnetic quantities. It includes a study of current, resistance, difference of potential, capacitance, magnetic flux, self and mutual inductances, impedance, and frequency of alternating currents. Open to those who have completed Course 1, 2 and who have a working knowledge of the calculus. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Crofutt

55, 56. Electricity and Magnetism.—The physical and mathematical relations involved in dealing with problems in electrostatics and direct-current phenomena are considered the first semester. The second semester is devoted to a study of magnetism and alternating currents. Course 1, 2 and a working knowledge of the calculus are required. Given in 1934-35 and alternate years. *Two hours a week. Two credit hours.* Mr. Bennett

58. Mathematical Physics.—An advanced course in which experimental data are examined and their mathematical relations deduced. The complex quantity will be used in problem solution in alternating currents. Some attention will be given to high-frequency phenomena. Open to students who have completed Course 1, 2 and who have a working knowledge of the calculus. Given in 1935-36 and alternate years. *Three hours a week. Three credit hours.* Mr. Fitch

59. Sound.—A course dealing with vibrating systems, sources of sound, transmission of sound, its reception and transformations. Attention is given to speech and hearing, sound ranging, architectural acoustics, reproduction of sound, noise reduction, and musical instruments. Open to those who have completed Course 1, 2 and have a working knowledge of the calculus. Given in 1934-35 and in alternate years. *Three hours a week. Three credit hours.* Mr. Crofutt

61. Heat.—A course dealing with the measurement of temperature, specific heat, thermal expansion, conduction, convection, radiation, change of state, and the production of high and low temperatures. Open to students who have completed Course 1, 2 and who have a working knowledge of the calculus. Given in 1935-36 and in alternate years. *Three hours a week. Three credit hours.* Mr. Crofutt

65. Vacuum Tubes.—A course treating the physics of vacuum tubes. This covers their use as rectifiers, amplifiers, modulators, detectors as well as their construction. Open to advanced students who are familiar with the calculus. Given in 1935-36 and in alternate years. *Two hours a week. Two credit hours.* Mr. Fitch

66. Vacuum Tube Laboratory.—This covers in the laboratory the same material as was covered in the classroom in the preceding course. Open to those who have completed Course 65 or its equivalent. *Laboratory, two hours a week. One credit hour.* Mr. Fitch

69. Modern Physical Theories.—This deals with electrical phenomena in gases, spectra, X-rays, thermionic emission, photo-electric effects, radioactivity, atomic structure, and electrical phenomena in solids. Some attention is given to quantum and wave mechanics. Open to students who have completed Course 1, 2 and can use the calculus. Given in 1935-36 and alternate years. *Three hours a week. Three credit hours.* Mr. Crofutt

73. Light.—An advanced course in the study of light covering its velocity of propagation, reflection, refraction, diffraction, and polarization. It also includes a study of optical instruments. Open to advanced students who can use the calculus. Given in 1934-35 and alternate years. *Three hours a week. Three credit hours.* Mr. Fitch

74. Light Laboratory.—This is a laboratory course covering the same field as Course 73 which is prerequisite to it. Given in 1934-35 and alternate years. *Laboratory, four hours a week. Two credit hours.*

Mr. Larsen

81, 82. Advanced Laboratory.—The experimental solution of some problem chosen by the student and a member of the department. In this course the student gets an idea of research by actually taking data on an original problem. All seniors in the department are expected to take this course for one semester. Laboratory, *two or more hours a week. One or more credit hours.* Mr. Fitch, Mr. Crofutt, Mr. Bennett

101, 102. Special Laboratory.—An original investigation, open only to graduate students. It is not expected in this course that the student will confine his work to a minimum number of hours a week. *Five or more credit hours.* Mr. Fitch, Mr. Crofutt, Mr. Bennett

CHEMISTRY

Professor Brautlecht; Professor Bray; Associate Professor Brann; Associate Professor Jenness; Assistant Professor Otto; Assistant Professor Gilliland; Mr. Caulfield; Mr. Osborn; Mr. Bogan; Mr. Tomlin; Mr. Martin

Chemistry is a natural physical science which has to do with substances and their changes. It is an experimental science and is closely associated with our modern civilization and our economic life. Educationally, its objective is to furnish some understanding of the substances which make up the earth, air, and animal and plant products, and of the changes associated with such substances. It is applied to industry, agriculture, food, clothing, shelter, and health and disease. An adequate knowledge of chemistry is required in the study of modern medicine, and analytical chemistry is frequently recommended in the preparation for the study of law. Thus the fundamentals of chemistry are applicable to many spheres of human interest and, in general, aid in providing some foundation for the enrichment of life.

The science and mathematics group requirement in the College of Arts and Sciences may be met by completing Course 1, 2.

Students taking chemistry as a major subject in the College of Arts and Sciences must complete satisfactorily Courses 1, 2, 31, 40, 51, 52, 71 and 72. Some biological science is required, also some mathematics and physics.

1, 2. General Chemistry.—This course deals with the general principles of the science and the elements of qualitative analysis. Lecture, *one*

hour a week; recitation, *one hour a week;* laboratory, *four hours a week.* One breakage card. *Four credit hours.*

Mr. Jenness and Members of the Departmental Staff

1a, 2a. General Chemistry.—A course similar to Course 1, 2, but for students who have not submitted units in chemistry for entrance requirements. Lecture and recitation, *three hours a week* (the second recitation period is optional for those students doing satisfactory work) ; laboratory, *four hours a week.* One breakage card. *Four credit hours.* Equivalent to 1, 2.

Mr. Jenness and Members of the Departmental Staff

31. Qualitative Analysis.—This course includes a thorough and extended study of the general reactions of substances with their qualitative separation and identification and the examination of industrial and commercial products. Prerequisite, Course 1, 2. Lectures and recitations, *two hours a week;* laboratory, *eight hours a week.* Two breakage cards. *Five credit hours.* Mr. Otto

37. History of Chemistry.—Recitation, *one hour a week. One credit hour.* Mr. Gilliland

40. Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric, volumetric, and electrolysis methods. Prerequisite, Course 31. Classroom, *one hour a week;* laboratory, *eight hours a week.* Two breakage cards. *Four credit hours.* Mr. Otto

42. Chemical and Engineering Computations.—Computation procedures employed by chemists and chemical engineers, including use of slide rule, logarithms, etc. Lectures and recitations, *two hours a week. Two credit hours.* Mr. Otto, Mr. Jenness

51, 52. Organic Chemistry.—Lectures, recitations, and laboratory work. Course 31 is prerequisite. For juniors. Classroom, *three hours a week;* laboratory, *four hours a week.* Two breakage cards. *Five credit hours.*

Mr. Gilliland, Mr. Osborn

71, 72. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lectures, recitations, and laboratory. Prerequisite, Chemistry 40. Calculus and physics are desirable. Classroom, *three hours a week;* laboratory, *four hours a week.* One breakage card. *Five credit hours.*

Mr. Brann, Mr. Tomlin

97, 98. Methods of Teaching Chemistry.—Administration, supervision, costs, discipline, subject matter, questioning, the project method, true and false question tests, texts, examinations, lesson planning, grading or scoring, high-school chemistry, history of the teaching of chemistry, kinds

of courses, laboratory arrangement, purchase of supplies and equipment, laboratory instruction, etc. Course 31 is prerequisite. Classroom, *two hours a week. Two credit hours.* MR. BRAUTLECHT

Other courses in the Department of Chemistry not listed here are described under the College of Technology.

GEOLOGY

These and other courses in Geology are described under the Department of Civil Engineering in the College of Technology.

12. ECONOMIC GEOGRAPHY.—An investigation of the geographical character and economic resources of various subdivisions of the world as determining their position in world trade and commerce. The subject includes such factors as geography, history, natural resources, economics, manufacturing, and customs as they affect trade relations. No prerequisite. Classroom, *three hours a week. Three credit hours.* MR. CHASE

13. PHYSICAL GEOLOGY.—An introduction to the dynamic and structural features of geology. The materials and structures and the geological agents and processes which act upon the materials are treated in a general manner. The relationship of these features of geology to mankind is presented throughout the course. No prerequisite. Classroom, *three hours a week. Three credit hours.* MR. CHASE

14. HISTORICAL GEOLOGY.—A study of the past history of the Earth. The distribution of land and sea areas, the prevailing types of rock, climatic conditions through each successive period. The type of life characteristic of each age and its development will be discussed. Course 13 or 16 is prerequisite. Classroom, *three hours a week. Three credit hours.* MR. CHASE

BOTANY

Courses in the Department of Botany are described under the College of Agriculture.

ZOOLOGY

PROFESSOR MURRAY; ASSISTANT PROFESSOR PACKARD; ASSISTANT PROFESSOR MORTENSEN; DR. NELSON; MR. FLYNN; MR. MENDALL

Zoology is the branch of biological science which deals with the study of animal life. A knowledge of the general principles of zoology is prerequisite

to an understanding of the relationships which exist between man and his animal environment, and serves as a basis for the study of the mental and social side of human behavior.

The department offers introductory courses for students who desire a survey of the whole field, and advanced courses for those who seek training in specific subjects. Curricula of courses prerequisite for admission to graduate, medical, dental, and nursing schools are also offered.

1. General Zoology.—A one-semester course in the fundamentals of zoology, illustrated by laboratory study of typical forms from the various groups of the animal kingdom. This course is designed to meet the requirements of students in the College of Agriculture. Together with Botany 2 it may be taken to fulfill the science requirement in the College of Arts and Sciences. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* Mr. Murray, Miss Mortensen

3, 4. Animal Biology.—A two-semester course in the fundamental principles of animal life, with laboratory study of the structure and function of organ systems in typical forms from the various groups of the animal kingdom. This course is prerequisite to all advanced courses in the department and fulfills the science requirement in the College of Arts and Sciences. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* Mr. Murray, Mr. Flynn

5. Elementary Physiology and Hygiene.—The principles of anatomy, physiology, and hygiene applied especially to human well-being. Required of all first-year women except those in the Department of Home Economics. Classroom, *two hours a week. Two credit hours.* Miss Mortensen

6. Ornithology.—A course which deals with the characteristics of birds, their life histories, economic importance, and aesthetic value. Lectures are supplemented by laboratory study of skins and mounted specimens and by directed field observation. Open to qualified students. Classroom, *one hour a week;* laboratory, *four hours a week. Three credit hours.* Mr. Mendall

8. Invertebrate Zoology.—A study of invertebrate animals with reference to their anatomy, life histories, and phylogenetic relationships. The course is designed for students interested in aquatic or marine biology, and serves as a basic course for summer work at the Lamoine Marine Laboratory. Open to qualified students. Classroom, *one hour a week;* laboratory, *four hours a week. Three credit hours.* Miss Mortensen

12. Anatomy and Physiology.—A course which takes up the general principles of animal life and the structure and function of organs and organ systems, with special emphasis placed on higher mammalian forms. Designed

for students in the Department of Home Economics, but open, by permission of the instructor, to all qualified women students. Classroom, *three hours a week;* laboratory, *four hours a week. Five credit hours.*

MR. MURRAY, MR. PACKARD

15, 16. COMPARATIVE ANATOMY.—A comparative study of the structure, origin, and history of the vertebrate organ-systems. Prerequisites, Zoology 1 and Botany 2, or Zoology 3, 4, passed satisfactorily. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.*

MR. NELSON, MR. MENDALL

18. VERTEBRATE EMBRYOLOGY.—A study of the development and formation of tissues, organs, and organ-systems in vertebrates. Prerequisite, Course 15, 16, passed with a grade of C or better. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* MR. FLYNN

37, 38. GENERAL PHYSIOLOGY.—A study of the physico-chemical forces of the vital processes of plants and animals; the more special phenomena in higher animals, with their bearing on human physiology. Prerequisites, two years of chemistry, one year of physics, and either Zoology 3, 4, or Zoology 1 and Botany 2. Classroom, *two hours a week;* laboratory, *four hours a week. Four credit hours.* MR. PACKARD

41. HISTOLOGY.—A study of animal tissues and of the methods of preparing microscopic slides. Admission by arrangement with the instructor. Prerequisite, two years of zoology. Classroom, *one hour a week;* laboratory, *six hours a week. Three credit hours.* MR. NELSON, MR. MENDALL

44. BIOLOGICAL THEORIES.—A discussion of the more important generalizations concerning the biological sciences designed to portray the growth and development of biological knowledge as a phase of intellectual culture, and to indicate the value of such knowledge to human welfare. Open only to zoology majors in the junior and senior years and to others upon the written approval of the instructor. Classroom, *two hours a week. Two credit hours.*

MR. NELSON

47, 48. PROBLEMS IN ZOOLOGY.—Open to juniors and seniors who may have special interest, and special qualification, in some phase of zoology. The approval of the instructor concerned must be obtained before registering for this work. *Credit to be arranged in each case.* MR. MURRAY

55, 56. ZOOLOGICAL SEMINAR.—A consideration of the historical and current literature which expresses the trends of thought in biological science. Required of all senior majors and graduates majoring in zoology. Classroom, *one hour a week. One credit hour.* THE STAFF

Opportunity is given for graduate work in the various phases of zoology under the direction of the members of the Department. Students with adequate preparation may register by special written permission for the following courses:

105, 106. Problems in Zoology.

111, 112. Problems in Physiology.

School of Education

FACULTY OF INSTRUCTION

Olin Silas Lutes, Ph.D., *Dean and Professor of Education*
Ava Harriet Chadbourne, Ph.D., *Associate Professor of Education*
Ernest Jackman, A.M., *Associate Professor of Education*
John Raymond Crawford, Ph.D., *Assistant Professor of Education*
Edith Grace Wilson, M.A., *Instructor in Education*
Charles Lester Smith, A.B., *Instructor and Critic Teacher*
Veysey Hiram Robinson, B.Pd., *Instructor and Critic Teacher*
Grace Stetson Grant, A.B., *Critic Teacher*
Helen Louise Hathorne, B.A., *Critic Teacher*
Alice Lowe Brown, A.B., *Critic Teacher*
Sadie Jane Thompson, M.S., *Critic Teacher*
Horace Alcander Croxford, B.A., *Critic Teacher*
Caroline Ella Collins, B.A., *Critic Teacher*

Heads of coöperating Departments of the Colleges of Arts and Sciences and Technology.

Charles Andrew Brautlecht, Ph.D., *Professor of Chemistry and Chemical Engineering*
Milton Ellis, Ph.D., *Professor of English*
François Joseph Kueny, L. ès L., *Professor of French*
Edward French Dow, Ph.D., *Associate Professor of History and Government*
George Davis Chase, Ph.D., *Professor of Latin*
Harley Richard Willard, Ph.D., *Professor of Mathematics*
Albert Lewis Fitch, Ph.D., *Professor of Physics*
Charles Alexius Dickinson, Ph.D., *Professor of Psychology*
Joseph Magee Murray, Ph.D., *Professor of Zoology*

GENERAL INFORMATION

The School of Education offers professional training to secondary teachers, superintendents, principals, and supervisors. Students will ordi-

narily enter with Junior standing, having had the first two years of work in either a liberal arts college or a normal school. Those with a different type of training may enter as special students until Junior standing is attained.

ADMISSION

Students in the College of Arts and Sciences

Those students in the College of Arts and Sciences of the University of Maine who plan to teach are given the opportunity to transfer to the School of Education at the beginning of their junior year. Such students should take the regular course as prescribed by the College of Arts and Sciences during the freshman and sophomore years, including in particular the course in General Psychology and such basic courses in other fields as will lay the foundation for a field of concentration.

At the beginning of the sophomore year, such students should register their intention to teach in the office of the Dean of the School of Education, and secure his approval as well as the approval of the Dean of the College of Arts and Sciences for their courses of study.

To be admitted to the School of Education students must have made a grade of C or better in at least three-fourths of their entire work during the freshman and sophomore years.

These students will be candidates for the degree of Bachelor of Arts in Education on the completion of their program in the School of Education.

Normal School Graduates

Graduates of the two-year course in normal schools who rank in the upper half of their graduating class, and who are recommended for college work by their principal, will be admitted to the School of Education with Junior standing. These graduates will be given fifty-four semester hours of advanced credit and by carrying a full program may graduate on the completion of two years of work. This rule is subject to modification if experience should warrant it. Successful teaching experience will be taken into consideration in passing on qualifications for admission.

Graduates of three-year training courses for junior high school teachers may be admitted in the same manner and be given eighty hours of credit and Senior standing. This will make it possible to complete the requirements for graduation in a year and one or two summer sessions, depending on how heavy a program is carried.

All normal school graduates will be expected to meet the requirement of a field of concentration in academic subjects, except that those who plan to enter administrative or supervisory work, or to remain in elementary school work, may be permitted to take this work in Education and Psychology. In either case any work previously taken at the normal school which lies within the field chosen will be given due credit toward the requirements.

Normal school graduates who are interested in entering the School of Education should request their principal to send a transcript of their record together with a statement giving their class rank to the Registrar of the University. These should be accompanied by a recommendation of the candidate by the principal.

Students who come from the normal schools will ordinarily be candidates for the Bachelor of Science in Education degree.

Graduates from the normal training departments of commercial schools approved by the State Department of Education for such work, whose ranks have placed them in the upper half of their graduating class, and who have had two years of successful teaching experience, may be admitted to the School of Education with a maximum of forty semester hours of advanced credit.

Graduates of other types of teacher-training institutions will be considered on their merits as special cases.

GRADUATION REQUIREMENTS

A total of 125 semester hours of college work is required for graduation. Of this total, approximately 24 hours will be required in Education and Psychology, and 40 to 50 hours in the field of concentration, all of which must be carried with a grade of C or better.

In addition, three-fourths of all work counted toward a degree must be completed with a grade of C or better.

Professional Subjects Required

Ed 29 (or 30)—Practice Teaching
Ed 51, 52, 53, or 54—History of Education
Ed 59—Principles of Secondary Education
Ed 65 (or 66)—Educational Measurement
Ed 77 (or 78)—Principles and Methods of High School Teaching
Py 1, 2—General Psychology
Py 66—Educational Psychology
Special Methods (one such course to be selected in a subject within the field of concentration)

Besides these specific requirements in strictly professional subjects, students will be strongly advised to take general courses in a number of subjects of vital importance as a part of the background of any teacher or educator, such as biology, economics, English, history and government, and sociology.

Field of Concentration

In order better to meet the needs of the typical high-school situation, the traditional requirement of a single major subject will be replaced by that of a field of concentration in the academic subjects. This field of concentration must include a minimum of 40 to 50 semester hours in a group of related subjects commonly taught in the secondary schools, the exact amount to depend on the number and character of the subjects combined, and the quality of the work done. This work must be carried with a grade of C or better to qualify for a degree in Education, and must be acceptable to the heads of the departments in which it is taken.

This requirement applies to all students whether working for the Bachelor of Arts in Education or the Bachelor of Science in Education degree. However, those who have had teaching experience and who plan to enter administrative, supervisory or elementary school work may be permitted to carry their field of concentration in Education and Psychology instead of academic subjects.

Combinations of subjects which occur frequently in the secondary schools are as follows: French and Latin; English and History; Mathematics and the Natural Sciences; English and Latin; English and French; History and Latin; English, French, and Latin; English, History, and Latin; English, History, and French; History, Civics, Economics, and Sociology.

Subjects which occur in a large variety of combinations are Physical Education, Music, Debating, and Dramatics. Each student will be expected to take sufficient work to attain proficiency in at least one of these fields.

COMPREHENSIVE EXAMINATIONS

Beginning with the Class of 1935 seniors in the School of Education will take a comprehensive oral examination in the subject of education, to be given individually by arrangement during the month of May. Non-resident students will be expected to take the examination beginning with the class of 1936.

The main purpose of this requirement is to enable students in education to develop a better integration of their professional training and outlook. To facilitate this purpose and to compensate in part for the lack of a tutorial

system which usually accompanies a system of comprehensive examinations, a new course, Education 49 (50), is required of students one semester during their senior year.

HONORS COURSE

Attention is called to the tutorial honors course which is open to superior students in education who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section on General Courses.

RESIDENCE REQUIREMENT

A minimum of thirty semester hours of credit must be earned while in residence at the University to qualify a candidate for a degree. This requirement may be met by one academic year of residence, or in case of teachers by attendance in summer sessions. Four summer sessions may be accepted as the equivalent of one academic year provided the work is of distinctly high quality. In either case, this requirement must ordinarily be met after the student has become a candidate for a degree in the School of Education.

Exceptions to these rules will not be permitted except by a vote of the faculty.

A maximum of sixteen semester hours may be earned toward a degree by extension work, of which not over eight hours may be taken by correspondence.

DEGREES

(1) Bachelor of Arts in Education. This degree will be given to students who do the first two years of work in the College of Arts and Sciences, or the equivalent thereof, meet their entrance requirements, and their curricular requirements for the first two years. Candidates for this degree will be required to complete a minimum of 40 to 50 hours in a group of related academic subjects which are commonly taught in the public schools, with a grade of C or better.

(2) Bachelor of Science in Education. This degree will be given to students who are admitted from normal schools with advanced standing. Requirements for the degree will include a field of concentration in the academic subjects as for the B.A. degree, and the same professional courses.

In meeting both these requirements, however, due credit will be given for the courses which have been previously taken in the normal school course.

PROFESSIONAL CERTIFICATES

On the successful completion of the above program students will be recommended to the State Department of Education for the Professional Secondary Certificate.

Students will be recommended for the various Special Certificates on the satisfactory completion of programs of study which have been approved by the State Department. Such programs are now under preparation in Physical Education, Music, and Junior High School Education.

Courses of Instruction

For courses in Psychology, see Department of Psychology in the College of Arts and Sciences

29 (30). Supervised Student Teaching.—A course in student teaching in academic subjects. Open to a limited number of seniors recommended by the Dean of the School of Education and approved by the heads of the academic departments. Preference is given to those who have completed Education 77 or 78. *Five hours a week* for nine weeks. *Two hours credit.*

Mr. Jackman

43 (44). Character Education.—A study of the nature of character and a critical appraisal of the means employed to cultivate it in young people with reference to theories of mental hygiene and progressive education. Prerequisite, Psychology 1, 2. *Three hours a week.* Miss Wilson

49 (50). Education Seminar.—This course is required of seniors in education one semester, and is designed to help integrate the various courses in education for the comprehensive examination. *Two hours a week.*

Departmental Staff

51. History of Education in the United States.—Evolution of education, educational institutions, school systems and practices of the American people. Open to juniors and seniors. *Three hours a week.*

Miss Chadbourne

52. History of Education in Maine.—A study of the evolution of the educational system in the State from its earliest period to the present time. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

53. History of Ancient and Medieval Education.—Historical analysis and interpretation of the more important elements in modern education derived from the Hebrews, Greeks, Romans, Middle Ages, and Renaissance. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

54. History of Modern Education.—Evolution of present-day educational theory; institutions and practices of modern civilizations from the time of the Reformation up to the present. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

56. History of Education of Women.—A study of the development of the education of women from the time of the Greeks to the present, with an especial emphasis on American education. Open to juniors and seniors. *Three hours a week.* Miss Chadbourne

59. Principles of Secondary Education.—A course in the application of the principles of education with special reference to the problems of high-school teaching. The aims of secondary education in a democracy in terms of skills, knowledges, tastes, and ideals which are demanded in modern life. Primarily for juniors and seniors. Open to sophomores by permission. *Three hours a week.* Mr. Lutes

61. School Administration.—The general problems of school organization and administration in the United States. Primarily for seniors. Open by permission. *Three hours a week.* Mr. Lutes

62. Secondary School Administration and Supervision.—A practical course for those who are looking forward to positions as high-school principals or supervisors. Problems of organization, teacher selection and rating, improvement of teachers in service, salary schedules, extra-curricular activities, testing programs, and techniques of supervision will be emphasized. Primarily for seniors. Open by permission. *Three hours a week.* Mr. Lutes

63. Junior High School Methods.—The course aims to present a theory of the junior high school based upon the psychology of adolescence, and to show the concrete consequences of such theory in the formation and treatment of a desirable curriculum. Open to juniors and seniors. Given in 1935-36 and alternate years. *Two hours a week.* Mr. Jackman

65 (66) Educational Measurements.—An introduction to educational measurements including principles of measurement; informal, standard, and group mental testing; and the uses of elementary statistics in educational measurements. Open to juniors and seniors. *Three hours a week.* Mr. Crawford

68. Vocational and Educational Guidance.—The aim is to present to prospective teachers the general problem of guidance in junior and senior high schools, with especial reference to the vocational phase, organization for guidance, necessary materials and techniques of counseling. Open to juniors and seniors. *Three hours a week.* Mr. Jackman

71. Psychology of Secondary Education.—A study of the adolescent age and its characteristics. Psychological principles which determine the scope and character of secondary education. Open to students who have passed Psychology 1, 2 with a grade of C; to others by permission. *Three hours a week.* Mr. Lutes

74. Extra-Curricular Activities in the Secondary School.—This course is designed to acquaint the prospective high-school teacher with the nature and scope of non-academic cultural and recreational activities related to the needs of adolescence, and to aid the teacher in developing a technique

for their promotion, and for their correlation with the usual academic courses. Given in 1934-35 and alternate years thereafter. *Two hours a week.*

Mr. Jackman

75. Teaching the Social Sciences in Secondary Schools.—The purpose of the course is to acquaint the prospective teacher of the social sciences with a point of view and vital methods of presentation that will tend to make these subjects effective in the everyday problems of living. Geography, biology, psychology, economics, political science, ethics, history and sociology are considered, the greater emphasis being placed on the subjects likely to appear in the average high-school curriculum. Open to juniors and seniors. Given in 1935-36 and alternate years. *Two hours a week.*

Mr. Jackman

77 (78). Principles and Methods of Teaching in Secondary Schools.—A general course in methods for prospective high-school teachers. Open to seniors and juniors who have had General Psychology. *Three hours a week.* Mr. Jackman

81. Supervision in the Elementary School.—This course will attempt to define the duties of the administrative officer of the elementary school in so far as such duties are concerned with supervision and improvement of instruction. The theory of supervision in general and specific methods of supervision of the prominent elementary school subjects will be considered. Open to normal school graduates, and students with teaching experience. Others by permission. *Two hours a week.* Mr. Crawford

84. Administration of the Elementary School.—A course for prospective superintendents and elementary school principals. The following topics will be considered: origin of the elementary school, the meaning of elementary education, the place of the elementary school in our total school system, and duties of the administrative officer, such as, personnel problems, curricular and instructional material selection, time allotment, and reports. Open to normal school graduates and students with teaching experience; to others by permission. *Two hours a week.* Mr. Crawford

95, 96. Philosophy of Education.—A course for seniors and graduate students designed primarily for the reading and discussion of conflicting factors in education with a view to their criticism and coördination. *Two hours a week.* Miss Chadbourne

97, 98. Current Problems in Education.—Each student is assigned special problems in the field of education. Primarily for majors in education. Open by permission to others. Seniors only. *Two hours a week.*

Mr. Lutes and Staff

105. Methods of Research in Education.—A course in principles and techniques of educational research. Designed primarily for graduate students writing theses in education. Opportunity will be afforded to use thesis problems to illustrate the principles and techniques emphasized in the course. This course will be required of graduate students majoring in education. *Two hours a week.* Mr. Lutes

College of Technology

FACULTY OF INSTRUCTION

PAUL CLOKE, E.E., Eng.D., *Dean of the College of Technology and Director, Maine Technology Experiment Station*
CHARLES PARTRIDGE WESTON, C.E., M.A., *Professor of Mechanics*
WILLIAM EDWARD BARROWS, B.S., E.E., *Professor of Electrical Engineering*
WILLIAM JORDAN SWEETSER, S.B., *Professor of Mechanical Engineering*
CHARLES ANDREW BRAUTLECHT, Ph.D., *Professor of Chemistry and Chemical Engineering*
EMBERT HIRAM SPRAGUE, B.S., *Professor of Sanitary Engineering*
ARTHUR ST. JOHN HILL, E.E., M.S.E., *Professor of Electrical Engineering*
BENJAMIN CALVIN KENT, B.S., *Professor of Engineering Drafting*
PAUL DECOSTA BRAY, B.S., Ch.E., *Professor of Pulp and Paper Technology*
WESTON SUMNER EVANS, M.S., *Professor of Civil Engineering*
ALPHEUS CROSBY LYON, S.B., C.E., *Associate Professor of Civil Engineering*
BERTRAND FRENCH BRANN, S.M., *Associate Professor of Chemistry*
HAROLD WALTER LEAVITT, C.E., M.S., *Associate Professor of Civil Engineering*
WALTER JOSEPH CREAMER, B.S., E.E., B.A., *Associate Professor of Electrical Communication*
HARRY DEXTER WATSON, M.S., *Associate Professor of Mechanical Engineering*
LYLE CLAYTON JENNESS, M.S., *Associate Professor of Chemistry*
CARL EVERETT OTTO, Ph.D., *Assistant Professor of Chemistry*
EVERETT LOUIS ROBERTS, B.S., *Assistant Professor of Electrical Engineering*
IRVING HENRY PRAGEMAN, Ph.B., M.E., *Assistant Professor of Mechanical Engineering*
EARL MAYNARD DUNHAM, M.A., *Assistant Professor of Engineering Drafting*
WILLIAM LESTER GILLILAND, Ph.D., *Assistant Professor of Chemistry*
EVERETT WILLARD DAVEE, *Instructor in Mechanical Engineering*
EVERETT JOSHUA FELKER, B.S., *Instructor in Civil Engineering*
HARRY ROY PERKINS, *Instructor in Mechanical Engineering*
JOHN GEORGE LESLIE CAULFIELD, M.S., *Instructor in Pulp and Paper Technology*

KENNETH GERARD CRABTREE, S.B., *Instructor in Electrical Engineering*
THERON ALONZO SPARROW, B.S., *Instructor in Mechanical Engineering*
LAWRENCE LEWIS OSBORN, A.M., *Instructor in Chemistry*
EDGAR JUNIOR BOGAN, A.M., *Instructor in Chemistry*
RALPH ALBERT SAWYER, B.S., *Instructor in Engineering Drafting*
LEONIDAS DACOSTA STEPHENSON, JR., B.S., *Instructor in Civil Engineering*
WILBUR EVERETT TOMLIN, A.M., *Instructor in Chemistry*
WARREN HERBERT BLISS, M.S., *Instructor in Electrical Engineering*
HUGH DONALD CHASE, S.M,. *Instructor in Civil Engineering*
FREDERIC THURMAN MARTIN, Ph.D., *Instructor in Chemistry*
CECIL CLOUGH TYRRELL, M.S., *Instructor in Mechanical Engineering*
GERTRUDE ELVIRA EBBESON, B.Arch., *Special Lecturer in Engineering Drafting*
NEIL MOODY CALDERWOOD, B.S., *Graduate Assistant in Personnel*
HERBERT BURR ABBOTT, *Mechanician in Mechanical Engineering*
RALPH FREEMAN BOWDEN, *Electrician in Electrical Engineering*

GENERAL INFORMATION

The College of Technology provides technical instruction in chemistry, various branches of engineering and Pulp and Paper Technology. The various engineering curricula have been arranged to fit the needs of most students. Although not stated in the outline of courses, bands of electives have been arranged for the student having decided aptitudes or preference, so that a sequence of studies in any one of several groups of non-technical subjects, which will especially train him for work in those fields in which he is interested, may be pursued. These elective groups are: (1) mathematics and science, (2) economics and psychology, (3) history, psychology, and sociology, (4) foreign language, (5) literature.

Those students showing marked inventive or research abilities are guided to studies in mathematics and science; those with tendencies for commercial or managerial work are advised to elect the second or third group; and for the students with strong preference for language or literature, the fourth and fifth groups are provided.

Orientation lectures, which engineering freshmen are required to attend, and conferences with faculty advisers during his first year are designed to assist the freshman in the final selection of his course.

Under each of the curricula described below is given a tabulated statement of the subjects pursued and the amount of work required. The college comprises:

Chemical Engineering Curriculum
Chemistry Curriculum
Civil Engineering Curriculum
Electrical Engineering Curriculum
General Engineering Curriculum
Mechanical Engineering Curriculum
Pulp and Paper Technology Curriculum

The following requirements for graduation are common to all curricula in this college:

1. A total of 143 semester hours exclusive of military and physical training. Three of these hours may be for thesis.
2. Drawing, four semester hours.
3. Language: English and Public Speaking, twelve semester hours with a minimum of two semester hours and a maximum of four semester hours of Public Speaking.
4. Mathematics, eighteen semester hours.
5. Military science, seven semester hours. Physical Training, two years.
6. Science: Chemistry, eight semester hours; Physics, ten semester hours.

At graduation in any of these curricula the student receives the degree of Bachelor of Science.

Upon the completion of one year's prescribed work in residence, including the presentation of a satisfactory thesis, he may receive the degree of Master of Science. Five or more years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive a professional degree.

HONORS COURSE

Attention is called to the tutorial honors course which is open to superior students in engineering who may desire to supplement their field of concentration by study under individual tutorial guidance. A fuller description of this course is to be found at the beginning of the section devoted to General Courses.

MAINE TECHNOLOGY EXPERIMENT STATION

Staff and Assistants

Paul Cloke, E.E., Eng.D., *Director*
Harold Walter Leavitt, C.E., M.S., *Secretary*

WILLIAM EDWARD BARROWS, B.S., E.E., *Professor of Electrical Engineering*
CHARLES ANDREW BRAUTLECHT, Ph.D., *Professor of Chemistry and Chemical Engineering*
PAUL DECOSTA BRAY, B.S., Ch.E., *Professor of Pulp and Paper Technology*
WESTON SUMNER EVANS, M.S., *Professor of Civil Engineering*
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WILLIAM LESTER GILLILAND, Ph.D., *Assistant Professor of Chemistry*
CARL EVERETT OTTO, Ph.D., *Assistant Professor of Chemistry*
WARREN HERBERT BLISS, M.S., *Instructor in Electrical Engineering*
ROGER LEE ANNIS, M.S., *Research Assistant in Chemistry*
EDNA R. BISHOP OTTO, A.M., *Research Assistant*
HORACE ASA PRATT, B.S., *Assistant Engineer*
WILLIAM FRANCIS SCAMMAN, M.A., *Editor of Bulletins*
JOHN H. SWEATT, B.A., *Bituminous Chemist for the State Highway Commission*
CLAYTON LEONARD SAWYER, *Highway Laboratory Assistant*

General Statement

By action of the Board of Trustees, June, 1915, the establishment of a Maine Technology Experiment Station was authorized. This station is under the direct control of the Dean of the College of Technology and the heads of the departments.

Income

The income of the Station is derived from University appropriations and from the State Highway Department.

Object

The objects of the Station are to carry on practical research in engineering subjects, make investigations for State boards and municipal authorities, furnish scientific information to the industries of the State, and distribute accurate scientific knowledge to the people of the State.

Equipment

Most of the Station offices and laboratories are at present located in Wingate Hall, described in the section on University buildings. The station is well equipped for the testing of concrete and highway materials, both bituminous and non-bituminous. Crosby laboratory is available for researches in the fields of hydraulics, steam-engineering, gas-engineering, metallography, and strength of materials. The new electrical power laboratory in Lord Hall includes among its equipment a 150,000 volt testing transformer and standard instruments for calibration purposes. The new communication laboratory in this building offers facilities for telephone transmission testing and radio research. The Department of Pulp and Paper Technology in Aubert Hall is equipped for the testing of pulp and paper products. The highway materials laboratory in the basement of Wingate Hall is equipped jointly by the Civil Engineering Department and the Maine State Highway Department.

Investigations

The principal line of research has been in the field of concrete and concrete materials. Some work has also been started in the pulp and paper industry. Researches are also being conducted in the electrical, mechanical, and chemical fields. Recently a State Highway Materials Survey, in cooperation with the Maine State Highway Commission, has been completed. Approximately three thousand samples of sand, gravel, and rock have been located and tested for suitability for highway use. Volume I, Parts I and II, has already been published.

Publications

The Station issues two series of publications: Bulletins and Papers. It has issued thirty Bulletins and fifteen Papers. The papers have been issued as reprints from such technical journals and magazines as: Proc. Nat. Acad. of Sciences, Proc. Am. Soc. Testing Materials, Proc. Am. Conc. Inst., Proc. Am. Soc. Civil Eng., Electrical Engineering, Journal Me. Assoc'n of Engrs., Industrial and Engineering Chemistry.

CURRICULA

FRESHMAN YEAR

Common to all engineering courses and Chemistry

Fall Semester					*Spring Semester*				
Subject			Hours			Subject		Hours	
			Rec.	Lab.	Cr.			Rec.	Lab.	Cr.
Ch	1	Gen. Chem. or Adv. Gen. Chem.	2	4	4	Ch 2	Gen. Chem. or Adv. Gen. Chem.	2	4	4
Eh	1	Comp. & Lit.	3	0	3	Eh 2	Comp. & Lit.	3	0	3
Md	1	Funds. Draft.	0	4	2	Md 2	Ely. Mach. Draft.	0	4	2
Ms	1	Trigonometry	2	0	2	Ms 6	Anal. Geom.	4	0	4
Ms	3	Algebra	2	0	2	Mt 2	Military	2	1	1½
Mt	1	Military	2	1	1½	Ps 2	Elec., Mag., Light, and Sound	5	2	5
Ps	1	Mech. & Heat.	5	2	5	Pt 2	Phy. Education	0	2	0
Pt	1	Phy. Education	0	2	0	Gc 6	Orientation	1	0	½
Gc	5	Orientation	1	0	½					

Chemical Engineering Curriculum

This curriculum is offered to furnish training in engineering and chemistry. The first two years are almost identical with those under the Chemistry curriculum, but in the junior and senior years, the students enrolled take, in part, fundamental courses in mechanics, mechanical and electrical engineering, etc., while in the Chemistry curriculum students take subjects having a chemical and general scientific objective. Chemical engineering graduates will be prepared to enter the profession of chemical engineering and to occupy positions as production foremen, research chemists, chemists, and engineers in industrial plants, in Federal and other government civil service laboratories, and in bleacheries, dye houses, chemical plants, rubber works, gas works, sugar refineries, etc. Some chemical engineering students also pursue advanced work and enter the fields of law, medicine, and teaching.

FRESHMAN YEAR

Common to all engineering courses. Outlined above.

The student must register for all courses listed in the first group for his year. Courses not italicized in this group *must be passed* before he is eligible

for graduation. Courses in italics, if failed, may have an approved elective substituted for them.

From the elective list the student must select three additional hours' credit in Chemistry courses, five in other engineering departments, two in English or Public Speaking, and sufficient additional hours to bring his total to that required by the college, namely, 143 exclusive of Military. See also statements on pages 212 and 213.

SOPHOMORE YEAR

Fall Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	31	Qual. Anal.	2	8	5
Ms	7	Diff. Calculus	5	0	5
Mt	3	Military	2	1	2
Pb	1	Pub. Speaking	2	0	2
Ps	*23*	*Elec. Meas.*	*0*	*3*	*1½*
Pt	3	Phy. Education	0	2	0
		Electives	—	—	3-5

Spring Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	40	Quant. Anal.	1	8	4
Me	*28*	*Kinematics*	*2*	*0*	*2*
Ms	8	Int. Calculus	5	0	5
Mt	4	Military	2	1	2
Ps	*24*	*Elec. Meas.*	*0*	*3*	*1½*
Pt	4	Phy. Education	0	2	0
		Electives	—	—	4-6

SUGGESTED ELECTIVE COURSES

Elective Band 1

Ch	37	Hist. of Chem.	1	0	1
Fr	5	Adv. French	3	0	3
Gm	1	First-Yr. German	5	0	5
Me	9	Machine Work	0	4	1½

Elective Band 2

Es	1a	Prin. of Econ.	3	0	3
Es	1b	Prin. of Econ.	2	0	2
Md	3	Des. Geometry	0	6	2

Elective Band 3

Es	1	Prin. of Sociology	3	0	3

SUGGESTED ELECTIVE COURSES

Elective Band 1

Ch	42	Chem. Computations	2	0	2
Ch	44	Metallurgy	3	0	3
Ch	48	Mineralogy	1	4	3
Fr	6	Adv. French	3	0	3
Gm	2	First-Yr. Ger.	5	0	5
Me	10	Machine Work	0	4	1½
Ps	10	Meteorology	3	0	3

Elective Band 2

Ce	12	Economic Geog.	3	0	3
Es	2a	Prin. of Econ.	3	0	3
Es	2b	Prin. of Econ.	2	0	2
Md	4	Adv. Mach. Drafting	0	6	2

Elective Band 3

Es	2	Prin. of Soc.	3	0	3

		Elective Band 4				Elective Band 4		
Fr	5	Adv. French 3	0	3	Fr 6	Adv. French 3	0	3
Gm	1	First-Yr. German 5	0	5	Gm 2	First-Yr. Ger....5	0	5
		Elective Band 5				Elective Band 5		
Eh	7	Second-Yr. Comp. 3	0	3	Eh 8	2nd-Yr. Comp. ..3	0	3
					Pb 2	Pub. Speaking...2	0	2

JUNIOR YEAR

Fall Semester					*Spring Semester*			
Subject			Hours		Subject		Hours	
			Rec.	Lab. or Comp.	Cr.		Rec.	Lab. or Comp.	Cr.
Ch	51	Organic Chem....3	4	5	Ch 52	Organic Chem...3	4	5
Ch	71	Phys. Chem. 3	4	5	Ch 72	Phys. Chem.....3	4	5
Mn	53	Mechanics 3	0	3	Ee 30	D. C. Machinery 2	0	2
		Electives .....—	—	5-8	Mn 54	Mechanics 3	0	3
						Electives .....—	—	3-6

		Suggested Elective Courses				Suggested Elective Courses		
		Elective Band 1				Elective Band 1		
By	1	Bacteriology and 0	6	3	Ce 14	Hist. Geology...3	0	3
By	3	Bacteriology 2	0	2	Ch 62	Technical Anal. .1	8	4
Ce	13	Phys. Geology....3	0	3	Me 66	Machine Design.2	3	3
Ch	61	Adv. Quant. Anal. 1	8	4	Ms 56	Diff. Equations..3	0	3
Pa	65	Pulp Technology 2	0	2	Pa 66	Pulp Technology 2	0	2
Ps	61	Heat 3	0	3				
Ps	69	Mod. Phys. Theories 3	0	3				
		Elective Band 2				Elective Band 2		
Es	51	Corp. Finance....3	0	3	Es 52	Social Con. of Ind. 3	0	3
Es	73	Labor Problems ..3	0	3				
Ms	17	Invest. Theory ...2	0	2	Ms 18	Invest. Theory..2	0	2
Py	1	Gen. Psychology..3	0	3	Py 2	Gen. Psychology 3	0	3
Py	5	App. Psychology 3	0	3	Py 6	App. Psychology 3	0	3
					Py 12	Advertising 3	0	3

	Elective Band 3			
Hy 73	Inter. Relations	3	0	3
Py 1	Gen. Psychology	3	0	3
Py 5	App. Psychology	3	0	3
	Elective Band 4			
	Fr. or German	3	0	3

	Elective Band 3			
Hy 74	Amer. For. Relations	3	0	3
Py 2	Gen. Psychology	3	0	3
Py 6	App. Psychology	3	0	3
Py 12	Advertising	3	0	3
	Elective Band 4			
	Fr. or German	3	0	3
	Elective Band 5			
Eh 78	Creative Writing	3	0	3

SENIOR YEAR

Fall Semester

Subject		Hours		
		Rec.	Lab. or Comp.	Cr.
Ch 77	Industrial Chem.	3	0	3
Ch 93	*Econ. of Chem.*	*2*	*0*	*2*
Ee 31	Alter. Curr.	2	0	2
Ee 33	Elec. Lab.	0	3	1½
Eh 5	*Technical Comp.*	*2*	*0*	*2*
Me 43	Heat Engineering	3	0	3
	Electives	—	—	4-8

Spring Semester

Subject		Hours		
		Rec.	Lab. or Comp.	Cr.
Ch 78	Els. of Chem. Eng.	3	0	3
Ch 80	Inorg. Chem. Tech.	2	0	2
Ch 94	*Econ. of Chem.*	*2*	*0*	*2*
Me 40	Mechanical Lab.	0	3	1½
Me 98	*Management*	*2*	*0*	*2*
	Electives	—	—	7-11

SUGGESTED ELECTIVE COURSES

	Elective Band 1			
Ce 35	Hydraulics	2	0	2
Ch 49	Thesis	Arr.		1-3
Ch 75	Microscopy	0	6	2
Ch 91	Adv. Org. Chem.	3	0	3
Ch 95	Electro-Chem.	3	0	3
Ch 101-107	Investigation	Arr.		0-3
Gm 15	Scientific German	2	0	2
Mn 101	Adv. Mechanics	2	0	2
Ms 53	Adv. Calculus	3	0	3
Pa 87	Paper Testing & Analysis	0	4	2

SUGGESTED ELECTIVE COURSES

	Elective Band 1			
Ce 26	Hydraulics	3	0	3
Ch 50	Thesis	Arr.		1-3
Ch 76	Microscopy	0	6	2
Ch 92	Adv. Org. Chem.	3	0	3
Ch 96	Electro-Chem.	3	0	3
Ch 102-108	Investigation	Arr.		0-3
Gm 16	Sci. German	2	0	2
Mn 102	Adv. Mechanics	2	0	2
Ms 54	Adv. Calculus	3	0	3

		Elective Band 2					Elective Band 2		
Ce	17	Econ. Geology....2	0	2	Ms	20	Theory of Stat...2	0	2
Ms	19	Theory of Stat...2	0	2	Py	82	Mental Measurement 1	4	3
Py	81	Mental Measurement 1	4	3					
		Elective Band 3					Elective Band 3		
Hy	21	Cur. World Prob. 2	0	2	Hy	22	Cur. World Prob. 2	0	2
Py	81	Mental Measurement 1	4	3	Py	82	Mental Measurement 1	4	3
		Elective Band 4					Elective Band 4		
Gm	15	Scientific German 2	0	2	Gm	16	Sci. German 2	0	2
		Elective Band 5					Elective Band 5		
Eh	9	Modern Lit.....2	0	2	Eh	10	Modern Lit.....2	0	2

Credit will not be given for election of courses covering substantially the same ground as another elected or required course that has been passed, i.e., Ce 35 and Ce 26.

Students desiring to elect any course not on a suggested list may do so only with approval of the major instructor. Such free electives will be limited in number.

Since every university granting the Ph.D. degree requires a reading knowledge of both French and German, it is advisable for the student who may possibly continue with graduate work to be prepared in this respect.

Chemistry Curriculum

This curriculum is designed to give the student not only a thorough technical training, but also a breadth of education which will enable him readily to undertake the great variety of problems which naturally present themselves to a chemist. It differs from the Chemical Engineering curriculum in that the student takes some secondary courses having a general scientific objective instead of secondary courses of an engineering type. The curriculum is a broad one and prepares the student for teaching or for the profession of analytical or research chemist in experiment stations, food laboratories, in dye, chemical, fertilizer, and tanning plants; and for many branches of the government civil service, and the general consulting and analytical work of a professional chemist. Some graduates also pursue advanced studies and enter fields of law, medicine, and teaching.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

The student must register for all courses listed in the first group for his year. Courses not italicized in this group must be passed before he is eligible for graduation. Courses in italics, if failed, may have an approved elective substituted for them.

From the elective list the student must select twelve additional hours credit in Chemistry or Biochemistry courses, ten in any other sciences, two in English or Public Speaking, and sufficient additional hours to bring his total to that required by the college, namely, 143, exclusive of Military.

SOPHOMORE YEAR

Fall Semester

Subject			Hours Rec. or Comp.	Lab.	Cr.
Ch	31	Qual. Anal.	2	8	5
Ch	*37*	*Hist. of Chem.*	*1*	*0*	*1*
Ms	7	Diff. Calculus	5	0	5
Mt	3	Military	2	1	2
Pt	3	Phy. Education	0	2	0
		Electives	—	—	5-8

Spring Semester

Subject			Hours Rec. or Comp.	Lab.	Cr.
Ch	40	Quant. Anal.	1	8	4
Ms	8	Int. Calculus	5	0	5
Mt	4	Military	2	1	2
Pb	2	Pub. Speaking	2	0	2
Pt	4	Phy. Education	0	2	0
		Electives	—	—	5-8

Suggested Elective Courses

Elective Band 1

Fr	5	Adv. French	3	0	3
Gm	1	First-Yr. German	5	0	5
Ps	23	Elec. Meas.	0	3	1½
Zo	3	Animal Biology	2	4	4

Elective Band 2

Es	1a	Prin. of Econ.	3	0	3
Es	1b	Prin. of Econ.	2	0	2

Suggested Elective Courses

Elective Band 1

Ch	42	Chem. Computations	2	0	2
Ch	44	Metallurgy	3	0	3
Ch	48	Mineralogy	1	4	3
Fr	6	Adv. French	3	0	3
Gm	2	First-Yr. Ger.	5	0	5
Ps	10	Meteorology	3	0	3
Ps	24	Elec. Meas.	0	3	1½
Zo	4	Animal Biology	2	4	4

Elective Band 2

Ce	12	Economic Geol.	3	0	3
Es	2a	Prin. of Econ.	3	0	3
Es	2b	Prin. of Econ.	2	0	2

		Elective Band 3				Elective Band 3		
Es	1	Prin. of Sociology	3	0	3	Es 2 Prin. of Soc.	3	0	3
		Elective Band 4				Elective Band 4		
Fr	5	Adv. French	3	0	3	Fr 6 Adv. French	3	0	3
Gm	1	First-Yr. German	5	0	5	Gm 2 First-Yr. Ger.	5	0	5
		Elective Band 5				Elective Band 5		
Eh	7	Second-Yr. Comp.	3	0	3	Eh 8 2nd-Yr. Comp.	3	0	3
Pb	1	Pub. Speaking	2	0	2				

JUNIOR YEAR

Fall Semester

Subject			Hours		
			Rec.	Lab. or Comp.	Cr.
Ch	51	Organic Chem.	3	4	5
Ch	61	Adv. Quant. Anal.	1	8	4
Ch	71	Phys. Chem.	3	4	5
		Electives	—	—	4-7

Spring Semester

Subject			Hours		
			Rec.	Lab. or Comp.	Cr.
Ch	52	Organic Chem.	3	4	5
Ch	72	Phys. Chem.	3	4	5
		Electives	—	—	8-11

SUGGESTED ELECTIVE COURSES

		Elective Band 1				Elective Band 1		
By	1	Bacteriology and	0	6	3	By 2 Bacteriology	0	6	3
By	3	Bacteriology	2	0	2	Ce 14 Hist. Geology	3	0	3
Ce	13	Phys. Geology	3	0	3	Ch 62 Technical Anal.	1	8	4
Ch	97	Teach'g of Chem.	2	0	2	Ch 98 Teach. of Chem.	2	0	2
Mn	53	Mechanics	3	0	3	Mn 54 Mechanics	3	0	3
Pa	65	Pulp Technology	2	0	2	Ms 56 Diff. Equations	3	0	3
Ps	61	Heat	3	0	3	Pa 66 Pulp Technology	2	0	2
Ps	65	Vacuum Tubes	2	0	2				
Ps	69	Mod. Phys. Theories	3	0	3				
		Elective Band 2				Elective Band 2		
Es	51	Corp. Finance	3	0	3	Es 52 Social Con. of Ind.	3	0	3
Es	73	Labor Problems	3	0	3				
Ms	17	Invest. Theory	2	0	2	Ms 18 Invest. Theory	2	0	2
Py	1	Gen. Psychology	3	0	3	Py 2 Gen. Psychology	3	0	3
Py	5	App. Psychology	3	0	3	Py 6 App. Psychology	3	0	3
						Py 12 Advertising	3	0	3

		Elective Band 3					Elective Band 3	
Hy	73	Inter. Relations	3	0	3	Hy 74	Amer. For. Relations	3 0 3
Py	1	Gen. Psychology	3	0	3	Py 2	Gen. Psychology	3 0 3
Py	5	App. Psychology	3	0	3	Py 6	App. Psychology	3 0 3
						Py 12	Advertising	3 0 3
		Elective Band 4					Elective Band 4	
		Fr. or German	3	0	3		Fr. or German	3 0 3
							Elective Band 5	
						Eh 78	Creative Writing	3 0 3

SENIOR YEAR

Fall Semester

Subject			Hours		
			Rec.	Lab. or Comp.	Cr.
Ch	77	Industrial Chem.	3	0	3
Ch	*93*	*Econ. of Chem.*	*2*	*0*	*2*
Eh	5	Technical Comp.	2	0	2
		Electives	—	—	10-14

Spring Semester

Subject			Hours		
			Rec.	Lab. or Comp.	Cr.
Ch	*94*	*Econ. of Chem.*	*2*	*0*	*2*
		Electives	—	—	15-19

Suggested Elective Courses

Elective Band 1

Bc	51	Biochemistry	3	0	3
Bc	57	Biological Colloids	3	0	3
Ch	49	Thesis	Arr.		1-3
Ch	75	Microscopy	0	6	2
Ch	89	Organ. Prepns.	0	4	2
Ch	91	Adv. Org. Chem.	3	0	3
Ch	95	Electro-Chem.	3	0	3
Ch	101-107	Investigation	Arr.		0-3
Gm	15	Scientific German	2	0	2
Ms	53	Adv. Calculus	3	0	3
Pa	87	Paper Test. & Anal.	0	4	2
Pl	5	Philosophical Anal.	3	0	3

Suggested Elective Courses

Elective Band 1

Bc	2	Biochemistry	3	4	5
Ch	50	Thesis	Arr.		1-3
Ch	76	Microscopy	0	6	2
Ch	80	Inorg. Chem. Tech.	2	0	2
Ch	90	Organ. Analysis	0	4	2
Ch	92	Adv. Org. Chem.	3	0	3
Ch	96	Electro-Chem.	3	0	3
Ch	102-108	Investigation	Arr.		0-3
Gm	16	Sci. German	2	0	2
Ms	54	Adv. Calculus	3	0	3
Pl	6	Philosophical Anal.	3	0	3
Pl	8	Logic	2	0	2

		Elective Band 2				Elective Band 2		
Ce	17	Econ. Geology....2	0	2	Es 16	Business Law....3	0	3
Es	53	Money & Banking 3	0	3	Es 54	Investments 3	0	3
Ms	19	Theory of Stat. ..2	0	2	Me 98	Management ...2	0	2
Py	81	Mental Measure-			Ms 20	Theory of Stat...2	0	2
		ment 1	4	3	Py 82	Mental Measure-		
						ment 1	4	3
		Elective Band 3				Elective Band 3		
Hy	21	Cur. World Prob. 2	0	2	Hy 22	Cur. World		
Py	81	Mental Measure-				Prob. 2	0	2
		ment 1	4	3	Py 82	Mental Measure-		
						ment 1	4	3
		Elective Band 4				Elective Band 4		
Gm	15	Scientific German 2	0	2	Gm 16	Sci. German 2	0	2
		Elective Band 5				Elective Band 5		
Eh	9	Modern Lit.....2	0	2	Eh 10	Modern Lit.....2	0	2

Credit will not be given for election of courses covering substantially the same ground as another elected or required course that has been passed.

Students desiring to elect any course not on a suggested list may do so only with approval of major instructor. Such free electives will be limited in number.

Since every university granting the Ph.D. degree requires a reading knowledge of both French and German, it is advisable for the student who may possibly continue with graduate work to be prepared in this respect.

Civil Engineering Curriculum

The object of the curriculum in Civil Engineering is to give the student as thorough a knowledge as possible of the principles underlying the profession. It is not possible in the time usually devoted to a college curriculum to take up more than the most important technical subjects, hence the time devoted to those subjects designed to cultivate and broaden the mind is necessarily limited. The attempt is made, however, to give the student not only a technical education, but to form the basis for a liberal one as well.

The endeavor is made to impress upon the mind of the student that the granting of his bachelor's degree does not create him an engineer, and to make him see that he has received only the basic mental training which will fit him to follow the profession, and that he must begin at the bottom of the

ladder of practice in order to obtain experience and judgment, without which he can never become a successful engineer.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing. Effort is made to acquaint the student with the best engineering practice and with the standard engineering literature. During each year it is the practice to have several lectures by engineers from other institutions and by those engaged only in practical work. These lectures tend to increase the interest of the student and to bring him in touch with men from outside his own institution.

The work of the first year is the same for all engineering students. The technical work begins in the fall semester of the second year with field work and the study of surveying. This technical work is gradually increased until the senior year, when it is nearly all professional. At the beginning of the senior year an opportunity is offered to elect one of three options. The first, called Option 1, consists of work in hydraulic engineering; the second, Option 2, consists of work in highway engineering; while Option 3 is specialized along the lines of sanitary engineering.

Beginning with the summer of 1936, all Civil Engineering students will be required to attend one Summer Camp of six weeks' duration. The first summer camp will be opened in 1936.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
Ce	1	Surveying	3	0	3	Ce	16	Geol. for Engrs.	2	0	2
Ce	3	Field Work & Plotting	0	9	3	Ce	32	Sanitary Eng.	2	0	2
Md	3	Des. Geometry	0	6	2	Ms	8	Int. Calculus	5	0	5
Ms	7	Diff. Calculus	5	0	5	Mt	4	Military	2	1	2
Mt	3	Military	2	1	2	Pb	4	Debate	2	0	2
Pb	1	Pub. Speaking	2	0	2	Ps	22	Mechanics & Heat	0	4	2
Pt	3	Phy. Education	0	2	0	Pt	4	Phy. Education	0	2	0
		Elective	—	—	—			Elective	—	—	—

JUNIOR YEAR

Fall Semester					*Spring Semester*				
Subject		Hours			Subject		Hours		
		Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
As 11	Pract. Astron.	2	0	2	Ce 20	Structural & Highway Materials	1	4	3
Ce 9	R.R. Curves & Earthwork	3	0	3	Ce 26	Hydraulics	3	0	3
Ce 23	Adv. Surveying	2	0	2	Ce 52	Theory of Structures	5	0	5
Ce 25	Eng. Geology	2	2	3	Mn 52	Mechanics	5	0	5
Ce 29	Highway Const.	2	0	2		Elective	—	—	—
Mn 51	Mechanics	5	0	5					
	Elective	—	—	—					

SUMMER CAMP

Subject		Hours. Cr.
Ce 11s	Highway & Railroad Surveys	3
Ce 24s	Geodetic & Topographic Surveying	2
Ce 51s	Hydrographic Surveying	1

SENIOR YEAR

Fall Semester				*Spring Semester*			
Subject	Hours			Subject	Hours		
	Rec. or Comp.	Lab.	Cr.		Rec. or Comp.	Lab.	Cr.
Ce 57 Conc. Structures & Foundations	5	0	5	Ce 60 Drafting	0	6	2
Ce 59 Drafting	0	9	3	Ce 59 Thesis, or equal	Arr		3
Ce 49 Thesis, or equal	Arr		3	Ee 36 Alt. Currents	2	0	2
Ee 35 D. C. Machy	2	0	2	Ee 38 Elec. Lab	0	3	1½
Me 39 Mech. Lab	0	3	1½	Eh 6 Tech. Comp	2	0	2
				Es 16 Business Law	3	0	3
Highway Option				Highway Option			
Ce 53 Hyd. Eng	0	2	1	Ce 68 Highway Design	0	4	2
Ce 63 Highway Econ	3	0	3	Ce 72 Highway Eng	2	0	2
Hydraulic Option				Hydraulic Option			
Ce 51 Hyd. Eng	0	4	2	Ce 56 Hyd. Eng	0	4	2
Ce 55 Hydrology	2	0	2	Me 78 Hyd. Lab	0	3	1½
Sanitary Option				Sanitary Option			
By 3 Bacteriology	2	0	2	By 2 Bacteriology	0	6	3
Ce 71 Water Supply	2	0	2	Ce 74 Sanitary Eng	2	0	2

Electrical Engineering Curriculum

This curriculum is intended to provide the student with a thorough understanding of the underlying principles of electrical engineering and to develop an ability to solve problems of an engineering nature from commercial as well as technical premises. To accomplish this, the student first studies the various electrical laws and methods of electrical measurements and correlates them with various laws previously assimilated in the study of physics and mathematics. These studies are followed by more advanced courses involving the fundamental electrical laws and theories and showing their application to the design, operation, and performance of electrical apparatus such as is used in the generation of electrical energy or in transforming electrical energy into mechanical energy for the various commercial requirements.

Courses in telephone and radio engineering are offered. These aim to provide the student with a thorough understanding of the basic principles of electrical communication, and to familiarize him with the design and operating characteristics of communication systems and component apparatus. Electrical reproduction of sound for motion pictures is also treated, with some emphasis on architectural acoustics, speech, and hearing. Basic work

in television and the industrial applications of vacuum tubes are made a part of the laboratory work of the department.

It is the endeavor of the department to acquaint the student with contemporary engineering practice, and, by persistent association of abstract analysis with practical problems, to equip him with the fundamentals of a successful career. Stress is laid upon the systematic reading of technical periodicals and the acquirement of a reference library. Effort is made to have lectures by active engineers and alumni following their profession, thus bringing the student into more intimate contact with the engineering world.

In addition to the purely electrical subjects, the student takes the customary work in mathematics, physics, mechanics, shop, drawing, and allied engineering courses, together with the humanistic studies enumerated below.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
Ee	1	Els. Elec. Eng.	2	5	4	Ee	2	Els. Elec. Eng.	2	5	4
Es	1b	Prin. of Econ.	2	0	2	Es	2b	Prin. of Econ.	2	0	2
Md	3	Des. Geometry	0	6	2	Md	4	Adv. Mach. Drafting	0	6	2
Ms	7	Diff. Calculus	5	0	5	Ms	8	Int. Calculus	5	0	5
Mt	3	Military	2	1	2	Mt	4	Military	2	1	2
Pb	1	Pub. Speaking	2	0	2	Pb	4	Debate	2	0	2
Py	5	App. Psychology	3	0	3	Py	6	App. Psychology	3	0	3
Pt	3	Phy. Education	0	2	0	Pt	4	Phy. Education	0	2	0

JUNIOR YEAR

Fall Semester

Subject			Hours Rec. or Comp.	Lab.	Cr.
Ee	13	Electronics	1	3	2
Ee	15	El. Cir. & Mach.	3	0	3
Ee	17	Elec. Lab.	1	3	2½
Eh	5	Tech. Comp.	2	0	2
Es	53	Money & Banking	3	0	3
		or			
Me	9	Machine Work	0	4	1½
		or			
Ms	53	Adv. Calculus	3	0	3
Me	27	Kinematics	3	0	3
Mn	53	Mechanics	3	0	3

Spring Semester

Subject			Hours Rec. or Comp.	Lab.	Cr.
Ee	16	El. Cir. & Mach.	4	0	4
Ee	18	Elec. Lab.	1	3	2½
Ee	22	Tel. Com.	3	0	3
Ee	24	Tel. Lab.	0	3	1½
Me	44	Heat Eng.	3	0	3
Mn	54	Mechanics	3	0	3
		Options (One subject required)			
Es	72	Labor Problems	3	0	3
Me	10	Machine Work	0	4	1½
Ms	54	Adv. Calculus	3	0	3
Ms	56	Diff. Equations	3	0	3

SENIOR YEAR

Subject			Hours Rec. or Comp.	Lab.	Cr.
Ee	51	Alt. Cur. Appar.	4	2	5
Ee	75	Elec. Lab.	1	3	2½
Me	45	Heat Eng.	3	0	3
		Options (Two subjects required)			
Ee	61	Illum. Eng.	3	0	3
Ee	63	Elec. Transp.	3	0	3
Ee	81	Comm. Eng.	0	6	3
Ee	83	Comm. Lab.	0	3	1½
Ee	85	Radio Eng.	1	2	2
Ee	91	Theory of Elect.	2	0	2
Es	51	Corp. Finance	3	0	3
Me	41	Mech. Lab.	0	3	1½
Ee	49	Thesis	Arr.		1-3

Subject			Hours Rec. or Comp.	Lab.	Cr.
		Options (Six subjects required)			
Ee	56	Elec. Power Plants	3	0	3
Ee	58	Elec. Transm.	2	3	3
Ee	60	Adv. Elec. Mach.	3	0	3
Ee	76	Elec. Lab.	1	3	2½
Ee	84	Tel. Transm.	0	6	2
Ee	86	Radio Eng.	3	0	3
Ee	88	Radio Lab.	0	3	1½
Ee	50	Thesis	Arr.		1-3
Ee	92	Theory of Elect.	2	0	2
Es	16	Business Law	3	0	3
Me	98	Management	2	0	2

General Engineering Curriculum

This curriculum is designed primarily to permit a selected few, preeminently capable students the opportunity of pursuing a curriculum which gives a broad emphasis on the fundamentals of engineering and to develop themselves along lines of particular aptitudes or choice. The first objective is met by including such studies as organic chemistry and biochemistry, or qualitative and quantitative analysis, metallurgy, geology, thermodynamics, the laws of the electric circuit, and the theory of structures. In addition to these studies in technical culture, a sequence of studies in any one of several groups in scientific culture, or liberal culture, is afforded.

These elective groups are: (1) mathematics and science, (2) economics and psychology, (3) history, psychology, and sociology, (4) foreign language, (5) literature.

Those students showing marked inventive or research abilities are guided to studies in mathematics and science; those with tendencies for commercial or managerial work are advised to elect the second or third group; and for the students with strong preference for language or literature, the fourth and fifth groups are provided.

Orientation lectures, which engineering freshmen are required to attend, and conferences with faculty advisers during his first year are designed to assist the freshman in the final selection of his course.

This course is also particularly adapted to the needs of the student who prefers to specialize in a graduate rather than in an undergraduate course and can utilize the latter as preparation for the former. In such a case a student at the beginning of the sophomore year would definitely select certain fundamental studies in one of the four departments: Chemical Engineering, Civil Engineering, Electrical Engineering, or Mechanical Engineering, and pursue, during the course, a sequence of studies in that department.

The Dean of the College is the adviser and registering officer for students in this course.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester					*Spring Semester*				
Subject			Hours		Subject			Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp.	Cr.
Ch	31	Qual. Anal.	2	8	5	Ch	40	Quan. Anal.	1	8	4
Es	1b	Prin. of Econ.	2	0	2	Ce	16	Geology	2	0	2
Md	3	Des. Geometry	0	6	2	Ch	44	Metallurgy	3	0	3
Ms	7	Diff. Calculus	5	0	5	Es	2b	Prin. of Econ.	2	0	2
Mt	3	Military	2	1	2	Ms	8	Int. Calculus	5	0	5
Pb	1	Pub. Speaking	2	0	2	Mt	4	Military	2	1	2
Pt	3	Phy. Education	0	2	0	Pt	4	Phy. Education	0	2	0
		Elective	—	—	—			Elective	—	—	—

JUNIOR YEAR

Subject			Hours			Subject			Hours		
			Rec.	Lab. or Comp.	Cr.				Rec.	Lab. or Comp.	Cr.
Ee	1	Els. Elec. Eng.	2	5	4	Ee	2	Els. Elec. Eng.	2	5	4
Me	69	Mech. Lab.	0	3	1½	Me	70	Mech. Lab.	0	3	1½
Me	79	Heat Eng.	3	0	3	Me	80	Heat Eng.	3	0	3
Mn	51	Mechanics	5	0	5	Mn	52	Mechanics	5	0	5
		Elective	—	—	4½			Elective	—	—	4½

SENIOR YEAR

Subject			Hours			Subject			Hours		
			Rec.	Lab. or Comp.	Cr.				Rec.	Lab. or Comp.	Cr.
Ce	35	Hydraulics	2	0	2	Ce	52	Theory & Design of Steel Structures	5	0	5
Me	55	Kinematics	3	3	4						
Me	71	Mech. Lab.	0	3	1½	Me	72	Mech. Lab.	0	3	1½
Me	81	Heat Eng.	2	3	3	Me	82	Heat Power	3	0	3
		Elective	—	—	—			Elective	—	—	—

The above curriculum is designed for students desiring to pursue mechanical engineering subjects. Similar curricula will be arranged for those interested in other subjects.

Mechanical Engineering Curriculum

The field of the mechanical engineer embraces all work involving the design, construction, or installation of machinery, either for manufacturing, transportation, or power generation; the design, manufacture, and installation of heating and ventilating or refrigerating equipment; the superintendence or management of factories, power plants, and motive power; the equipment of railways, and similar work.

The Mechanical Engineering curriculum is arranged to equip men as well as possible in four years' time to enter any of these lines of work.

It is not possible to develop the student into an expert engineer in any branch of the profession. It is also not possible, in general, to foresee what will be his ultimate occupation. Accordingly, those subjects which are fundamental to all engineering work and which may best be learned in college are most emphasized in the required courses, while those subjects which are best acquired in practical work are left for the engineer graduate to obtain in actual practice. An endeavor is made, however, to give the more advanced technical courses such a trend as to make the period of adjustment of the graduate to practical engineering conditions short, and his acquirement of the knowledge necessary for advancement rapid.

The theoretical work is taught by lectures and recitations. The texts are carefully chosen and are supplemented, where necessary to illustrate more recent practice, by explanation and examples given by the instructor. Numerous problems are assigned for work outside the classroom to make sure the student can apply the principles learned.

Courses in the shops and laboratories illustrate the application of matter learned in the recitation work, and also teach methods of construction, operation, and testing of apparatus by direct contact with it. In the drawing rooms, application of theories to work in design are taught, together with methods and requirements for the production of neat and accurate engineering drawings.

Thorough instruction is given in the theory and operation of both direct and alternating current electrical machinery, with ample practice in the electrical laboratory. Lectures by practical engineers and trips of inspection to engineering works help to bring before the student the conditions existing in practice.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Fall Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Es	1b	Prin. of Econ.	2	0	2
Md	3	Des. Geometry	0	6	2
Me	1	Foundry & Forging	0	6	2
Me	21	Els. Mech. Eng.	2	0	2
Ms	7	Diff. Calculus	5	0	5
Mt	3	Military	2	1	2
Pb	1	Pub. Speaking	2	0	2
Ps	21	Mech. & Heat	0	4	2
Pt	3	Phy. Education	0	2	0

Spring Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Es	2b	Prin. of Econ.	2	0	2
Md	4	Adv. Mach. Drafting	0	6	2
Me	2	Pattern Work	0	6	2
Me	38	Mech. Lab.	0	3	1½
Me	32	Materials of Eng.	2	0	2
Ms	8	Int. Calculus	5	0	5
Mt	4	Military	2	1	2
Pb	4	Debate	2	0	2
Pt	4	Phy. Education	0	2	0

JUNIOR YEAR

Subject			Hours Rec.	Lab. or Comp.	Cr.
Es	73	Labor Problems or Option	3	0	3
Me	7	Machine Work	0	6	2
Me	55	Kinematics	3	3	4
Me	69	Mech. Lab.	0	3	1½
Me	79	Heat Eng.	3	0	3
Mn	51	Mechanics	5	0	5

Subject			Hours Rec.	Lab. or Comp.	Cr.
Eh	6	Tech. Comp.	2	0	2
Me	8	Machine Work	0	6	2
Me	66	Machine Design	2	3	3
Me	70	Mech. Lab.	0	3	1½
Me	80	Heat Eng.	3	0	3
Me	82	Heat Power or Option	3	0	3
Mn	52	Mechanics	5	0	5

SENIOR YEAR

Fall Semester Subject	Hours Rec.	Lab. or Comp.	Cr.	*Spring Semester* Subject	Hours Rec.	Lab. or Comp.	Cr.
Ce 35 Hydraulics	2	0	2	Ee 36 Alt. Currents	2	0	2
Ee 35 D. C. Machy.	2	0	2	Ee 38 Elec. Lab.	0	3	1½
Me 71 Mech. Lab.	0	3	1½	Me 72 Mech. Lab.	0	3	1½
Me 81 Heat Eng.	2	3	3	Me 86 Power Plants	3	0	3
Me 87 Machine Design	0	6	2	Me 88 Dynamics of			
Me 91 Heat & Vent.	2	0	2	Machines	2	3	3
Me 93 Gas Engines	3	0	3	(or Option)			
Py 3 App. Psychol.	3	0	3	Me 98 Management	2	0	2
(or Option)				Me 50 Thesis	Arr		3
				(or Option)			

Pulp and Paper Technology Curriculum

This curriculum is offered to furnish training in the fundamentals of mathematics, chemistry, engineering, and pulp and paper technology. The first two years are identical with those under the Chemical Engineering curriculum, but in the junior and senior years the students enrolled take, in part, fundamental courses in mechanics, mechanical and electrical engineering, and pulp and paper technology. Pulp and Paper Technology graduates will be prepared to occupy positions as production foremen, salesmen, research chemists, and works-control chemists in pulp and paper plants and in allied industries.

FRESHMAN YEAR

Common to all engineering courses and Chemistry. See page 216.

SOPHOMORE YEAR

Same as Chemical Engineering. See page 217.

JUNIOR YEAR

Fall Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Bt	43	Wood Iden.	0	3	1
Ch	51	Organic Chem.	3	4	5
Ch	71	Phys. Chem.	3	4	5
Mn	53	Mechanics	3	0	3
Pa	65	Pulp. Tech.	2	0	2
Pa	67	Pulp Mfg. (9 wks.)	0	8	2
		Electives	—	—	0-4

Spring Semester

Subject			Hours Rec.	Lab. or Comp.	Cr.
Ch	52	Organic Chem.	3	4	5
Ch	72	Phys. Chem.	3	4	5
Ee	30	D. C. Machinery	2	0	2
Mn	54	Mechanics	3	0	3
Pa	66	Paper Tech.	2	0	2
Pa	68	Paper Mfg. (9 wks.)	0	8	2
		Electives	—	—	0-3

SUGGESTED ELECTIVE COURSES

Elective Band 1

By	1	Bacteriology and	0	6	3
By	3	Bacteriology	2	0	2
Ce	13	Phys. Geology	3	0	3
Ch	61	Adv. Quant. Anal.	1	8	4
Ps	61	Heat	3	0	3
Ps	69	Mod. Phys. Theories	3	0	3

Elective Band 2

Es	51	Corp. Finance	3	0	3
Es	73	Labor Problems	3	0	3
Ms	17	Invest. Theory	2	0	2
Py	1	Gen. Psychology	3	0	3
Py	5	App. Psychology	3	0	3

Elective Band 3

Hy	73	Inter. Relations	3	0	3
Py	1	Gen. Psychology	3	0	3
Py	5	App. Psychology	3	0	3

SUGGESTED ELECTIVE COURSES

Elective Band 1

Ce	14	Hist. Geology	3	0	3
Ch	62	Technical Anal.	1	8	4
Me	66	Machine Design.	2	3	3
Ms	56	Diff. Equations	3	0	3

Elective Band 2

Es	52	Social Con. of Ind.	3	0	3
Ms	18	Invest. Theory	2	0	2
Py	2	Gen. Psychology	3	0	3
Py	6	App. Psychology	3	0	3
Py	12	Advertising	3	0	3

Elective Band 3

Hy	74	Amer. For. Relations	3	0	3
Py	2	Gen. Psychology	3	0	3
Py	6	App. Psychology	3	0	3
Py	12	Advertising	3	0	3

		Elective Band 4					Elective Band 4	
Fr, Gm		Fr. or German	3	0	3	Fr, Gm	Fr. or German	3 0 3
							Elective Band 5	
						Eh	78 Creative Writing	3 0 3
						Pb	4 Debating	2 0 2

SENIOR YEAR

Fall Semester					*Spring Semester*				
Subject			Hours			Subject		Hours	
			Rec.	Lab. or Comp.	Cr.			Rec.	Lab. or Comp. Cr.
Ch	77	Industrial Chem.	3	0	3	Ch	78 Els. of Chem. Eng.	3	0 3
Ch	*93*	*Econ. of Chem. and Ch.E.*	*2*	*0*	*2*	*Ch*	*94 Econ. of Ch. & Ch. E.*	*2*	*0 2*
Ee	31	Alter. Curr.	2	0	2				
Ee	33	Elec. Lab.	0	3	1½	Me	40 Mechanical Lab.	0	3 1½
Eh	5	Technical Comp.	2	0	2	*Me*	*98 Management*	*2*	*0 2*
Me	43	Heat Engineering	3	0	3	*Pa*	*50 Thesis*	*Arr.*	*1-3*
Pa	85	Cellulose	0	4	2	Pa	82 Paper Color (9 wks.)	0	8 2
Pa	87	Paper Testing	0	4	2	Pa	86 Pulp Bleach (9 wks.)	0	8 2
		Electives	—	—	0-4		Electives	—	— 0-7

Suggested Elective Courses						Suggested Elective Courses				
Elective Band 1						Elective Band 1				
Ce	35	Hydraulics	2	0	2	Ce	26 Hydraulics	3	0	3
Ch	75	Microscopy	0	6	2	Ch	76 Microscopy	0	6	2
Ch	91	Adv. Org. Chem.	3	0	3	Ch	80 Inorg. Chem. Tech.	2	0	2
Ch	95	Electro-Chem.	3	0	3	Ch	92 Adv. Org. Chem.	3	0	3
Gm	15	Scientific German	2	0	2	Ch	96 Electro-Chem.	3	0	3
Mn	101	Adv. Mechanics	2	0	2	Gm	16 Sci. German	2	0	2
Ms	53	Adv. Calculus	3	0	3	Mn	102 Adv. Mechanics	2	0	2
Pa	49	Thesis	Arr.		1-3	Ms	54 Adv. Calculus	3	0	3
						Pa	50 Thesis	Arr.		1-3

		Elective Band 2					Elective Band 2	
Ce	17	Econ. Geology....2	0	2	Ms	20	Theory of Stat...2	0	2
Ms	19	Theory of Stat...2	0	2	Py	82	Mental Measurement 1	4	3
Py	81	Mental Measurement 1	4	3					
		Elective Band 3					Elective Band 3	
Hy	21	Cur. World Prob. 2	0	2	Hy	22	Cur. World Prob. 2	0	2
Py	81	Mental Measurement 1	4	3	Py	82	Mental Measurement 1	4	3
		Elective Band 4					Elective Band 4	
Gm	15	Scientific German 2	0	2	Gm	16	Sci. German 2	0	2
		Elective Band 5					Elective Band 5	
Eh	9	Modern Lit.....2	0	2	Eh	10	Modern Lit.....2	0	2
Fy	9	Wood Preservation 0	2	1	Pb	12	Bus. & Prof. Speaking 3	0	3

Credit will not be given for election of courses covering substantially the same ground as another elected or required course that has been passed, i.e., Ce 35 and Ce 26.

The student must register for all courses listed in the first group for his year. Courses not italicized in this group *must be passed* before he is eligible for graduation. Courses in italics, if failed, may have an approved elective substituted for them.

Required for graduation: a total of 143 semester hours exclusive of Military and Physical Training. Three of these hours may be for thesis.

Departments of Instruction

Courses designated by an odd number are given in the fall semester, those designated by an even number, in the spring semester.

Courses numbered 1-50 are for undergraduates only; courses numbered 51-100 are for graduates and undergraduates; courses numbered above 100 are for graduates.

CHEMISTRY AND CHEMICAL ENGINEERING

Professor Brautlecht; Professor Bray; Associate Professor Brann; Associate Professor Jenness; Assistant Professor Otto; Assistant Professor Gilliland; Mr. Caulfield; Mr. Osborn; Mr. Bogan; Mr. Tomlin; Mr. Martin

1, 2. General Chemistry.—This course deals with the general principles of the science and the elements of qualitative analysis. Lecture, *one hour a week;* recitation, *one hour a week;* laboratory, *four hours a week.* One breakage card. *Four credit hours.*

Mr. Jenness and Members of the Departmental Staff

1a, 2a. General Chemistry.—A course similar to Course 1, 2, but for students who have not submitted units in chemistry for entrance requirements. Lecture and recitation, *three hours a week* (the second recitation period is optional for those students doing satisfactory work); laboratory, *four hours a week.* One breakage card. *Four credit hours,* equivalent to 1, 2. Mr. Jenness and Members of the Departmental Staff

5, 6. Inorganic Chemistry.—This course is designed only for students in Agriculture. More of the laboratory time is devoted to drill on inorganic principles than in Course 1, 2. Classroom, *two hours a week;* laboratory, *four hours a week.* One breakage card. *Four credit hours.*

Mr. Jenness and Members of the Departmental Staff

31. Qualitative Analysis.—This course includes a thorough and extended study of the general reactions of substances with their qualitative separation and identification and the examination of industrial and commercial products. Prerequisite, Course 1, 2. Lectures and recitations, *two hours a week;* laboratory, *eight hours a week.* Two breakage cards. *Five credit hours.* Mr. Otto

37. History of Chemistry.—Recitation, *one hour a week. One credit hour.* Mr. Gilliland

40. Quantitative Analysis.—An introductory course illustrating the fundamental principles of gravimetric, volumetric, and electrolysis methods. Prerequisite, Course 31. Classroom, *one hour a week;* laboratory, *eight hours a week.* Two breakage cards. *Four credit hours.* Mr. Otto

42. Chemical and Engineering Computations.—Computation procedures employed by chemists and chemical engineers, including use of slide rule, logarithms, etc. Lectures and recitations, *two hours a week. Two credit hours.* Mr. Otto, Mr. Jenness

44. Metallurgy.—An introductory study dealing with iron, steel, and the common metals and alloys. Classroom, *three hours a week. Three credit hours.* Mr. Martin

46. Sanitary Chemistry.—For Civil Engineering students taking the Sanitary Engineering option, and other qualified students. (*Two credit hours* only for Chemistry majors.) Fundamental topics of water purification and waste disposal. Course 1, 2 is prerequisite. Lectures and recitations, *two hours a week;* laboratory, *three hours a week.* One breakage card. *Three credit hours.* Mr. Brann

48. Mineralogy and Crystallography.—Prerequisite, Chemistry 31. This course is offered only in alternate years of even number. Classroom, *one hour a week;* laboratory, *four hours a week.* One breakage card. *Three credit hours.*

49, 50. Undergraduate Thesis.—The thesis will embody the result of the study of a special problem in the laboratory. It will partake of the nature of original investigation. Hours arranged. *Zero to three credit hours.* The Departmental Staff

51, 52. Organic Chemistry.—Lectures, recitation, and laboratory work. Course 31 is prerequisite. For juniors. Classroom, *three hours a week;* laboratory, *four hours a week.* Two breakage cards. *Five credit hours.* Mr. Gilliland, Mr. Osborn

61. Advanced Quantitative Analysis.—The further application of volumetric and gravimetric methods, etc. Course 40 is a prerequisite. Classroom, *one hour a week;* laboratory, *eight hours a week.* Two breakage cards. *Four credit hours.* Mr. Brann, Mr. Bogan

62. Technical Analysis.—Application of gravimetric and volumetric methods of analysis to some of the more difficult problems of separation and determination, and to technical products, such as fuels, and alloys. Course 61 is desirable. Course 40 is a prerequisite. Classroom, *one hour a week;*

laboratory, *eight hours a week.* Two breakage cards. *Four credit hours.*
Mr. Brann, Mr. Bogan

71, 72. Physical Chemistry.—This course is devoted to the study of some of the more important principles and methods of physical chemistry in its several branches. Lecture, recitations, and laboratory. Prerequisite, Chemistry 40. Calculus and physics are desirable. Classroom, *three hours a week;* laboratory, *four hours a week.* One breakage card. *Five credit hours.* Mr. Brann, Mr. Tomlin

75, 76. Chemical Microscopy.—Prerequisite, Course 40. Laboratory, *six hours a week.* One breakage card. *Two credit hours.* Mr. Otto

77. Industrial Chemistry.—General processes of technical chemistry and selected topics, including the principal manufactured products together with general equipment and the elements of unit operations in engineering practice. Classroom, *three hours a week. Three credit hours.*
Mr. Martin

78. Elements of Chemical Engineering.—The course includes a more detailed study of the application of unit operations to engineering practice and is designed primarily for chemical engineers. Prerequisites, Chemistry 77, Electrical Engineering 31 and 33, and Mechanical Engineering 83. Classroom, *three hours a week. Three credit hours.* Mr. Martin

80. Inorganic Chemical Technology.—The course includes sufficient descriptive matter concerning selected industrial processes, illustrative in part of unit operations in the production of ammonia, sulfuric acid, paints, etc., to enable the solution of plant problems incident to these processes. Prerequisite, Course 77. Classroom, *two hours a week. Two credit hours.*
Mr. Martin

89. Organic Preparations.—The preparation of a large number of typical organic compounds. Course 51, 52 is prerequisite. Laboratory, *four hours a week. Two credit hours.* Mr. Gilliland

90. Organic Analysis.—Qualitative and quantitative determination in organic compounds of carbon, hydrogen, oxygen, nitrogen, sulphur, phosphorus, the halogens, etc. Courses 40, 51, and 52 are prerequisites. Laboratory, *four hours a week. Two credit hours.* Mr. Gilliland

91, 92. Advanced Organic Chemistry.—A course involving the general and also special topics of organic chemistry. Prerequisite, Course 51, 52. Recitation, *three hours a week. Three credit hours.* Mr. Gilliland

93, 94. Economics of Chemistry and Chemical Engineering.—A course in which the various branches of chemistry are considered from their economic relationships as applied to industry; designed to acquaint the stu-

dent with supply, demand, costs of production, and distribution of chemical substances; value, price, markets; plant location, chemical patents, evolution of chemical industries; chemical background and development in America; fundamentals of chemical unit process accounting, current chemical opinion and events, chemical future, etc. Text, problem, and current journal assignments. *Two hours a week. Two credit hours.* MR. BRAUTLECHT

95, 96. THERMODYNAMICS AND ELECTROCHEMISTRY.—A brief study of the laws of thermodynamics as applied to chemical problems; free energy and its applications; the electrochemistry of solutions; the more important industrial applications of electrochemistry. Prerequisite, Course 71, 72. Lectures and recitations, *three hours a week. Three credit hours.*

97, 98. METHODS OF TEACHING CHEMISTRY.—Course 31 is a prerequisite. Administration, supervision, costs, discipline, subject matter, questioning, the project method, true and false question tests, texts, examinations, lesson planning, grading or scoring, high-school chemistry, history of the teaching of chemistry, kinds of courses, laboratory arrangement, purchase of supplies and equipment, laboratory instruction, etc. Classroom, *two hours a week. Two credit hours.* MR. BRAUTLECHT

101, 102. INVESTIGATIONS IN ORGANIC CHEMISTRY.—*Time and credit hours arranged.* MR. BRAUTLECHT or MR. GILLILAND

103, 104. INVESTIGATIONS IN PHYSICAL CHEMISTRY.
MR. BRANN, MR. JENNESS

105, 106. INVESTIGATIONS IN ANALYTICAL CHEMISTRY.
MR. BRANN, MR. OTTO

107, 108. MICROCHEMICAL INVESTIGATIONS. MR. OTTO

109, 110. INVESTIGATIONS IN CELLULOSE CHEMISTRY.
MR. BRAUTLECHT

120. GRADUATE THESIS.—Arrangement and preparation of data and manuscript, based upon an original investigation. Usually, the last quarter of the college year should be devoted principally to the thesis, also to the preparation for the oral examination on the thesis, investigation, and graduate courses taken. No student can present himself for examination for an advanced degree until the thesis has been accepted. See additional information on degrees in the Graduate Study section of this catalog. *Consultation time and credit hours arranged.* THE DEPARTMENTAL STAFF

Equipment obtained and receipted for by a student and not returned at the end of a course in good condition, as well as a few non-returnable supplies and a few special chemicals, will be charged to the student at cost.

The supply room will be open during all laboratory periods. Breakage cards may be obtained only at the Treasurer's office, and all students taking chemical laboratory courses are required to have one or more. The unused balance is redeemable at the Treasurer's office, after obtaining clearance at the chemistry storeroom.

For courses in biological and agricultural chemistry, see the description of courses given by the Department of Biological and Agricultural Chemistry.

For chemistry courses in the Summer Session, see the Summer Session Bulletin.

For requirements leading to the degree of Bachelor of Arts in Chemistry, see section devoted to the College of Arts and Sciences.

CIVIL ENGINEERING

Professor Evans; Professor Sprague; Associate Professor Lyon; Associate Professor Leavitt; Mr. Felker; Mr. Stephenson; Mr. Chase

1. Plane Surveying.—Recitations and lectures covering the general theory of plane surveying and plotting. A study of surveying instruments, their adjustments and use, followed by a study of the methods commonly used for surveying and plotting. Required of all students in the Department of Civil Engineering. Classroom, *three hours a week. Three credit hours.*
Mr. Felker, Mr. Stephenson

3. Field Work and Plotting.—This course consists of practice in the use of the chain, tape, compass, transit, and level, followed by practice in the common methods of map drawing. Field and drawing room, *nine hours a week. Three credit hours.* Mr. Felker, Mr. Stephenson

6. Land Surveying.—This course is designed to familiarize the student with the methods employed by the General Land Office for laying out public lands and with such other methods as may have been used by the various states. During the last six weeks, the field work gives some opportunity for retracing old lines and determining the true meridian. Prerequisites, Courses 1 and 3. Classroom, *two hours a week;* field work, *nine hours a week during the last six weeks. Three credit hours.* Mr. Stephenson

8. Construction Surveying.—A course covering the various problems which the man surveying for various types of construction encounters. The legal aspect of surveying, methods employed, and the necessary computations are studied. Prerequisites, Courses 1 and 3. Classroom, *two hours a week;* field work, *nine hours a week during the last six weeks. Three credit hours.* Mr. Lyon

9. Railroad Curves and Earthwork.—A course of recitations and lectures investigating the geometry of railroad curves, switches, and turnouts; also the field and office practice of staking out and computing earthwork, and the methods and materials of railroad construction, subgrade, roadbed, track and track work. Prerequisites, Courses 1 and 3. Classroom, *three hours a week. Three credit hours.* Mr. Evans

12. Economic Geography.—An investigation of the geographical character and economic resources of various subdivisions of the world as determining their position in world trade and commerce. The subject includes such factors as geography, history, natural resources, economics, manufacturing, and customs as they affect trade relations. No prerequisite. Classroom, *three hours a week. Three credit hours.* Mr. Chase

13. Physical Geology.—An introduction to the dynamical and structural features of geology. The materials and structures and the geological agents and processes which act upon the materials are treated in a general manner. The relationship of these features of geology to mankind is presented throughout the course. No prerequisite. Classroom, *three hours a week. Three credit hours.* Mr. Chase

14. Historical Geology.—A study of the past history of the Earth. The distribution of land and sea areas, the prevailing type of rock and climatic conditions through each successive period. The type of life, its development, and the characteristics of each age will be discussed. Prerequisite, Course 13 or 16. Classroom, *three hours a week. Three credit hours.* Mr. Chase

16. Geology for Engineers.—An introductory course to Engineering Geology covering a study of the various dynamical and geological agents involved in the modification of the outer surface of the earth. Classroom, *two hours a week. Two credit hours.* Mr. Chase

17. Economic Geology.—An introductory course to economic mineral deposits. The general classification, structure, and occurrence of ore deposits is briefly covered. The study of metallic and non-metallic deposits includes the history, uses, composition, characteristics, and distribution of the common economic materials of industry and commerce. No prerequisite. Classroom, *two hours a week. Two credit hours.* Mr. Chase

20. Structural and Highway Materials.—Laboratory and recitations covering the methods of testing, characteristics of and specifications for the materials commonly used for structural and highway purposes. Classroom, *one hour a week;* laboratory, *four hours a week. Three credit hours.* Mr. Leavitt, Mr. Sprague, Mr. Felker, Mr. Stephenson

21. Railroad Field and Office Work.—The first part of this course consists of making preliminary and location surveys for a railroad about two miles long. Grades are established and slope stakes set. The latter part of the course consists of plotting the notes previously taken and calculating the requisite amount of earthwork. Prerequisites, Courses 1, 3, and 9 or 27. *Six hours a week. Two credit hours.* Mr. Lyon, Mr. Chase

23. Advanced Surveying.—This course consists of lectures, readings, and recitations on the theory and practice of base line measurement, triangulation, precise leveling, topographical surveying, the use of the plane table and sextant, the theory and application of least squares, and map projection. It is a preparation for Course 24s. Prerequisites, Courses 1 and 3. Lecture, recitation, and problems, *two hours a week. Two credit hours.* Mr. Lyon

25. Engineering Geology.—An intense megascopic study and classification of the common rocks and rock minerals of paramount importance to the engineer and their identification in the field, combined with a map-reading course to study the characteristics and development of land forms and the methods of interpretation of topographic maps. The relation of geology to the engineer and his work is kept constantly in mind. Prerequisite, Course 16. Classroom, *two hours a week;* laboratory or field, *two hours a week. Three credit hours.* Mr. Chase

26. Hydraulics.—Fundamental data; hydrostatics; theoretical hydraulics; instruments and observations; theoretical and actual flow through orifices, weirs, tubes, pipes, and conduits; dynamic pressure of water. Prerequisite, Mechanics 51. Classroom, *three hours a week. Three credit hours.* Mr. Lyon

27. Railroad Curves and Earthwork.—A lecture course on the theory and practice of simple railroad curves, and on the field and office practice of staking out and computing earthwork. Given to students outside of the Department of Civil Engineering who desire to take Course 21. Prerequisites, Courses 1 and 3. Lecture, *one hour a week. One credit hour.* Mr. Leavitt

29. Highway Construction.—The construction and maintenance of city pavements and country roads under various conditions of traffic, climate, soil, etc. Prerequisites, Courses 1 and 9. Recitation, *two hours a week. Two credit hours.* Mr. Leavitt

32. Sanitary Engineering.—The general principles of sewer design and construction, and sewage disposal; a study of city sanitation. Classroom, *two hours a week. Two credit hours.* Mr. Sprague

35. Hydraulics.—A short course which includes the main principles given in Course 26. Given to students in the Departments of Mechanical

and Electrical Engineering. Prerequisite, Mechanics 51. Classroom, *two hours a week. Two credit hours.* MR. LYON

49, 50. THESIS WORK.—The study of and report upon some original investigation or design. *Time to be arranged.* See regulations regarding degrees. *Three credit hours.* MR. EVANS

51. HYDRAULIC ENGINEERING, OFFICE WORK.—From notes previously taken in the field, rating curves and vertical velocity curves are plotted and studied and discharge measurements are computed; also problems in hydrology, water storage, and water power are studied. Prerequisites, Courses 26 and 51s. Course 55 must be concurrent. Classroom, *four hours a week. Two credit hours.* MR. LYON

52. THEORY AND DESIGN OF STEEL STRUCTURES.—This course involves the determination of stresses and strain in beams, girders, and trusses under the usual systems of loading. Students are required to make a complete design of several types of structures. Prerequisite, Mechanics 51. *Five hours a week. Five credit hours.* MR. EVANS

53. HYDRAULIC ENGINEERING, OFFICE WORK.—A course similar to but shorter than Course 51. Given to Highway majors. Prerequisites, Courses 26 and 51s. Classroom, *two hours a week. One credit hour.* MR. LYON

55. HYDROLOGY.—A study of stream-flow as applied to water-power development; rainfall; evaporation; run-off; methods of obtaining data with a study of their use. Required of students electing Option 1. Prerequisite, Course 26. Classroom, *two hours a week. Two credit hours.* MR. LYON

56. HYDRAULIC ENGINEERING.—A continuation of Courses 51 and 55. The development and utilization of water power; the modern turbine; inspection of hydro-electric plants. Drawing room, *four hours a week. Two credit hours.* MR. LYON

57. CONCRETE STRUCTURES AND FOUNDATIONS.—This course covers the design and construction of plain and reinforced concrete structures with due consideration for preparing the foundation to receive such structures. Prerequisite, Mechanics 51. *Five hours a week. Five credit hours.* MR. EVANS

59. DRAFTING.—This course consists of detailing the structures designed in Course 52. Drawing room, *nine hours a week. Three credit hours.* MR. SPRAGUE

60. DRAFTING.—The structures designed in Course 57 are detailed in this course. *Six hours a week. Two credit hours.* MR. SPRAGUE

63. HIGHWAY ECONOMICS.—State highway and municipal highway management as they affect organization, administration, and finance of streets

and highways; economic factors of highway location, design, and operation; traffic and operation expenses. Required of students electing Option 2. Prerequisites, Courses 29 and 11s. *Three hours a week. Three credit hours.*

MR. LEAVITT

68. HIGHWAY DESIGN.—Drawing room study of highway location and relocation, including plans of proposed improvement and construction of about five miles of highway with detailed estimates and specifications for the same. Also design of street intersections. Required of students electing Option 2. Prerequisite, Course 63. Drawing room, *four hours a week. Two credit hours.* MR. LEAVITT

71. MUNICIPAL WATER SUPPLY.—This course deals with the requirements of a community for pure drinking water. It makes a study of sources of supply, quality, and purification of water; the engineering works necessary for its transportation; water-borne diseases; fire service. Prerequisite, Course 32. Required of student selecting Option 3. Classroom, *two hours a week. Two credit hours.* MR. SPRAGUE

72. HIGHWAY ENGINEERING.—An advanced course of lectures and recitations on various highway problems; general survey of higher types of pavements; city planning; specifications; cost keeping; maintenance and repair work as discussed in engineering periodicals. Required of students electing Option 2. Prerequisite, Course 63. Classroom, *two hours a week. Two credit hours.* MR. LEAVITT

74. SANITARY ENGINEERING.—Lectures and recitations dealing with municipal and rural sanitation. Sanitation of swimming pools. Sanitation of milk and other foods. Collection and disposal of refuse. Control of mosquitoes, flies, and rodents. Prerequisite, Course 32. Required of students electing Option 3. Classroom, *two hours a week. Two credit hours.*

MR. SPRAGUE

80. STRUCTURAL GEOLOGY.—A study of the principles and theories of the conditions and processes affecting the materials and structures of the Earth. The development of the types of structures found in rocks, the mechanics of their formation, interpretation, and application to other geological problems. Prerequisites, Courses 16 and 25. Classroom, *two hours a week. Two credit hours.* MR. CHASE

82. ADVANCED ENGINEERING GEOLOGY.—The study and application of geology to the engineering phases of construction problems. Such subjects as river improvement, shore line protection, ground water, quarrying, earthquakes, dams and reservoirs will be considered. A part of the work includes presentation and discussion of reports. Prerequisites, Courses 16 and 25. Classroom, *three hours a week. Three credit hours.* MR. CHASE

102. Theory of Structures.—This course involves the determination of stresses in statically indeterminate structures. It is a continuation of Course 28 and is open only to those men who have passed that course or its equivalent satisfactorily. Classroom, *three hours a week. Three credit hours.*

Mr. Evans

Courses To Be Offered at Summer Camp

7s. Highways and Railroads.—Preliminary and location surveys for railways and highways, particularly forest highways. Grades are established and grade stakes set. The preparation of maps from notes previously taken and calculations of earthwork. Trail location and construction. Prerequisites, Courses 1 and 3. *Two credit hours.*

11s. Highway and Railroad Surveys.—This course consists of making preliminary and location surveys for a highway and a railroad, each approximately two miles in length, establishing grades and setting grade stakes. The notes are plotted and calculations are made as to the amount of earthwork. Prerequisites, Courses 1, 3, and 9. *Three credit hours.*

24s. Geodetic and Topographic Surveying.—This field work consists of making topographic surveys with the transit and plane table, including triangulation, the use of sextant, trigonometric levelling and the traverse plane table. The drafting room work consists of making computations and drawings necessary to interpret the results of the field observations. Prerequisites, Courses 1, 3, and 22. *Two credit hours.*

51s. Hydrographic Surveying.—(a) *Stream Gauging.* This course is planned to instruct the student in the principles underlying the measurement of flow of water in open channels. (b) *Soundings.* This course takes up the methods of making soundings and practices the use of surveying instruments for locating them. Prerequisite, Course 26. *One credit hour.*

ELECTRICAL ENGINEERING

Professor Barrows; Professor Hill; Associate Professor Creamer; Assistant Professor Roberts; Mr. Crabtree; Mr. Bliss

1, 2. Elements of Electrical Engineering.—Fundamental laws and principles of electricity; series and parallel circuits; the magnetic circuit; dielectric circuit; conduction through electrolytes and gases; thermionics; instrument calibration; electrical measurements. Recitations and problems.

Classroom, *two hours a week;* computation, *three hours a week;* laboratory, *two hours a week. Four credit hours.*

Mr. Barrows, Mr. Creamer, Mr. Bliss

5a, 6a. Household Equipment.—Physical principles, use, and selection of various household appliances. Elementary principles of heat and electricity, household heating and ventilating systems, laundry procedure, refrigerators, all types of kitchen ranges, and all small electrical appliances are considered. Course intended for senior Home Economics students. Lectures, recitations, and laboratory demonstrations. Classroom or laboratory, *two two-hour periods a week.* Fall semester, *three credit hours.* Spring semester, *two credit hours.* Mr. Bliss

13. Electronics.—The physics of electron tubes; hard vacuum diodes, triodes, tetrodes, pentodes, photocells, etc.; gaseous tubes utilizing neon, argon, and mercury vapor; arcs, corona, and other discharges; tube detectors, amplifiers, oscillators, and associated circuits; functioning of the dynatron, and magnatron; crystal and magneto-striction oscillators; electrical measurements; industrial applications. Classroom, *one hour a week;* laboratory, *three hours a week. Two credit hours.* Mr. Creamer, Mr. Bliss

15, 16. Electric Circuits and Machinery.—Fundamental theory of sinusoidal alternating currents, including representation by vectors and solutions by trigonometric and algebraic methods. Underlying principles and circuit problems common to all types of electrical apparatus; design and performance of direct-current machinery. Theory of polyphase alternating-current systems, non-sinusoidal wave forms, and electrical transmission. Introduction to the analysis of transient phenomena. Lectures, recitations, and problems. Prerequisite, Course 2. Fall semester: classroom, *three hours a week. Three credit hours.* Spring semester: classroom, *four hours a week. Four credit hours.* Mr. Hill

17, 18. Electrical Laboratory.—Electrical measurements; operation and testing of direct-current generators and motors. Introductory experiments of alternating-current circuits and machines. Application of the work of Courses 1, 2, 15, and 16. Prerequisite, Course 2; Courses 15 and 16 are concurrent. Classroom, *one hour a week;* laboratory, *three hours a week. Two and one-half credit hours.* Mr. Crabtree

22. Telephone Communication.—Characteristics of speech: the hearing mechanism; mechanical and electrical characteristics of telephone apparatus; the subscriber's set; common battery and local battery circuits; dial systems; repeaters; traffic studies. Lectures and recitations. Prerequisite, Course 15; Course 24 is required concurrently. Classroom, *three hours a week. Three credit hours.* Mr. Bliss

24. Telephone Laboratory.—Microphonic efficiency of telephone apparatus; measurements of articulation, and audition; local and common battery systems; phantom and composite circuits; repeaters; transmission testing. Prerequisite, Course 13; Course 22 is required concurrently. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Bliss

30, 35. Direct Current Machinery.—Electrical principles and applications; the production, distribution, and utilization of power from the standpoint of the mechanical and chemical engineer. Recitations and problems. Classroom, *two hours a week. Two credit hours.*

Mr. Roberts, Mr. Crabtree

31, 36. Alternating Currents.—Alternating current measurements and calculations; operation of generators and motors. Lectures, recitations, and problems. Prerequisite, Course 30 or 35. Classroom, *two hours a week. Two credit hours.* Mr. Roberts, Mr. Crabtree

33, 38. Electrical Laboratory.—These courses are based on Courses 30, 31, 35, and 36. Operations of direct-current and alternating-current generators and motors; electrical power measurements. Prerequisite, Course 30 or 35; Course 31 or 36 concurrent. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Roberts, Mr. Crabtree

49, 50. Thesis Work.—The study of and report upon some original investigation or design. *Time to be arranged.* See regulations regarding degrees. *Zero to three credit hours.* Mr. Barrows, Mr. Hill, Mr. Creamer

Inspection Trip.—About a week's trip visiting some of the electrical and industrial plants of New England. Mr. Barrows

51. Alternating Current Apparatus.—Continuation of Course 16. Theory, construction, and operating characteristics of alternating current apparatus and machinery. Polyphase apparatus; generation, distribution, and utilization of polyphase power. Lectures, recitations, and problems. Prerequisite, Course 16. Classroom, *four hours a week;* computation, *two hours a week. Five credit hours.* Mr. Barrows

56. Electrical Power Plants.—Electrical equipment of power-plants, methods of control, switching, protection, lightning arresters; arrangement of station and substation machinery, apparatus, and switchboards. Lectures and recitations. Prerequisites, Courses 15, 16, and 51. Classroom, *three hours a week. Three credit hours.* Mr. Barrows

58. Electrical Power Transmission.—Theory, design, and operation of power transmission systems. Calculation of circuits, wire spans, and supporting structures. Use of hyperbolic functions, equivalent circuits, and circle diagrams. Problems of inductive interference, insulation, protection,

stability, and control. Lectures, recitations, and supervised problem work. Prerequisites, Courses 16 and 51. Classroom, *two hours a week;* computation, *three hours a week. Three credit hours.* Mr. Roberts

60. Advanced Electrical Machinery.—Analysis of windings and magnetic circuits of electric power apparatus. Advanced problems on flux distribution, commutation, heat paths, air flow, and mechanical stresses. Design of alternating-current machinery. Predetermination of performance characteristics. Lectures and problems. Prerequisite, Course 51. Classroom, *three hours a week. Three credit hours.* Mr. Hill

61. Illuminating Engineering.—Different types of lamps; light, photometry, illumination calculations, and problems of interior and exterior illumination. Lectures, recitations, and problems. Classroom, *three hours a week. Three credit hours.* Mr. Barrows

63. Electrical Transportation.—Mechanics of vehicle movement; estimates of power and energy requirements of trains and other transportation units. Principles governing the selection and design of electric motive power equipment for railways, buses, elevators, and ships. Distribution of power to moving loads. Engineering and economic problems involved in steam-railroad electrification. Elements of railway signaling. Lectures, recitations, and problems. Prerequisites, Course 15, 16; Course 51 is concurrent. Classroom, *three hours a week. Three credit hours.* Mr. Hill

75, 76. Electrical Laboratory.—Alternating-current instruments and measurements; experimental work on single-phase circuits and polyphase systems. Operation and testing of alternating-current generators, motors, transformers, and converters. Prerequisites, Courses 15, 16, 17, and 18; Course 51 is concurrent. Classroom, *one hour a week;* laboratory, *three hours a week. Two and one-half credit hours.* Mr. Roberts

81. Communication Engineering.—Theory of apparatus; equivalent circuits; passive networks; filters; transmission and design problems; public-address systems; sound pictures; acoustics of auditoriums, carrier-current systems. Lectures and problems. Prerequisites, Courses 22 and 24. Computation, *six hours a week. Three credit hours.* Mr. Creamer

83. Communication Laboratory.—Advanced measurements on communication apparatus; repeaters; carrier current systems; electromechanical and cathode ray oscillographs; filters; transformers; public-address systems. Prerequisites, Courses 22 and 24. Course 81 is required concurrently. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Creamer

84. Telephone Transmission.—Application of hyperbolic functions to transmission line problems; transmission of speech over cable and open wire circuits; loaded lines; design of artificial lines. Lectures and problems.

Course 81 is prerequisite. Computation, *six hours a week. Two credit hours.* MR. CREAMER

85, 86. RADIO ENGINEERING.—Detailed study of inductance coils, condensers, and resistors for radio frequencies; vacuum-tube theory; extended analysis of oscillatory circuits and methods of excitation; radiation and transmission phenomena; comparisons of methods of transmission and reception; theory of modulation; radio measurements. Lectures, recitations and design problems. Prerequisite, Course 22. Fall semester: classroom, *one hour a week;* computation, *two hours a week. Two credit hours.* Spring semester: classroom, *three hours a week. Three credit hours.* MR. CREAMER

88. RADIO LABORATORY.—Use of wave-meters; tube characteristics; audio- and radio-frequency amplifiers; tests of tube transmitters and receivers; continuous wave and radiophone transmission at various frequencies; radio directionals. Course 86 is concurrent. Laboratory, *three hours a week. One and one-half credit hours.* MR. CREAMER

91, 92. THEORY OF ELECTRICITY.—A study of the more advanced mathematical and physical theories of electricity with reference to their engineering applications. Wave propagation, radiation, gaseous conduction, and the analysis of transient phenomena by the methods of Heaviside's operational calculus. Problems, conferences, and seminar. Either or both semesters. *Two credit hours.* MR. CLOKE, MR. HILL

156. ADVANCED ELECTRICAL POWER PLANTS.—Study of the latest designs and methods of central station practice. Location, parallel operation, super-power practice, and economics. Lectures, studies, and problems. Prerequisites, Courses 51, 56, and 76. Classroom, *two hours a week. Two credit hours.* MR. BARROWS

157, 158. ADVANCED ELECTRICAL POWER TRANSMISSION.—A detailed study of the advanced theory of electric power circuits in the normal steady state and under transient and unbalanced conditions. Analysis of the performance of transmission systems, distribution networks, and connected apparatus. Engineering and economic problems of design, construction, and operation. Lectures, analytical studies, and problems. Prerequisite, Course 58. Classroom, *three hours a week. Three credit hours.* MR. HILL

165. ADVANCED THEORY OF ELECTRICAL MACHINERY.—Analytical study of electrical machinery with emphasis on methods useful in research and development. Application of advanced mathematical and physical theory to problems of electrical and mechanical design, insulation, heat flow, ventilation, and control. Analysis of behavior in transient states, during disturbances, and under abnormal conditions of operation. Lectures, problems, sem-

inar papers, and reviews. Prerequisite, Course 60; Course 175 is concurrent. Classroom, *two hours a week. Two credit hours.* MR. HILL

175. ELECTRICAL LABORATORY.—Continuation of Courses 75 and 76, consisting of more advanced tests of electrical machines and circuits as related to design and development. Performance studies involving the use of the oscillograph. Prerequisites, Courses 51, 60, and 76; Course 165 is concurrent. Classroom, *one hour a week;* laboratory, *three hours a week. Two and one-half credit hours.* MR. BARROWS

185. COMMUNICATION CIRCUITS.—Advanced study of substation circuits; passive networks, including filters and attenuation equalizers; transformer and transition losses; high quality circuits used as an adjunct to radio broadcasting; advances in communication from study of current technical literature. Lectures, reports, and problems. For graduate students who have specialized in electrical communication. Classroom, *two hours a week. Two credit hours.* MR. CREAMER

188. CIRCUITS LABORATORY.—Experimental work based on theory treated in Course 185; oscillographic study of speech sounds and modulation; detection and elimination of speech distortion in amplifiers. Prerequisite, Course 185. Laboratory, *three hours a week. One and one-half credit hours.* MR. CREAMER

ENGINEERING DRAFTING

PROFESSOR KENT; ASSISTANT PROFESSOR DUNHAM; MR. SAWYER; MISS EBBESON

1. FUNDAMENTALS OF DRAFTING.—Instruction and practice in technical sketching and lettering, in the care of drawing instruments, and their use in elementary problems involving right lines, circles, irregular curves, and orthographic projections. Drawing room, *four hours a week. Two credit hours.* MR. KENT, MR. DUNHAM, MR. SAWYER

2. ELEMENTARY MACHINE DRAFTING.—A continued study of the methods of orthographic projection, isometric projection, and oblique projection, accompanied by instruction and practice in the making of working drawings and tracings. Drawing room, *four hours a week. Two credit hours.* MR. KENT, MR. DUNHAM, MR. SAWYER

2a. DRAFTING.—Continuation of orthographic projections, with isometric and perspective projections, topographical symbols and their application, map reproduction and enlarging, and blueprinting. Drafting room, *four hours a week, two credit hours.* MR. SAWYER, MR. DUNHAM

3. Descriptive Geometry.—The elementary principles and problems of descriptive geometry, including intersections and developments. Recitation and drawing room, *six hours a week. Two credit hours.*

Mr. Kent, Mr. Dunham, Mr. Sawyer

4. Advanced Machine Drafting.—A continued study of the making of working drawings of simple machines, together with instruction and practice in blueprinting. Drawing room, *six hours a week. Two credit hours.* Mr. Kent, Mr. Dunham, Mr. Sawyer

5. Graphical Methods in Business.—An introduction to the methods of constructing and interpreting graphic charts. Instruction and practice are given in elementary drafting principles and in lettering. Pictorial, bar, rectilinear, trilinear, ratio, logarithmetic, polar, isometric, probability, alignment and nomographic charts are studied as well as the more specialized business forms. This course is designed for students of economics and the methods used are applicable to industrial management, executive control, and to statistical preservation and prediction. Open to Economics and Mathematics majors only. Drawing room, *six hours a week; two credit hours.*

Mr. Dunham

6. Graphical Analysis in Business.—The practical application of the methods studied in Course 5 to the analysis of statistical and economic problems as well as to industrial and office management. Prerequisite, Course 5. Drawing room, *four hours a week. Two credit hours.* Mr. Dunham

9, 10. Agricultural Drafting.—A course designed especially for students in Agriculture and for others who are not engineers. It combines the fundamental principles of Courses 1 and 2. Drawing room, *six hours a week. Two credit hours.* Mr. Kent

11, 12. Theory of Architecture.—A study of the theory and principles underlying all architecture, special attention being given to the modern. Laboratory exercises are carried on in conjunction with the lectures. A study of buildings through the types of plan used. Classroom, *one hour;* drafting room, *two hours. Two credit hours.* Miss Ebbeson

14. Architectural Design.—A study of architectural design and planning with the use of plastocene models and simply rendered drawings. Prerequisites, Courses 53a and 53b. Drafting room, *four hours. One credit hour.*

Miss Ebbeson

51. Advanced Theory of Architecture.—A continuation of Course 11, 12. Concentration on special phases of building, especially on the materials. Classroom, *one hour;* drafting room, *two hours. Two credit hours.*

Miss Ebbeson

53a. Shades and Shadows.—A study of the principles of the casting of shadows on and by architectural objects. A half-semester course. Drafting room, *four hours. One credit hour.* Miss Ebbeson

53b. Perspective.—A study of the principles of architectural perspective and the making of the same. A half-semester course. Drafting room, *four hours. One credit hour.* Miss Ebbeson

LECTURE COURSES

Gc 5. Orientation.—A course of lectures by members of the staff of the College and other faculty members for Technology freshmen. Designed to better acquaint them with the different fields of study and the opportunities in these fields. Given Wednesday afternoons at 4:15 throughout the first semester. *One-half credit hour.* Mr. Calderwood, Mr. Watson, Mr. Cloke

Gc 6. Orientation.—A general lecture course given Wednesday afternoons at 4:15 throughout the second semester, consisting of addresses by engineers and business and professional men for Technology freshmen. Open to the public. *One-half credit hour.*

Mr. Calderwood, Mr. Watson, Mr. Cloke

MECHANICAL ENGINEERING

Professor Sweetser; Associate Professor Watson; Assistant Professor Prageman; Mr. Davee; Mr. Perkins; Mr. Sparrow; Mr. Tyrrell

1. Foundry and Forge Work.—Foundry instruction is given in bench and floor molding, mixing of materials, core making, operation of cupolas, etc. Forge instruction is given in drawing, upsetting, forming, welding, and tool dressing. Shop work, *six hours a week. Two credit hours.* Mr. Davee

2. Pattern Work.—Bench work and wood turning to familiarize the student with the tools used in modern woodworking practice, and to give him experience in working from dimensioned drawings. Pattern work, consisting of making complete patterns and core boxes from drawings. Shop work, *six hours a week. Two credit hours.* Mr. Davee

7, 8. Machine Work.—A small piece of machiery is manufactured which involves a study of the principles and operation of the various machine tools, at the same time including an insight into that phase of manufacturing

which requires one part to fit another properly and the entire machine to be readily assembled. Shop work, *six hours a week. Two credit hours.*

Mr. Perkins

9, 10. Machine Work.—A shorter course than 7, 8, for electrical engineers. Shop work, *four hours a week. One and one-half credit hours.*

Mr. Perkins

21. Elements of Mechanical Engineering.—A course designed to familiarize the student with the mechanical apparatus of manufacturing and power plants, and elementary mechanical engineering calculations. Classroom, *two hours a week. Two credit hours.* Mr. Sparrow, Mr. Tyrell

27. Kinematics.—A shorter course than 55, arranged for electrical engineers. Recitation, *three hours a week. Three credit hours.* Mr. Tyrrell

28. Kinematics.—A shorter course than 27, given to chemical engineers. Recitation, *two hours a week. Two credit hours.* Mr. Tyrrell

32. Materials of Engineering.—Properties of the metals; production from ores; heat treatment; methods of testing. Classroom, *two hours a week. Two credit hours.* Mr. Tyrrell

38. Mechanical Laboratory.—Elementary experimental work such as calibration of instruments, use of steam and gas engine indicators, mechanical efficiency tests, etc. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Sparrow, Mr. Tyrrell

39. Mechanical Laboratory.—A course arranged for seniors in Civil Engineering. Testing of strength of materials; measurement of flow of water over weirs, through orifices and nozzles; calibration of venturi meters. Prerequisite, Civil Engineering 26 or 35. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Sparrow

40. Mechanical Laboratory.—A course arranged for seniors in Chemical Engineering. Calibration of instruments; tests of engines; measurement of flow of water; tests of lubricants. Prerequisite, Course 43. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Sparrow

41. Mechanical Laboratory.—A course arranged for seniors in Electrical Engineering. Calibration of instruments; testing strength of materials; testing of steam engines, gas engines, hydraulic testing. Prerequisite, Course 44. Laboratory, *three hours a week. One and one-half credit hours.*

Mr. Sparrow

43. Heat Engineering.—A short course for senior chemical engineers covering the laws of thermodynamics and their application to heat motors, air compressors, refrigerating machinery, and power plant equipment. Recitation, *three hours a week. Three credit hours.* Mr. Sparrow

44. Heat Engineering.—A course similar to Course 79, given to electrical engineers. Prerequisites, Mathematics 8 and Physics 2. Recitation, *three hours a week. Three credit hours.* Mr. Sparrow

45. Heat Engineering.—Simple and compound steam engines; steam turbines; gas engines; gas producers; fuels and combustion; steam and gas power plant equipment and operation. For seniors in Electrical Engineering. Prerequisite, Course 44. Recitation, *three hours a week. Three credit hours.* Mr. Sparrow

55. Kinematics.—A study of motion, velocity, and acceleration of machine parts, supplemented by drawings of cams, gear teeth, and graphical studies of kinematical problems. Classroom, *three hours a week;* drawing room, *three hours a week. Four credit hours.* Mr. Prageman, Mr. Tyrell

66. Machine Design.—A study of the design of machines; proportioning of parts for strength, rigidity, etc. Prerequisites, Course 55 and Mechanics 51. Classroom, *two hours a week.* Drawing room, *three hours a week. Three credit hours.* Mr. Prageman, Mr. Tyrrell

69, 70. Mechanical Laboratory.—Tests of materials, heating value of liquid and gaseous fuels, steam calorimetry, thermal efficiency, economy, and heat balance tests of steam engines, steam turbines, and gas engines. Prerequisite, Course 38. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Watson, Mr. Sparrow

71, 72. Mechanical Laboratory.—Tests of condensers, boilers, air compressors, pumps, fans, hydraulic testing. Prerequisite, Course 70. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Watson, Mr. Sparrow

78. Mechanical Laboratory.—A course arranged for students taking Hydraulic option in Civil Engineering. Testing of impulse and reaction water wheels, flow measurement and friction in pipes and channels, etc. Prerequisite, Course 39. Laboratory, *three hours a week. One and one-half credit hours.* Mr. Sparrow

79. Heat Engineering.—Laws of thermodynamics; laws of gases, saturated and superheated vapors; Carnot's, Rankine's, and actual steam engine cycles; use of steam tables; steam calorimetry; illustrative practical problems. Prerequisites, Mathematics 8 and Physics 1, 2, and 20 or 22. Recitation, *three hours a week. Three credit hours.* Mr. Watson

80. Heat Engineering.—Simple and compound steam engines, flow of steam, air compressors; flow of air; refrigeration. Prerequisite, Course 79. Recitation, *three hours a week. Three credit hours.* Mr. Watson

81. Heat Engineering.—A continuation of Courses 79 and 80 dealing with steam turbines; consideration affecting the design and efficiency of operation of the various types. Recitation, *two hours a week;* drawing room, *three hours a week. Three credit hours.* Mr. Sweetser

82. Heat Power.—Fuels and combustion, steam and gas power plant equipment, arrangement, operation, and efficiencies of various types of apparatus. Prerequisite, Course 79. *Three hours a week. Three credit hours.* Mr. Watson, Mr. Sparrow

86. Power Plants.—Design, costs, operating expenses, and economics of steam and gas power plants. Prerequisite, Course 81. Classroom, *three hours a week. Three credit hours.* Mr. Sweetser

87. Machine Design.—A continuation of Course 66, including the execution of the design of some typical machines. Prerequisites, Courses 55 and 66. Drawing room, *six hours a week. Two credit hours.* Mr. Prageman, Mr. Tyrrell

88. Dynamics of Machines.—A study of the forces due to reciprocating and rotating masses with special application to balancing high-speed machinery, designing governors and flywheels. Prerequisites, Courses 55 and 66. Recitation, *two hours a week.* Drawing room, *three hours a week. Three credit hours.* Mr. Prageman

91. Heating and Ventilation.—Heat resistance of building materials, calculation of heat losses through various types of walls, windows, etc., heating systems, ventilating systems, humidification. Prerequisite, Course 80. Recitation, *two hours a week. Two credit hours.* Mr. Prageman

93. Gas Engines.—Types, operation, fuels and combustion, carburetion, ignition, valves, cooling, governing, determination of cylinder sizes for given fuel and horsepower. Prerequisites, Courses 66 and 79. Classroom, *three hours a week. Three credit hours.* Mr. Sweetser, Mr. Watson

94. Hydraulic Machinery.—Hydraulic turbines; water wheels, various features of hydraulic power plant development. Prerequisites, Mechanics 52, Civil Engineering 26 or 35, and Mechanical Engineering 55. Recitation, *three hours a week. Three credit hours.* Mr. Prageman

98. Factory Organization and Management.—Lectures and assigned reading bearing upon various types of organization for industrial enterprises; planning and equipping of factory plants; systems of management; factory design and construction. Recitation, *two hours a week. Two credit hours.* Mr. Prageman, Mr. Tyrrell

50. Thesis.—The results of some origial investigation or design presented in proper form. The subject should be selected early in the fall semes-

ter of the senior year. See regulations regarding degrees. Laboratory, *six hours a week. Three credit hours.* MR. SWEETSER AND STAFF

101 or 102. METALLOGRAPHY.—Polishing, etching, and a microscopic study of the crystalline structure of metals. A study of the effect of heat treatment on the crystalline structure and physical properties of steel. Classroom, *one hour a week;* laboratory, *four hours a week. Three credit hours.*
MR. SWEETSER

INSPECTION TRIP.—A visiting trip of one week's duration to various manufacturing and power plants. This trip is open only to seniors who are eligible for graduation. A complete schedule of the trip is prearranged and a member of the department staff is in charge of the party.

MECHANICS

PROFESSOR WESTON

51, 52. MECHANICS.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; exercises in finding center of gravity and moment of inertia; the study of stresses and strains in bodies subject to tension, compression, and shearing; the common theory of beams, including shearing force, bending moment, and elastic curves; torsional stresses and theories of stress in long columns. *Five credit hours.*

53, 54. MECHANICS.—The fundamental principles of statics, kinematics, and kinetics, with applications to practical problems; the study of simple stresses and strains with such applications as the time permits. *Three credit hours.*

101, 102. ADVANCED MECHANICS.—General principles of kinematics, statics, and kinetics; the mathematical theory of elasticity; the theory of the potential function with applications to problems in gravitation, hydromechanics, etc. *Two credit hours.*

PULP AND PAPER TECHNOLOGY

PROFESSOR BRAY; MR. CAULFIELD

49, 50. THESIS.—The thesis will embody the result of the study of a special problem in the laboratory. It will partake of the nature of original investigations. Hours arranged. *Zero to three credit hours.*
MR. BRAY, MR. CAULFIELD

65. Pulp Technology.—A lecture course on the manufacture of the various kinds of wood pulps, and the chemical engineering involved in present-day pulp making. Prerequisites, Chemistry 1, 2, 31, and 40. Classroom, *two hours a week. Two credit hours.* Mr. Bray

66. Paper Technology.—A lecture course on the processes of manufacturing paper. Prerequisite, Course 65. Classroom, *two hours a week. Two credit hours.* Mr. Bray

67. Pulp Manufacture.—Laboratory work. Unit-process work on semi-commercial scale production of various kinds of wood pulps, analysis of pulp-making raw materials, etc. Course 65 should be taken in conjunction. Prerequisites, Chemistry 1, 2, 31, and 40. Laboratory, *eight hours a week for first nine weeks.* One breakage card required. *Two credit hours.*
Mr. Bray, Mr. Caulfield

68. Paper Manufacture.—A laboratory course, unit process work, in which papers of various kinds are made on semi-commercial equipment including Jordan and cylinder paper machines. Course 66 should be taken in conjunction. Laboratory, *eight hours a week for first nine weeks.* One breakage card required. *Two credit hours.* Mr. Bray, Mr. Caulfield

82. Paper Coloring.—A laboratory course involving an examination and application of the various classes of dyestuffs. Prerequisite, Course 85. Laboratory, *eight hours a week for first nine weeks.* One breakage card required. *Two credit hours.* Mr. Bray, Mr. Caulfield

85. Cellulose.—A laboratory course dealing with the characteristics and derivatives of various kinds of pulps (cellulose). Prerequisites, Chemistry 1, 2, 31, 40 and Pulp and Paper 65. Laboratory, *four hours a week.* One breakage card required. *Two credit hours.* Mr. Caulfield

86. Bleaching of Pulp.—A laboratory course dealing with the methods of bleaching various kinds of pulp including use of bleaching powder, chlorine, electrolytic bleach production, and efficiency testing. Prerequisite, Course 65. Laboratory, *eight hours a week for last nine weeks.* One breakage card required. *Two credit hours.* Mr. Bray, Mr. Caulfield

87. Paper Testing and Analysis.—A laboratory course involving physical, microscopical, and chemical testing of various kinds of papers. Prerequisites, Chemistry 31 and 40 and Pulp and Paper 65 and 66. Laboratory, *four hours a week.* One breakage card required. *Two credit hours.*
Mr. Bray, Mr. Caulfield

105, 106. Investigations in Pulp and Paper Technology.
Mr. Bray, Mr. Caulfield

120. Graduate Thesis.—Arrangement and preparation of data and manuscript, based upon an original investigation. Usually, the last quarter of the college year should be devoted principally to the thesis, also to the preparation for the oral examination on the thesis, investigation, and graduate courses taken. No student can present himself for examination for an advanced degree until the thesis has been accepted. See additional information on degrees in the Graduate Study section of this catalog. *Consultation time and credit hours arranged.* Mr. Bray, Mr. Caulfield

Equipment obtained and receipted for by a student and not returned at the end of a course in good condition, as well as a few non-returnable supplies and a few special chemicals, will be charged to the student at cost. The supply room will be open during all laboratory periods. Breakage cards may be obtained only at the Treasurer's office and all students taking laboratory courses are required to have one. The unused balance is redeemable at the Treasurer's office, after obtaining clearance at the chemistry storeroom.

For Pulp and Paper Technology courses in the Summer Session, see the Summer Session Bulletin.

General Courses

Not sponsored by a single College or School.

TUTORIAL HONORS

The purpose of the Tutorial Honors course is to afford the superior student an opportunity to pursue, under exceptionally favorable conditions, some subject which is deemed important in the equipment of the symmetrically educated person, but for which he has not yet found a place in his course of study. It is not intended to provide instruction in a student's major subject, but to enable him to gratify his intellectual curiosity in some new field. Only juniors or seniors who have attained the standard of the Dean's List may be admitted, although inclusion in that list is not necessarily prerequisite, nor will it serve automatically to admit the student to the course. The course is designed solely for the benefit of the student of ability, ideas, and self-reliance who can profit by the free manner of tutorial instruction and close contact with an adviser specially qualified to direct his study.

49, 50. Tutorial Honors.—The work is conducted by personal conferences and directed reading. The tutor is selected with the approval of the Committee on Tutorial Courses. Application for admission to the course should be made to Dean Chase. *Two credit hours.*

MILITARY SCIENCE AND TACTICS

Major Oliver; Major Eberle; Major Stewart; Captain Phinney; Sergeant Ogilvie; Sergeant Bays

Military instruction is required by law. The department is in charge of an officer of the regular army, detailed by the President of the United States, as Professor of Military Science and Tactics. The course maintained is that of an Infantry Unit of the Reserve Officers' Training Corps, the purpose of which is to train officers for infantry. The students are organized into an infantry battalion, including band, officered by cadets selected for character,

soldierly bearing, and military efficiency. Instruction is carried on under rules and regulations prescribed by the Secretary of War in accordance with law.

Uniforms (except shoes, white shirts, and collars), arms, and equipment of the latest model of the U. S. Army are furnished by the government.

Each student is required to have a pair of regulation shoes and, to insure uniformity, as well as reduce the cost to the minimum, he is required to secure these from the University. They are issued with the uniform, become the student's property, and the cost is deducted from his military deposit. These shoes are purchased directly from the manufacturers and are charged to the student at cost.

The uniform prescribed is as follows:

For cadet commissioned officers, the olive-drab service uniform prescribed for infantry officers of the U. S. Army, except that "R.O.T.C." insignia are used; for other than commissioned officers, the olive-drab service uniform prescribed for the R.O.T.C. Basic Course.

Cadets are required to wear the uniform when on military duty.

In the following schedule of courses, numbers 1 to 4, inclusive, are required of all physically fit male freshmen and sophomores except students in the Two-Year Course in Agriculture. Course 5, 6 is elective for juniors; and Course 7, 8 is elective for seniors. The required courses cover two years' instruction as laid down in War Department regulations. The elective courses also cover two years and once entered upon become a prerequisite for graduation. Having completed Courses 1 to 4, inclusive, students electing to continue their military training, who comply with the requirements of law and regulations, are entitled to money commutation of subsistence at a rate fixed by the Secretary of War.

Three per cent of the total number of students who on March 1 of each year are enrolled in the second year of the Advanced Course (Mt 7 and 8), may be designated by the institution as honor graduates. The term "honor graduate" is understood to apply to a graduate whose attainments in scholarship have been so marked as to receive the approbation of the head of the University, and whose proficiency in military training and intelligent attention to duty have invited the approbation of the professor of military science and tactics.

The general object of the courses of instruction of the Reserve Officers' Training Corps is to qualify students for positions of leadership in time of a national emergency.

The basic course includes those subjects necessary to qualify the student to perform the duties of a non-commissioned officer of the lowest grade of

the branch in which he is trained. The first year of the course includes those subjects appropriate to training of the student in the duties of a private.

The object of the advanced course is to qualify for a commission in the Officers' Reserve Corps a limited number of students who have completed the basic course and who have demonstrated exceptional qualities of leadership. The first year of the course should prepare the student to derive the maximum benefit from the advanced R.O.T.C. camp.

The completion of the first three years of the course should qualify the student to perform, with reasonable efficiency, the duties of a non-commissioned officer of the highest grade. Graduates of the four years' course including the advanced camp should be reasonably qualified to perform the duties of a second lieutenant of infantry.

Courses of instruction outlined below have been arranged in progressive order.

BASIC COURSE

Freshman year, Course 1, 2. *Three hours a week, one and one-half credit hours.*

Sophomore year, Course 3, 4. *Three hours a week, two credit hours.*

1. Military Training—
   (a) Military Fundamentals:
      (1) Orientation; National Defense and the R.O.T.C.; Obligations of Citizenship; Military History and Policy; Current International Situation. Scope: Our military policy as defined by the National Defense Act; the principal provisions of the Act making this policy effective, the mission of the R.O.T.C., and its place in the scheme of national defense; relationship of the American citizen to his government; consequences of a lack of a sound national defense policy; important world events of economic, political, and military nature; their international consequences with possible effects on our foreign and domestic policies.
      (2) Military Discipline, Courtesies and Customs of the Service. Scope: The essentials of military discipline, courtesies and customs of the service.
      (3) Military Sanitation and First Aid. Scope: Elementary sanitation with special reference to the protection and maintenance of the health and physical efficiency of personnel; first aid procedure.

(4) Military Organization, General; Organization of the Infantry with special reference to rifle, machine gun, howitzer, supply and headquarters companies. Scope: General information about the composition and organization of the U.S. Army, both from a territorial and tactical viewpoint; orientation of the student in infantry organizations.

(b) Leadership. Scope: Theory of close and extended order drill to include the platoon; the practice of close and extended order to include the company and ceremonies; practice of the fundamentals of leadership.

2. Military Training—
   (a) Military Fundamentals:
      (1) Map Reading. Scope: Theoretical and practical instruction in reading military maps.
   (b) Weapons:
      (1) Rifle and Rifle Marksmanship. Scope: Theory and practice of the care, mechanism and use of the rifle.
   (c) Leadership. Scope: Continuation of Course 1 (b).
3. Military Training—
   (a) Weapons:
      (1) Automatic Rifle. Scope: Practical instruction in mechanical functioning, positions, and combat use of automatic rifle.
      (2) Characteristics of Infantry Weapons. Scope: Characteristics of Infantry weapons and those of the supporting arms.
   (b) Combat Training:
      (1) Musketry. Scope: The elements of musketry.
   (c) Leadership. Scope: Review and continuation of first year's training, stressing fundamentals of leadership.
4. Military Training—
   (a) Military Fundamentals:
      (1) Military History. Scope: Lecture course on selected battles.
   (b) Combat Training:
      (1) Scouting and Patrolling.
      (2) Functions of scouts. Scope of (1) and (2): Theory and practice of scouting and patrolling, and the functions of platoon scouts.
      (3) Combat principles of the rifle squad and section in attack, defense, and security. Scope: Squad and section in combat principles.
   (c) Leadership. Scope: Continuation of Course 3 (c).

ADVANCED COURSE

Junior year, Course 5, 6. *Five hours a week, four credit hours.*

Senior year, Course 7, 8. *Five hours a week, four credit hours.*

5. Military Training—
   (a) Military Fundamentals:
      (1) Aerial Photograph Reading. Scope: Theoretical and practical instruction in reading aerial photographs.
   (b) Weapons:
      (1) Machine Guns. Scope: Theoretical and practical instruction in the characteristics, powers, limitations, and operation of the machine gun.
      (2) Howitzer Company Weapons. Scope: Theoretical and practical instruction in the characteristics, powers, limitations, and operation of the 37 mm gun and the 3-inch trench mortar.
      (3) Pistol. Scope: Theory and practice in the care, mechanism, and use of the pistol.
   (c) Leadership:
      (1) Principles of.
      (2) Instructional methods.
      Scope of (1) and (2): A theoretical and practical review of the basic training in this subject, primarily from the viewpoint of an instructor and leader, with a view to qualifying the student as an instructor of basic students in close order drill and ceremonies.
6. Military Training—
   (a) Weapons:
      (1) Rifle Marksmanship. Scope: A brief review of instruction in rifle marksmanship.
   (b) Combat Training:
      (1) Estimate of the Situation and Combat Orders. Scope: Estimate of the situation and use of the five-paragraph order.
      (2) Marches, Security, Development for Combat, Offensive Combat, Defensive Combat, and Organization of the Ground. Scope: The conduct of marches, development for combat, offensive and defensive combat together with organization of the ground; security measures employed by a command on all occasions.
      (3) Combat Principles of the Rifle Platoon, Machine-Gun Platoon and Howitzer Company Squad in Attack, Defense, and

Security. Scope: Combat principles of the rifle platoon, machine gun platoon, howitzer company squad in attack, defense, and security.

(4) Field Fortification. Scope: The fundamentals of field fortification.

(c) Leadership. Scope: Continuation of Course 5 (c).

7. Military Training—

(a) Weapons:

(1) Tanks. Scope: A brief course on the characteristics, powers, limitations, and functions of the infantry tank.

(2) Mechanization. Scope: An informative course of lectures on mechanization, its present development, trend, and future possibilities.

(b) Combat Training:

(1) Review of Offensive Combat, Defensive Combat, Organization of the Ground, Combat Orders, and Solution of Problems (Infantry). Scope: A review of platoon instruction as covered in the first-year advanced training, together with solution of problems and combat orders.

(2) Combat Principles of the Rifle Company, Machine Gun Company and Howitzer Company Platoon in Attack, Defense, and Security. Scope: Theoretical and practical instruction in combat principles of the rifle and machine gun company and the howitzer platoon acting as part of the infantry battalion in security and in combat.

(3) Anti-Aircraft Defense. Scope: A general knowledge of anti-aircraft defense.

(4) Defense against Chemical Warfare. Scope: An elementary knowledge of chemical material and defense against chemical agents.

(5) Combat Intelligence. Scope: Basic ideas on functioning of military intelligence in combat.

(6) Infantry Signal Communications. Scope: Means and methods of maintaining communications within the infantry.

(c) Leadership:

(1) Principles of.

(2) Instructional Methods. Scope of (1) and (2): A theoretical and practical review of the first-year advanced training primarily from the viewpoint of the instructor and leader; principles of leadership and instructional methods.

8. Military Training—

(a) Military Fundamentals:

(1) Military History. Scope: The effects of national policy, both foreign and domestic, on national preparedness for war and the conditions resulting therefrom as exemplified by United States history contemporary with the major conflicts in which the nation has been involved.

(2) Company Administration. Scope: Instruction in the preparation of reports and records, military correspondence, mess management, organization funds, property and clothing, emergency procurement, supply in the field, mobilization of a small unit, movements by rail.

(3) Military Law. Scope: Theoretical and practical instruction in military law and the procedure of courts-martial.

(4) Officers' Reserve Corps Regulations. Scope: Transition from a member of the R.O.T.C. to a commissioned member of the Officers' Reserve Corps.

(b) Leadership. Scope: Continuation of Course 7 (c).

11, 12. Military Training (Band)—

The band consists of two classes of students: (1) Those who register for band and receive one hour of academic credit. (2) Those who do not register but who usually play with the band on public appearances, at military ceremonies, and on trips of the band as an undergraduate organization. Students who are registered for Band are required to practice two hours per week. For the equivalent of the third hour, they are required to attend such parades, ceremonies, and functions as designated by the Military Department and as requested by the Athletic Association. *Three hours a week, one credit hour.*

Professor Sprague, Sergeant Bays

PHYSICAL EDUCATION AND ATHLETICS

Men's Division

Professor Wallace; Professor Curtis; Professor Brice; Professor Jenkins; Mr. Kenyon

Athletics for men are under the supervision of the Athletic Board, composed of members of the faculty, alumni, trustees, and students. The manage-

ment of athletics is in the hands of a faculty manager, who carries out the policies of the Athletic Board.

The schedules of all sports are arranged with the interest of both the University and the individual members of teams in mind. Letters and numerals are awarded by the Athletic Board to those men who earn them in competition in various sports. Admission to all athletic contests is included in the blanket tax which is paid by each student at the time of registration.

Student managers are appointed in each sport and their work is carried on under the direction of the Faculty Manager. They are awarded a letter in their sport at the satisfactory completion of their duties.

Teams are maintained in varsity, junior varsity, and freshman football, relay, track, baseball, winter sports, and freshman basketball.

The field house, which is one of the largest and best in the world, offers a fine opportunity for the athletic teams to practice and participate in various sports during inclement weather.

The organization of the Physical Education Department has been planned to give the student such experience and instruction as will enable him to establish habits of recreation which will serve to promote healthful physical activity while in college and in his life after graduation. Especial emphasis will be placed upon out-of-door recreational exercises during the fall and spring, while the gymnasium will be used to its full extent during the winter months.

The Intramural Athletic Association is a part of the Physical Education Department, and was organized for the purpose of fostering athletics for men who are not participating in varsity sports at the time and for all others at any time.

Competition is carried on by twenty-three teams in ten different sports and it is hoped that it will be possible to increase this number in the near future.

It is the plan of the department to furnish opportunity for everyone to participate in his favorite physical education activity.

1, 2. Physical Education.—Required of all freshmen. Outdoor supervised mass games; competitive athletics including football, boxing, wrestling, fencing, corrective exercises, elementary apparatus work, intramural sports, and indoor games. *Two hours a week, no credit.*

3, 4. Physical Education.—Required of all sophomores. Outdoor mass games and athletics including football, tag football, tennis, volley ball, playground ball, speedball, and winter sports. Indoor games include basketball, wrestling, boxing, fencing; corrective work and apparatus work will

also be taught in the gym. Credit is given for participation in intramural sports. *Two hours a week, no credit.*

Teachers' Courses in Physical Education for Men

The following courses are for students who wish to teach physical education and who have completed Courses 1, 2 and 3, 4. The complete program is classed as a minor subject.

5. Physical Education.—The technique of teaching gymnastics. An outline of General Physical Education taking up specifically the meaning and results to be expected in modern physical education, first aid and massage, and the principles of training athletes and caring for athletic injuries. Practice teaching of games and mass athletics, supplemented by outside reading on physical education and hygiene. Methods of teaching football and basketball. *Five hours a week, two credit hours.*

6. Physical Education.—The study of games and play activity, covering plays and games from a physical education standpoint. Apparatus work, formal and school-room gymnastics, methods of promoting grammar and high-school programs in physical education and health. Methods of teaching track and baseball. *Five hours a week, two credit hours.*

7. Physical Education.—Health problems of school and community with emphasis on rural schools. A continuation of the technique of teaching mass games, corrective work, formal and informal gymnastics. Training and conditioning of athletes. Practice teaching. Methods of teaching football and basketball. *Five hours a week, two credit hours.*

8. Physical Education.—The administration of Physical Education programs in elementary and secondary schools. Graded apparatus work, training of leaders, corrective work individually and in classes. Practice teaching. Methods of teaching track and baseball. *Five hours a week, two credit hours.*

Women's Division

Assistant Professor Lengyel; Miss Rogers

It is the purpose of this department to develop good physical condition among college women by providing opportunity for the formation of wholesome habits and for relaxation and recreation.

A medical examination by the University physicians and a physical examination by the director of physical education are given each entering student during the first week of school, and thereafter as often as seems advisable. These are intended: to assist in the placement of the student with reference to her college program in the light of her physical ability and limitations; to inform the student as to her exact physical condition, so that she can intelligently conduct her mental and physical activity; and to discover as soon as possible any organic and physical defects in order to hasten their treatment.

Instructors in all activities are placing particular emphasis on two important aspects: the physical needs of the individual and the fun of the game. To stimulate a wholesome competitive interest on the part of the student, the Maine Athletic Association Women's Branch conducts a series of interclass activities in hockey, basketball, archery, tennis, baseball, track, and other sports.

Regulation gymnasium uniforms, described elsewhere in the catalog, are required for this work.

1, 2. Elementary Physical Education.—Required of all freshmen. Consists of postural and developmental gymnastics and physical efficiency tests of endurance, strength, and agility. Hockey, tennis, basketball, baseball, archery, and track may be substituted for this in season. *Two hours a week, no credit.*

1a, 2a. Elementary Dancing.—This may be substituted for Course 1, 2. The elements of dancing, folk dancing, simple combination of technique, a few classic dances, and simple rhythms. *Two hours a week, no credit.*

3, 4. Advanced Physical Education.—Required of all sophomores. A continuation of Course 1, 2, with advanced gymnastics and apparatus work, and more difficult physical efficiency tests. The sports listed above may be substituted for this in season, for the purpose of developing greater skill and accuracy, as well as providing recreation. *Two hours a week, no credit.*

3a, 4a. Advanced Dancing.—A continuation of Course 1a, 2a with more advanced technique and classic dances. Prerequisite: Course 1a, 2a. *Two hours a week, no credit.*

5, 6. Tap Dancing.—Can be taken for Physical Education credit for one year only, either freshman or sophomore year.

Individual Gymnastics.—Required of all freshmen and sophomores referred to the department by the medical examiner or by their family physician for special work. Prescribed exercises for body building, posture,

foot work, etc. Students who are required to take this work substitute it for Courses 1, 2 and 3, 4. *Two hours a week, no credit.*

Teachers' Certificate Courses in Physical Education for Women

The following courses are for students who wish to minor in Physical Education and thus obtain a Secondary State Teachers' Certificate, from the State Department of Education.

Prerequisites: Physical Education 1, 2, 3, 4 without credit; General Zoology, *four credit hours;* Elementary Physiology and Hygiene, *two credit hours;* Human Physiology, *four credit hours.*

7. The Principles of Physical Education and Hygiene.—An introductory course in the interpretation and objectives of physical education. Open to juniors who are preparing to teach. *Three hours a week and field work, two credit hours.*

8. Physical Examination and Measurements.—This course covers the purposes, management, and technique of physical examination and first aid with the exception of the determination of organic capacity for activities. Open to juniors who have fulfilled the requirements of Zoology 1, 5, 12. *Three hours a week and field work, two credit hours.*

9, 10. Methods for Teaching Physical Education.—This course deals with the methods of teaching physical education activities through the grades and high school. It also gives opportunity for practice teaching. Open to seniors who have passed Physical Education 7, 8. *Three hours a week and field work, two credit hours.*

14. Girls' Basketball and High-School Athletics.—It takes up girls' athletics from the standpoint of girls' need of physical education. Specializes in athletics. Instruction in organized team games such as basketball, hockey, tennis, archery; recreational activities such as volley ball, badminton, deck tennis. Plan and diagram of plays, skeleton practice system and methods of training. *Three hours a week and field work, two credit hours.*

It is recommended that students enrolling in the above courses should have at least six hours of each of the following departments: Education, Psychology, Sociology, and Public Speaking.

Graduate Study

FACULTY OF GRADUATE STUDY

George Davis Chase, Ph.D., LL.D., *Dean of Graduate Study and Professor of Classics*

James Norris Hart, Sc.D., Ph.D., *Dean of the University and Professor of Mathematics*

Edith Marion Patch, Ph.D., *Entomologist, Experiment Station*

Lamert Seymour Corbett, M.S., *Professor of Animal Industry*

William Jordan Sweetser, S.B., *Professor of Mechanical Engineering*

Roy Merle Peterson, Ph.D., *Secretary of the Faculty and Professor of Romance Languages*

Robert Rutherford Drummond, Ph.D., *Professor of German*

Harley Richard Willard, Ph.D., *Professor of Mathematics*

John H Ashworth, Ph.D., *Professor of Economics and Sociology*

Charles Andrew Brautlecht, Ph.D., *Professor of Chemistry and Chemical Engineering*

Milton Ellis, Ph.D., *Professor of English*

Embert Hiram Sprague, B.S., *Professor of Sanitary Engineering*

Albert Lewis Fitch, Ph.D., *Professor of Physics*

Donald Folsom, Ph.D., *Plant Pathologist, Experiment Station*

François Joseph Kueny, L. ès L., *Professor of Romance Languages*

Charles Henry Merchant, Ph.D., *Professor of Agricultural Economics and Farm Management*

James Howard Waring, Ph.D., *Professor of Horticulture*

Paul Cloke, E.E., Eng.D., *Dean of the College of Technology*

Olin Silas Lutes, Ph.D., *Dean of the School of Education and Professor of Education*

Charles Alexius Dickinson, Ph.D., *Professor of Psychology*

Pearl Stuart Greene, A.M., *Professor of Home Economics*

Ferdinand Henry Steinmetz, Ph.D., *Professor of Botany and Entomology*

William Edward Barrows, E.E., *Professor of Electrical Engineering*

Arthur St. John Hill, E.E., M.S.E., *Professor of Electrical Engineering*

Fred Griffee, Ph.D., *Biologist and Director of the Experiment Station*

Ronald Bartlett Levinson, Ph.D., *Professor of Philosophy*

Elmer Reeve Hitchner, Ph.D., *Professor of Bacteriology*

Marion Deyoe Sweetman, Ph.D., *Professor of Home Economics*
Maurice Daniel Jones, M.S., *Professor of Agricultural Economics and Farm Management*
James Muilenburg, Ph.D., *Dean of the College of Arts and Sciences*
Paul DeCosta Bray, Ch.E., *Professor of Pulp and Paper Technology*
Arthur Lowell Deering, B.S., Sc.D., *Dean of the College of Agriculture*
Weston Sumner Evans, M.S., *Professor of Civil Engineering*
Joseph Magee Murray, Ph.D., *Professor of Zoology*
Ava Harriet Chadbourne, Ph.D., *Associate Professor of Education*
Charles Burton Crofutt, Ph.D., *Associate Professor of Physics*
William Franklin Dove, Ph.D., *Associate Biologist, Experiment Station*
George William Small, Ph.D., *Associate Professor of English*
George Baer Fundenburg, Ph.D., *Associate Professor of Romance Languages*
Albert Morton Turner, Ph.D., *Associate Professor of English and Comparative Literature*
Edward French Dow, Ph.D., *Associate Professor of History and Government*
John Raymond Crawford, Ph.D., *Assistant Professor of Education*
Alfred Carleton Andrews, Ph.D., *Assistant Professor of Classics*

ADMINISTRATION

Graduate work is administered by the Faculty and Dean of Graduate Study. The details of administration are in the hands of an executive committee consisting of the Dean, one member from the Experiment Station, two from each of the three colleges—Agriculture, Arts and Sciences, and Technology,—and two from the School of Education.

ADMISSION

Students who hold a bachelor's degree from the University of Maine, or from an institution granting a fully equivalent degree, and who desire to pursue advanced studies, are admitted as graduate students and are under the direction of the faculty of graduate study, whether they are candidates for a degree or not.

REGISTRATION

At the beginning of each semester all graduate students, whether candidates for a degree or not, are required to register with the head of the de-

partment in which they propose to do their major work, obtain the approval of the Dean, and complete their registration by filing their program of study at the Registrar's office. A fee of two dollars is charged for registration after two weeks have elapsed.

TUITION AND FEES

The tuition charges for graduate students are the same as for undergraduates.

Candidates for professional degrees are required to pay a fee of $5.00 at the time of registration, and a fee of $10.00 upon the presentation of the thesis.

FELLOWSHIPS AND SCHOLARSHIPS

Applications for graduate fellowships and scholarships should be made to the Dean of Graduate Study by May 1, except that for the Trustee Scholarship in Technology they should be made not later than April 1.

Trustee Fellowships.—The Trustees of the University established in 1931 three graduate fellowships of the value of $500.00 each, to be assigned annually on a competitive basis by a committee of the Faculty of Graduate Study.

Trustee Graduate Scholarships.—Four scholarships, of the value of a year's tuition, were established by the Board of Trustees in 1923, one each for graduates of the three colleges in the University and the School of Education.

Maritime Provinces Graduate Scholarships.—By action of the Trustees of the University, a graduate scholarship is available annually in each of the four academic divisions of the University, on a competitive basis, for graduates of the colleges and universities in the Provinces of New Brunswick, Nova Scotia, and Prince Edward's Island. These scholarships have a value of $250.00, equivalent to a full year's tuition for a student residing without the State. The first award was made in 1934, to a graduate of Acadia University.

THE COE RESEARCH FUND

The Trustees of the University have set aside the sum of $100,000 to form a permanent fund, the proceeds of which are to be used for carrying

on various kinds of research work within the University. Applications for grants from this fund should be addressed to Professor E. R. Hitchner, Secretary. It is hoped that this fund may later be increased by grants from other sources.

DEGREES

The degrees of Master of Arts, Master of Science, Master of Arts in Education, and Master of Science in Education are granted to candidates who hold corresponding bachelor's degrees and fulfill the requirements of residence and scholarship.

A candidate for an advanced degree must give evidence by his previous record that he is qualified to do graduate work of a satisfactory grade. If he is a graduate of another institution he is required to submit, with his plan of study, credentials covering the courses pursued and the standing attained. If he is a graduate of the University of Maine he must present his record from the Registrar's office.

REQUIREMENTS FOR THE MASTER'S DEGREE

A candidate for the master's degree is required to devote at least one year to resident graduate study and to complete work amounting to fifteen hours per week throughout the college year (thirty semester hours). In the case of summer session students, four sessions, or the equivalent, are normally accepted as equivalent to a year of residence.

At least one year must elapse between the conferring of the bachelor's and the master's degree. No work done before the recommending for the bachelor's degree shall be counted toward the master's degree. All requirements for the degree must be completed within an eight-year period.

As soon after registration as practicable, the student, in conference with his major instructor, will plan his entire course of study for the master's degree. The major instructor will present the proposed curriculum for approval to a committee, which consists of the Dean of Graduate Study and the representatives of the candidate's college on the Executive Committee of the faculty.

The curriculum shall include work in a major department or subject in which the candidate has already completed the equivalent of at least two years of undergraduate study. The work may all be done in one department, or it may include not more than two minor subjects which bear a distinct relation to the general plan or purpose of the major subject. All of the work

must be of advanced character and must be tested by examinations which the candidate shall pass with distinction.

Courses of study intended primarily for graduate work are numbered above 100 in the catalog, but courses numbered 51 to 100 inclusive may be counted upon approval. Courses numbered 50 or under may not be accepted for graduate credit.

Each candidate for a degree is furnished with a registration book containing the names and number of the courses which have been approved for his degree, and spaces for entering the date of beginning and completing each course, to be filled in by the instructor. This book is the student's official record of his course and should be carefully preserved and presented at the time of his final examination.

The candidate shall prepare, as a part of his curriculum, a satisfactory thesis on some topic connected with his major subject. It is ordinarily expected that the thesis shall be a limited piece of original research, with the design of making a minor contribution to scholarship in the student's particular field. A student of proved maturity, intelligence, accuracy, and industry, however, whose objectives and interests are not best furthered by this type of research, may be authorized to submit a thesis of different type. This may consist of a digest and analysis of the literature on a topic or problem of major importance in the student's field; the analysis of a set of accepted statistics in that field; a comprehensive outline and critique of current practices; or a report of a project undertaken and carried on under competent direction. The subject must be submitted by the end of the first semester of study.

The thesis must be deposited in completed form with the Dean of Graduate Study before the final examination. It must have been previously approved by a committee composed of his major instructor, the head of the major department, and the members of the Executive Committee from the candidate's college.

At the end of the course of study for the master's degree, after his thesis has been approved, the candidate will be required to pass an oral examination covering his work, including the thesis. The time for such examinations will be arranged by the Dean to accord, so far as possible, with the convenience of the candidate and the major instructor; they will ordinarily be held in the month of May, but, at the discretion of the Executive Committee, may be held at other times. About May 15, the Dean will notify the heads of all departments of the University of the dates set for the public oral examinations of the candidates of the year. Examinations are open to all voting members of the faculty. While, as a matter of course, the examination will be conducted chiefly by the members of the departments in which the work has been done,

any member of the faculty present at the examination has the privilege of questioning the candidate.

Graduates are required to receive their degree in person at Commencement unless especially excused by the President.

Further information about the administration of graduate work and detailed requirements for the form and arrangement of theses may be found in a pamphlet entitled "Degrees and Theses."

PROFESSIONAL DEGREES

The professional degrees of Chemical Engineer (Ch.E.), Civil Engineer (C.E.), Electrical Engineer (E.E.), and Mechanical Engineer (M.E.) may be conferred upon graduates in the curriculum of Chemistry, Chemical Engineering, or Pulp and Paper Technology, Civil Engineering, Electrical Engineering, and Mechanical Engineering respectively, upon the completion of the requirements stated below. Graduates receiving the degree of Bachelor of Science in General Engineering, upon the completion of these requirements, will be granted the professional degree of Chemical Engineer, Civil Engineer, Electrical Engineer, or Mechanical Engineer, depending upon the field of work of the candidate and the judgment of the dean and the heads of departments in the College of Technology.

The presentation of a satisfactory thesis, which shall constitute an original contribution to the advance of engineering, is required of all candidates. The candidate must hold a position of responsibility and must have accomplished professional work of eminence for a period of at least five years subsequent to graduate. A full and complete statement covering the professional experience of the candidate must be presented at the time of registration. Candidates are expected to be present in person to receive their degrees.

UNIVERSITY OF MAINE STUDIES

The *University of Maine Studies,* Second Series, are issued under the direction of the Faculty of Graduate Study, for the purpose of publishing notable pieces of research work produced by graduate students and members of the faculty. The numbers issued to date are:

No. 1 The Life and Work of John Davis (1774-1853)
By Thelma Louise Kellogg 1924

No. 2 Economic Feminism in American Literature prior to 1848
By A. Genevieve Violette 1925

No. 3 Roumanian Folk Tales Retold from the Original
By Jacob Bernard Segall 1925

No. 4 Life of Thomas Green Fessenden
By Porter Gale Perrin 1925

No. 5 Mental Attainment of College Students in Relation to Previous Training, Environment, and Heredity
By John Whittemore Gowen and Marjorie Eunice Gooch 1925

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No. 12 An Economic Study of Production, Destination, and Farm Price of Maine Potatoes
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By Leola Bowie Chaplin 1934

No. 33 A History of Lumbering in Maine, 1820-1861
By Richard G. Wood 1935

No. 34 The Herbaceous Flowering Plants Growing without Cultivation in the Vicinity of Orono, Maine
By Eugene Cecil Ogden 1935

No. 12 is no longer available for distribution.

The First Series of the *University of Maine Studies,* issued at irregular intervals from 1900 to 1907, comprises the following numbers:

1. Effect of Magnetization upon the Elasticity of Rods, by James S. Stevens; 2. The Life History of Nucula Delphenodonta Mighels, by Gilman A. Drew; 3. The Preliminary List of Maine Fungi, by Percy LeRoy Ricker; 4. Catalog and Bibliography of the Odonata (Dragon Flies) of Maine, by F. L. Harvey; 5. Study of the Physiographic Ecology of Mt. Katahdin, Maine, by L. H. Harvey; 6. The Habits, Anatomy, and Embryology of the Giant Scallop (Pecten tenuicostatus Mighels), by Gilman A. Drew; 7. Meteorological Conditions at Orono, Maine, by James S. Stevens. Numbers 4 and 5 are out of print.

Copies of the *Studies* may be obtained from the University Library.

Maine Agricultural Experiment Station

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*Also a member of the Council ex officio as Commissioner of Agriculture.

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Florence Lydia Markin, M.S., Assistant
Gladys Elizabeth Babbin, Assistant in Seed Analysis and Laboratory Assistant

GOVERNMENT OF THE STATION

By authority of the Trustees the affairs of the Station are considered by the Station Council, composed of the President of the University, three members of the Board of Trustees, the Director of the Station, the heads and associates of the various departments of the Station, the Dean of the College of Agriculture, the Director of the Extension Service, the Commissioner of Agriculture, and one member each from the State Pomological Society, the State Grange, the State Dairymen's Association, the Maine Live Stock Breeders' Association, the Maine Seed Improvement Association, and the Maine Poultry Improvement Association. The recommendations of the Council are referred to the Trustees for final action. The Director is the executive officer of the Station and the other members of the staff carry out the lines of research that naturally come under their departments.

INCOME

The income of the Station is derived from the following sources: Federal and State appropriations, payments for inspection analyses made for the Commissioner of Agriculture, and from the sale of farm produce. Through appropriations to the University the State provides for the cost of printing Station publications.

OBJECT

The purpose of the agricultural experiment stations is defined in the Act of Congress establishing them as follows:

"It shall be the object and duty of said experiment stations to conduct original researches or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued under the varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of the different kinds of food for domestic animals; the scientific and economic questions involved in the production of butter and cheese; and such other researches or experiments bearing directly on the agricultural industry of the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories."

The work that the Station can undertake from the Adams Act fund is more restricted, as the fund can "be applied only to paying the necessary expenses of conducting original researches or experiments bearing directly on the agricultural industry of the United States, having due regard to the varying conditions and needs of the respective States or Territories." The object of the Purnell Act is stated as follows: "The funds appropriated pursuant to this Act shall be applied only to paying the necessary expenses of conducting investigations or making experiments bearing directly on the production, manufacture, preparation, use, distribution, and marketing of agricultural products and including such scientific researches as have for their purpose the establishment and maintenance of a permanent and efficient agricultural industry, and such economic and sociological investigations as have for their purpose the development and improvement of the rural home and rural life."

EQUIPMENT

Most of the Station offices and laboratories are in Holmes Hall, described in the section on University buildings. The station is well equipped in laboratories and apparatus, particularly in the lines of biological, chemical, entomological, horticultural, pomological, plant pathological, and poultry investigations. It has extensive collections illustrating the botany and entomology

of the State. It has a library of nearly 7000 volumes comprising agricultural and biological journals and publications of the various experiment station.s

HIGHMOOR FARM

The State Legislature of 1909 purchased a farm upon which the Maine Agricultural Experiment Station "shall conduct scientific investigations in orcharding, corn, and other farm crops." The farm is situated in the counties of Kennebec and Androscoggin, largely in the town of Monmouth. It is on the Farmington branch of the Maine Central Railroad, two miles from Leeds Junction. A flag station, "Highmoor,'" is on the farm.

The original farm contains 225 acres, about 200 of which are in orchards, fields, and pastures. The Legislature in 1925 provided an appropriation for the purchase of 30 acres adjoining the farm for a demonstration orchard. There are in the neighborhood of 2500 apple trees upon the place. Fields that are not in orchards are well adapted to experiments with corn, potatoes, and similar farm crops. The house is well arranged for the station offices and for the home of the farm superintendent. The barns are large, affording storage for hay and grain. A cold storage plant has been provided for apples. The capacity of this plant is about 7500 boxes.

AROOSTOOK FARM

By action of the Legislatures of 1913 and 1915 a farm was purchased in Aroostook County for scientific investigations in agriculture to be under "the general supervision, management, and control" of the Maine Agricultural Experiment Station. The farm is in the town of Presque Isle, about two miles south of the village, on one of the main roads to Houlton. The Bangor and Aroostook Railroad crosses the farm.

The farm contains about 275 acres, somewhat more than half of which is cleared. The eight-room house provides an office and a home for the farm superintendent. The large barn affords storage for hay and grain and has a potato storage house in the basement.

INVESTIGATIONS

The Station continues to restrict its work to a few important lines, believing that it is better for the agriculture of the State to study thoroughly a few problems than to spread over the whole field of agricultural science. It

has continued to improve its facilities and segregate its work in such a way as to make it an effective agency for research in agriculture. Prominent among the lines of investigation are studies upon the food of man and animals, the diseases of plants and animals, breeding of plants and animals, investigations in animal husbandry, orchard and field experiments, poultry investigations, entomological, agricultural, and home economics research.

INSPECTIONS

The Commissioner of Agriculture is the executive of the laws regulating the sale of agricultural seeds, commercial feeding stuffs, commercial fertilizers, dairy products, drugs, foods, fungicides and insecticides. The law requires the commissioner to collect samples and have them analyzed at the Station. The law also requires the Station to make the analyses and publish the results.

PUBLICATIONS

The Station issues three series of publications: Bulletins, Official Inspections, and Miscellaneous Publications.

The results of the work of investigation are published in part in scientific journals at home and abroad, in U. S. Department of Agriculture publications, and in bulletins of the Station. All of the more important and immediately practical studies are published in the Station Bulletins. The Bulletins for a year together make up the Annual Report. Bulletins are sent to the press of the State, to exchanges, libraries, and scientific workers. Bulletins which contain matter of immediate value to practical agriculture are sent free to residents of Maine whose names are on the permanent mailing list.

The results of the work of inspection are printed in pamphlet form and are termed Official Inspections. Official Inspections are sent to dealers within the State; those that have to do with fertilizers, feeding stuffs, and seeds are sent to farmers; and those reporting foods and drugs are sent to a list of several thousand women within the State.

The Miscellaneous Publications consist of newspaper bulletins, circulars, and similar fleeting publications. These are sent to different addresses according to the nature of the subject matter.

On request, the name of any resident of Maine will be placed on the permanent mailing list to receive notices of the Bulletins and Official Inspections as they are published. Upon request, any of the Bulletins or Official Inspections will be mailed free of charge to residents of Maine.

Summer Session

The University maintains a Summer Session which begins the first week in July and continues for six weeks. The faculty is made up mainly of heads of departments and other members of the University staff of professorial rank and visiting professors from other institutions. Over 100 courses in seventeen departments are now offered. Instruction is given in most of the subjects taught in the College of Arts and Sciences as well as in Chemistry, Pulp and Paper Technology, Physical Education, and Home Economics. A large amount of work is available in Education.

As an integral part of the University organization, the Summer Session insists upon similar standards of academic achievement. In general the same requirements for admission and the same regulations apply as during the regular academic year. The Summer Session may be used to meet the residence requirement for the different degrees authorized by the University, and credit obtained during the summer is fully recognized.

The Session is primarily for the benefit of teachers and superintendents of Maine and other states who desire to improve themselves by taking professional courses in the field of Education or by pursuing subjects which may be helpful to them in connection with their work. Hence, special attention is given to teachers' courses in the various subjects offered. The Session also affords opportunities for students in the University of Maine or other similar institutions to secure credits toward a degree and complete their work in a shorter time than would otherwise be possible. Normal-school graduates who are admitted to advanced standing as candidates for a bachelor's degree in the School of Education may do a considerable part of their work in the Summer Session.

Properly qualified graduates of colleges or universities may enroll in most departments as candidates for a master's degree and complete their work by attendance at the Summer Session. The minimum residence requirement in such cases is four sessions. An increasing number of summer students are candidates for an advanced degree.

Classes meet five times a week, Monday to Friday inclusive. Except in special cases the maximum registration is for three courses, the successful completion of which entitles the student to six semester hours of credit.

A registration fee of $5.00 is paid by all students. Tuition for a single two-credit course is $15.00; for each additional two-credit course, $10.00. In some courses involving laboratory work a special fee is charged.

Living accommodations for both men and women may be obtained in the campus dormitories at moderate prices. Families or groups desiring to live together may secure houses or apartments in Orono by making their requirements known to the Director.

The opening and closing dates for 1935 are Monday, July 1 and Friday, August 9. The Summer Session Bulletin, giving a list of the courses offered and detailed information, is published annually about March 1. For copies and other information address Dr. Roy M. Peterson, Director, Orono, Maine.

Alumni Associations

GENERAL ASSOCIATION

President, George S. Williams, 1905, 9 Green St., Augusta
Vice-President, Harold M. Pierce, 1919, Box 58, Bangor
Clerk, Maurice D. Jones, 1912, Orono
Treasurer, Paul D. Bray, 1914, Orono
Executive Secretary, Charles E. Crossland, 1917, Fernald Hall, Orono

ALUMNI COUNCIL

Members at Large

	Term expires
Mrs. Hamlyn Robbins, 1919, R.D. 1, Scarboro	1935
Mrs. Merrill Bowles, 1921, 176 Nowell Rd., Bangor	1935
R. E. McKown, 1917, Bar Harbor	1935
Arthur L. Deering, 1912, Orono	1935
Harold Cooper, 1915, 77 Davis Ave., Auburn	1935
C. Parker Crowell, 1898, 6 State St., Bangor	1936
Mrs. W. F. Schoppe, 1908, R.F.D. 4, Auburn	1936
Harry E. Sutton, 1909, 161 Devonshire St., Boston, Mass.	1936
F. Drummond Freese, 1915, 144 Broadway, Bangor	1936
J. A. McCusker, 1917, Camp Wilson, East Barre, Vt.	1936
R. H. Fogler, 1915, Montgomery-Ward Co., Chicago, Ill.	1937
J. E. Totman, 1916, Stock Exchange Bldg., Baltimore, Md.	1937
G. T. Carlisle, 1909, 12 Hammond St., Bangor	1937

College of Agriculture

W. Ray Thompson, 1914, 11 Teague St., Caribou	1935

College of Arts and Sciences

Hazen H. Ayer, 1924, 10 Post Office Sq., Boston, Mass.	1936

College of Technology

Arthur E. Silver, 1902, 360 No. Fullerton Ave., Upper Montclair, N. J..... 1935

College of Law

Robert W. DeWolfe, 1907, 102 Exchange St., Portland..... 1937

Alumni Representative on Board of Trustees

Hosea B. Buck, 1893, 1 Columbia Bldg., Bangor..... 1936

G. S. Williams, 1905, 9 Green St., Augusta
President of the General Alumni Association *ex officio*
Harold M. Pierce, 1919, Box 58, Bangor
Vice-President of the General Alumni Association *ex officio*

Executive Committee

Harold M. Pierce, Chairman
G. S. Williams, *ex officio*
Harry E. Sutton
Harold Cooper
R. W. DeWolfe
A. L. Deering
G. T. Carlisle

Alumni Members of Athletic Board

	Term expires
J. Harvey McClure, 1905, 45 Sixth St., Bangor.....	1935
Clifford Patch, 1911, 83 Grove St., Bangor.....	1936
Clifton A. Hall, 1910, Box 778, Bangor.....	1937

SPECIAL ASSOCIATIONS

Pulp and Paper

President, A. W. Nickerson, 1916, Saxon Garden, White Plains, N. Y.; Secretary-Treasurer, Merle Shaw, 1915, 5130 Connecticut Ave., N.W., Washington, D. C.

Maine Teachers

President, Linwood J. Kelley, 1921, Lewiston; Secretary, C. E. Crossland, 1917, Orono; Treasurer, K. Jean Keirstead, 1931, 144 So. Brunswick St., Old Town

LOCAL ASSOCIATIONS

Androscoggin Alumnae—President, Mrs. Linwood J. Kelley, 1921, 84 Russell St., Lewiston; Secretary, Mrs. Robert Pendleton, 1933, 500 Main St., Lewiston.

Androscoggin Valley—President, F. Owen Stephens, 1917, 21 Academy St., Auburn; Secretary, Marion Cooper, 1927, c/o Lewiston Daily Sun, Lewiston.

Aroostook County—President, Verne C. Beverly, 1920, Caribou; Secretary, Lewis H. Kriger, 1916, Fort Fairfield.

Boston Alumnae—Chairman, Elizabeth Bright, 1917, 11 Waverly St., Brookline, Mass.

Boston—President, Myron Watson, 1922, 15 Roberts Ave., Newtonville, Mass.; Secretary, James L. Gulliver, 1915, 11 Boston Ave., W. Medford, Mass.

Chicago—President, G. E. LaMarche, 1911, 6525 Olmstead Ave., Chicago, Ill.; Secretary, L. I. Johnstone, 1905, 1816 S. Crescent Ave., Park Ridge, Ill.

Central Maine—President, A. P. Wyman, 1907, 3 Greylock St., Waterville; Secretary, Willard Gilmore, 1932, 40 Main St., Waterville.

Central New York—President, Clarence Libby, 1916, N. Y. State College of Forestry, Syracuse, N. Y.; Secretary, A. L. Gilmore, 1907, 602 Comstock Ave., Syracuse, N. Y.

Connecticut—President, Alfred W. Hanmer, 1926, 311 Main St., Wethersfield, Conn.; Secretary, Leonard Lord, 1923, 5 Ridge Road, Middletown, Conn.

Hancock County—President, Horace H. Towle, 1916L, Bucksport; Secretary, Gardner Tibbetts, 1922, Ellsworth.

Kennebec County—President, Clayton C. Osgood, 1924, Dept. of Agriculture, Augusta; Secretary, George H. McGouldrick, 1923, 237 Water St., Augusta.

Knox County—President, F. L. S. Morse, 1922, R.D. 1, Rockland; Secretary, Katherine Veazie, 1930, 12 Shaw Ave., Rockland.

Lehigh Valley—President, E. N. Woodsum, 1915, Box 592, Allentown, Pa.; Secretary, Paul S. Armstrong, 1921, 824 Porter St., Easton, Pa.

Lincoln County—President, B. West Lewis, 1916, Boothbay Harbor; Secretary, Selma Gregory, 1934, Boothbay Harbor.

Missouri—President, Kent R. Fox, 1910, 7022 Amherst, St. Louis, Mo.; Secretary, Thelma L. Kellogg, 1918, 323 W. Walnut St., Carbondale, Ill.

New York Alumnae—President, Mrs. R. M. Boynton, 1920, 95 Hillside Ave., Tenafly, N. J.; Secretary, Jean Campbell, 1931, 545 West 111th St., New York, N. Y.

New York—President, Foster B. Blake, 1922, 463 West St., New York, N. Y.; Secretary, L. K. Betts, 1928, 133-01 Sanford Ave., Flushing, L. I., N. Y.

Northeastern New York—President, Philip W. Ham, 1922, 1504 Keyes Ave., Schenectady, N. Y.; Secretary, S. O. McCart, 1929, 70 Jackson Ave., Schenectady, N. Y.

Northern Ohio—President, Philip Dorticos, 1904, Suite 3, 2194 Ambleside Road, Cleveland, Ohio; Secretary, A. C. Goodnow, 1911, 1225 Bonnieview Ave., Lakewood, Ohio.

Northwestern—President, Guy French, 1909, 4214 Pillsbury Ave., Minneapolis, Minn.; Secretary, J. H. Davidson, 1921, 1100 Builders Exchange, Minneapolis, Minn.

Oxford County—President, Peter McDonald, 1914, 114 Congress St., Rumford; Secretary, Mrs. Emma T. Ledger, 1928, 81 Main St., Norway.

Penobscot Valley—President, George T. Carlisle, 1909, 12 Hammond St., Bangor; Secretary, George Lord, 1925, Orono.

Penobscot Valley Law—President, B. W. Blanchard, 1904, 50 Columbia St., Bangor; Secretary, L. V. Jones, 1909, 50 Columbia St., Bangor.

Philadelphia—President, Albert H. Repscha, 1925, Drexel Institute, Philadelphia, Penna.; Secretary, G. O. Ladner, 1926, Summit Ave., Langhorne, Pa.

Piscataquis County—President, Raymond Davis, 1911, Guilford; Secretary, Freda Crozier, 1931, Brownville.

Pittsburgh—President, Henry E. Cole, 1902, 6100 Stanton Ave., Pittsburgh, Pa.; Secretary, Donald Babb, 1926, 1355 Cordova Rd., Pittsburgh, Pa.

Portland Club University of Maine Women—President, Mrs. Eirena Luce, 1918, 19 Victory Ave., So. Portland; Secretary, Mrs. Virginia Lamb, 1928, 118 Brentwood St., Portland.

Rhode Island—President, J. Raymond Dubee, 1916, 1040 Hospital Trust Bldg., Providence, R. I.; Secretary, L. Addison Curren, 1926, 789 Park Ave., Cranston, R. I.

Somerset County—President, Leon W. Smiley, 1912, 9 Coburn Ave., Skowhegan; Secretary, Gerald Dunn, 1923, Skowhegan.

Southern California—President, A. C. Hardison, 1890, 912 Main St., Santa Paula, Calif.; Secretary, G. E. Springer, 1910, 1128 West 50th St., Los Angeles, Calif.

Southern New Hampshire—President, Harold W. Howe, 1924, R.F.D. #3, Concord, N. H.; Secretary, Harold W. Ingham, 1911, 328 E. Penacook St., Concord, N. H.; Alumnae Secretary, Ina Jordan, 1924, 519 Hanover St., Manchester, N. H.

Waldo County—President, John A. Vickery, 1931, 74 Church St., Belfast; Secretary, Doris Curtis, 1931, Belfast.

Washington, D. C.—President, A. S. Creamer, 1926, 3102 Rodman St., N.W., Washington, D. C.; Secretary, Marion E. Lord, 1927, 1423 Geranium St., N.W., Washington, D. C.

Western Maine—President, Frank W. Hagan, 1933, 90 Woodfords St., Portland; Secretary, Reginald Merrill, 1929, 80 Exchange St., Portland.

Western Massachusetts—President, C. Roger Lappin, 1923, 283 Worthington St., Springfield, Mass.; Secretary, Ethelyn Percival, 1924, 39 W. School St., Westfield, Mass.

Western New York—President, S. C. Clement, 1915, State Teachers College, Buffalo, N. Y.; Secretary, Clayton T. Knox, 1929, 45 W. Mohawk St., Buffalo, N. Y.

White Mountain—President, Elmer Noyes, 1900, 173 Main St., Berlin, N. H.; Secretary, C. H. Goldsmith, 1915, 110 Washington St., Berlin, N. H.

Worcester County—President, James E. Masterson, 1916, 1241 Main St., Worcester, Mass.; Secretary, Mrs. E. R. Fuller, 1928, 24 Neptune Rd., Worcester, Mass.

York County—President, R. H. Bryant, 1915, 81 South St., Biddeford; Secretary, R. H. Lovejoy, 1918, 9 Maple St., Sanford.

CLASS SECRETARIES

1872

1873 F. Lamson-Scribner, 1849 California St., N.W., Washington, D. C.

1874

1875 E. F. Hitchings, 2 Summer St., Orono

1876 E. M. Blanding, 46 Madison Avenue, Bangor

1877 E. F. Danforth, Skowhegan

1878 C. C. Chamberlain, 113 R. R. Street, Enderlin, N. D.

1879 C. A. Morse, Windermere Hotel, Chicago, Ill.

1880 A. H. Brown, 24 So. Brunswick St., Old Town

1881 H. M. Plaisted, 4413 Page Blvd., St. Louis, Mo.

1882 W. R. Howard, 11 Church St., Belfast

1883 L. W. Taylor, 123 Forest St., Oberlin, Ohio

1884 L. W. Cutter, 65 State St., Bangor

1885 Dean J. N. Hart, 123 Main St., Orono
1886 S. S. Twombly, Route 1, Box 40, Fullerton, Calif.
1887 J. S. Williams, Guilford
1888 G. E. Seabury, 19 Park Lane, Jamaica Plains, Mass.
1889 Dr. J. S. Ferguson, 1 Malba Drive, Malba, L. I., N. Y.
1890 Edward H. Kelley, 225 Main St., Orono
1891 W. M. Bailey, 81 Rockland Ave., Malden, Mass.
1892 W. R. Butterfield, 14 Paulina St., Somerville, Mass.
1893 Harry M. Smith, 51 Hammond St., Bangor
1894 Frank Gould, Orono
1895 Dr. H. S. Boardman, 172 Main St., Orono
1896 Perley B. Palmer, 65 Summit St., Woodland
1897 W. L. Holyoke, 1422 Watanga St., Kingsport, Tenn.
1898 C. Parker Crowell, 6 State St., Bangor
1899 A. W. Stephens, 10 E. 40th St., New York City
1900 H. F. Drummond, Box 4, Bangor
1901 Fred M. Davis, 7 So. Dearborn St., Chicago, Ill.
1902 A. E. Silver, 360 No. Fullerton Ave., Upper Montclair, N. J.
1903 Paul D. Simpson, Seal Harbor
1904 Leslie E. Little, 73 Court St., Augusta
1905 R. R. Drummond, 61 Bennoch St., Orono
1906 Harry Emery, 78 Exchange St., Bangor
1907 C. H. Lekberg, c/o Worcester Envelope Co., 110 Foster St., Worcester, Mass.
1908 J. A. Gannett, 166 Main St., Orono
1909 Harold A. Rich, 78 Adella Ave., West Newton, Mass.
1910 H. W. Wright, R.F.D. #4, Portland
1911 B. O. Warren, 381 Fourth Ave., New York, N. Y.
1912 Dean A. L. Deering, Orono
1913 James E. Church, 192 Northern Ave., Gardiner
1914 F. S. Youngs, 225 Center St., Bangor
1915 R. F. Thurrell, East Wolfboro, N. H.
1916 W. W. Webber, 126 Shepard St., Berlin, N. H.
1917 F. O. Stephens, 21 Academy St., Auburn
1918 Thelma Kellogg, 323 West Walnut St., Carbondale, Illinois
1919 Oscar Whalen, 105 Water St., Eastport
1920 W. W. Chadbourne, 59 College Ave., Orono
1921 Horace C. Crandall, 517 Fellsway East, Malden, Mass.
1922 Ian M. Rusk, West Townsend, Mass.
1923 Mrs. Iva M. Burgess, 22 Main St., Orono
1924 Eric O. Berg, Cumberland Rd., So. Portland

1925 Mrs. F. C. Bannister, 85 Capitalian Blvd., Rockville Center, N. Y.
1926 Cora E. Emery, 141 Oxford St., Cambridge, Mass.
1927 Mrs. Archie O. Dostie, 29 Summer St., Skowhegan
1928 Mrs. Spofford Giddings, 16 Middle St., Hallowell
1929 George F. Mahoney, 6 Pleasant St., Ellsworth
1930 Pauline Hall, 59 Fletcher St., Kennebunk
1931 Mary Carter, 60 Park St., Orono
1932 Mrs. Maynard Hincks, 36 Myrtle St., Orono
1933 Mrs. Martha S. Baldwin, 275 Broadway, Norwich, Conn.
1934 Madelene Bunker, 281 Main St., Calais

Honors and Prizes Awarded

Members of Phi Beta Kappa

1934

Eva Myrtle Bisbee, Portland; Rita Eleanor Lancto, Springfield, Mass.; Ruth Esther Lord, East Lebanon; Dorothy Edith Romero, Bangor; Abraham Everett Rosen, Bangor; Abraham Stern, Bangor; William Lawrence Thompson, Portland; Martha Ilona Tuomi, Monson; Ruth Sherlock Walenta, South China.

1935

Ruth Clifford Harding, Stockton Springs; Norman Mason Jackson, Rumford.

Members of Tau Beta Pi

1934

Robert Gray Adams, Portland; Lloyd Weatherbee Burr, Mattawamkeag; William Ernest Canders, Jr., Rumford; Ralph Millar Dougherty, Houlton; Wayne Burchard Dow, Skowhegan; Armand Marc Giguere, Rumford; Robert Arthur Hill, Orono; Peter Charles Karalekas, Dorchester, Mass.; Bruce Spruance Longfellow, Machias; Francis Jordan Lord, Old Town; Richard Glenn Lull, Augusta; Alpheus Crosby Lyon, Jr., Bangor; Joseph Massaro, South Manchester, Conn.; Richard Edwin Moore, Rangeley; Kenneth Langmaid Parsons, Old Town; John Alexander Pollock, Fitchburg, Mass.; Elliott Austin Reid, Bangor; Norman Webb Turner, Isle au Haut; Edward Warren Weeks, Ellsworth; William Joseph White, Chillicothe, Ohio; Carroll Works, Portland.

1935

Donald Lincoln Pedersen, Portland; James Wilson Sanborn, Gorham; Raymond Burgess Thorne, St. Albans.

Members of Alpha Zeta

1934

Robert Leighton Cram, Woodfords; Lewis Merrill Hardison, Caribou; Morris Henry Judd, South Paris; Wesley Parkhurst Judkins, Waterville; Howard Franklin Knight, Richmond; Philip Stewart Parsons, South Paris; Wayne Schermerhorn Rich, Charleston; Clarence Kirby Wadsworth, Gardiner; Andrew Elwell Watson, Oakland.

1935

William Nathan Farwell, Unity; Cecil Alden Gilbert, Greene; Merle Milton MacBride, Easton; Wesley Spaulding Norton, Strong; Basil George Staples, Kittery; Max Elvin Turner, Augusta.

1936

Alan Campbell Corbett, Orono; John Reynolds Dean, Waterville; Chester Williams Smith, Fairfield; Malcolm Louville Tilton, Burnham.

Members of Phi Kappa Phi

1934

Roy Bernard Augenstein, Newark, N. J.; Eva Myrtle Bisbee, Portland; Darrell Enthia Brown, Old Orchard; Lloyd Weatherbee Burr, Mattawamkeag; Armand Marc Giguere, Rumford; Robert Arthur Hill, Orono; Frederick Henry Jones, Darien, Conn.; Kenneth Edgar Jones, Bangor; Wesley Parkhurst Judkins, Waterville; Rita Eleanor Lancto, Springfield, Mass.; Paul Raymond Langlois, Springfield, Mass.; Bruce Spruance Longfellow, Machias; Francis Jordan Lord, Old Town; Alpheus Crosby Lyon, Jr., Bangor; Ernestine Sophia Moore, Morrill; Richard Edwin Moore, Rangeley; John Bréchemin Quinn, Wilmington, Delaware; Wayne Schermerhorn Rich, Charleston; Dorothy Edith Romero, Bangor; Abraham Everett Rosen, Bangor; Abraham Stern, Bangor; William Lawrence Thompson, Portland; Martha Ilona Tuomi, Monson; Norman Webb Turner, Isle au Haut; Ruth Sherlock Walenta, South China; Andrew Elwell Watson, Oakland; William Joseph White, Chillicothe, Ohio.

1935

Maurice Kimball Goddard, Portland; Ruth Clifford Harding, Stockton Springs; Norman Mason Jackson, Rumford.

Members of Kappa Delta Pi

1934

Clara Elizabeth Bunker, Bangor; Orville Jewett Guptill, Jr., Bar Harbor; Clara Harriet Owen, Milo; Hilda Maria Packard, Skowhegan.

Members of Omicron Nu

1934

Beatrice Cummings, Lewiston; Dorothy Hartwell Fletcher, Portland; Ruth Isabel Vaughan, Belfast.

1935

Florence Ida Kaminsky, Bangor; Ruth Martha Libby, Caribou.

Members of Xi Sigma Pi

1934

Donald Emerson Favor, South Gray; Norman Heald Gray, Lovell; Kenneth Edgar Jones, Bangor; John Brechemin Quinn, Wilmington, Delaware; William Rossing, North Quincy, Mass.; Laurence Towle Small, Madison.

1935

George William Morrill, Jr., Concord, N. H.

Scholarships and Prizes

Kidder Scholarship, Maurice Kimball Goddard, Portland.

New York Alumni Association Scholarship No. 1, Stanwood Rowe Searles, Cumberland Center.

New York Alumni Association Scholarship No. 2, Robert Pierce Willard, Malden, Mass.

The Pittsburgh Alumni Association Scholarship, Earle Oliver Collins, Anson.
Prize of the Class of 1873, John Matthews Coombs, Boothbay Harbor.
Elizabeth Abbott Balentine Scholarship, Elisabeth Philbrook, Brookline, Mass.
Phi Mu Scholarship, Nancy Cushing Woods, Bar Harbor.
Joseph Rider Farrington Scholarship, Ruth Elizabeth Shurtleff, Portland.
Stanley Plummer Scholarship, Arlene Merrill, Bangor.
Franklin Danforth Prize, John Brechemin Quinn, Wilmington, Del.
Washington Alumni Association Watches, James Edward DeCourcy, Darien, Conn.; Philip Stewart Parsons, South Paris.
Victoria Weeks Hacker Watch, Shirley Cynthia Young, Camden.
Alpha Omicron Pi Alumnae Prize, Naida Barrows Sanders, Portland.
Chi Omega Sociology Prize, Lucinda Elizabeth Ripley, South Paris.
William Emery Parker Scholarship, Merle Milton MacBride, Easton.
Class of 1905 Scholarship, William Eleazor Crowell, South Portland.
Henry L. Griffin Prize, Robert Nivison, Jr., Waterville.
Pale Blue Key Award, Alton Leroy Bell, Dennysville.
Greek Culture Prize, Enid Mary Humphreys, Jackman Station.
Charles Rice Cup, Phi Kappa Sigma.
Twentieth Century Commencement Cup, Class of 1909.
Class of 1908 Commencement Cup, Class of 1884.
Panhellenic Sorority Cup, Sigma Tau.
Fraternity Scholarship Cup, Alpha Gamma Rho.
Women's Student Government Scholarships, Minnie Sarah Zeitman, Portland; Rachel Fowles, Belfast; Louise Elizabeth Steeves, Lincoln.
Sigma Mu Sigma Award, Virginia Cobb Nelson, Guilford.
Spanish Club Prize, George Philip Hitchings, Chicago, Ill.
The W. H. Bowker Scholarship, George Louis Findlen, Fort Fairfield.
Trustee Undergraduate Scholarships—At Large, Ruth Clifford Harding, Stockton Springs; Agriculture, Maurice Kimball Goddard, Portland; Arts and Sciences, Norman Mason Jackson, Rumford; Technology, Donald Lincoln Pedersen, Portland; School of Education, Paul Warren Moody, Gorham.
Trustee Graduate Scholarship—Arts and Sciences, Martha Ilona Tuomi, Monson.
Trustee Graduate Fellowships—Eva Myrtle Bisbee, Portland; William Lawrence Thompson, Portland; Clarence Kirby Wadsworth, Gardiner.
Maritime Province Trustee Graduate Scholarship—Arts and Sciences, Douglas Ross Angus, Acadia University, Wolfville, Nova Scotia.
Charles H. Hood Fund Scholarships—Donald Philip Corbett, East Parsonsfield; Morris Henry Judd, South Paris; Philip Stewart Parsons, South Paris; William Nathan Farwell, Unity; Cecil Alden Gilbert, Greene; John Reynolds Dean, Waterville; Malcolm Louville Tilton, Burnham.

Winners, State Scholarship Contest, Awarded June, 1934

Members of Class of 1938

Four-Year Scholarship

Lloyd Fremont Brown, Cony High School, Augusta; Harvey Carl Kenneson, Cony High School, Augusta.

One-Year Scholarship

Frances Elizabeth Higgins, Brewer High School, Brewer; Ellen Bailey Hodgkins, Morse High School, Bath; Carl Chapin Osgood, Ellsworth High School, Ellsworth.

One-half Year Scholarship

Dustin Stetson Adams, Boothbay Harbor High School, Boothbay Harbor.

Commencement 1934

Thursday, June 7

5:45 P.M. Phi Kappa Phi Initiation—Library
6:30 Phi Kappa Phi Banquet

Friday, June 8

1:30 P.M. Annual Meeting of the Alumni Council—Library
2:30 Class Day Exercises—The Oval
4:00 Pageant—given by All Maine Women on Coburn Green
8:00 President's Reception—President's House
9:00 Student Hop—Alumni Memorial

Saturday, June 9

9:00 A.M. Reunion Class Meetings in headquarters rooms
10:00 Annual Meeting of General Alumni Association—Little Theatre
12:30 P.M. Alumni Luncheon—Alumni Memorial
1:30-2:00 Band Concert—The Oval
2:00 Frolics—The Oval
3:00 Dedication of Stevens Hall
4:10 Baseball Game—Alumni vs. Seniors—Baseball Field
6:15 Alumni Banquet—Alumni Memorial
9:00 Alumni Hop—Alumni Memorial

Sunday, June 10

10:30 A.M. Baccalaureate Address—Alumni Memorial

Monday, June 11

9:30 A.M. Commencement Exercises—Alumni Memorial
8:00 P.M. Commencement Ball—Alumni Memorial

Degrees Conferred, 1934

College of Agriculture

Bachelor of Science

IN AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

Lawrence Alfred Chatto.....South Brooksville
Lewis Merrill Hardison, *With Distinction*.....Caribou
Howard Franklin Knight.....Richmond
George Markey Osgood.....Easton
George Gordon Plumpton.....South Eliot
Andrew Elwell Watson, *With Distinction*.....Oakland

IN AGRONOMY

David Kelsey Abbott.....Brooks
Boyd Bennett Stratton.....Hancock

IN ANIMAL HUSBANDRY

Stanley Hayes Blanchard.....Cumberland Center
Donald Philip Corbett.....East Parsonsfield
Roscoe Franklin Cuozzo.....Bangor
Allan Moses Thomas.....Caribou

IN BACTERIOLOGY

Robert Davee Dearth.....West Upton, Mass.
Clarence Kirby Wadsworth.....Gardiner

IN BIOLOGICAL AND AGRICULTURAL CHEMISTRY

Wayne Schermerhorn Rich, *With Distinction*.....Charleston
Arthur Herbert Wheaton.....North Kennebunkport

IN BOTANY

Charles Howe Reed.....Lewiston

IN DAIRY HUSBANDRY

Philip Stewart Parsons.....South Paris
Robert Atwood Thomas.....Dexter
Lawrence Elwood Tompkins.....Sherman

IN DAIRY TECHNOLOGY

Kenneth Elmer Aldrich.....Norway
Morris Henry Judd.....South Paris

IN FORESTRY

James Milton Attridge.....East Pepperell, Mass.
Cecil Earl Clapp.....West Brooklin
Donald Emerson Favor.....South Gray
Malcolm Falconer Goodwin.....Parker Head
Norman Heald Gray.....Lovell
Carl James Johnson.....Poland
Kenneth Edgar Jones, *With Highest Distinction*.....Bangor
Robert Arthur Leadbetter.....Bangor
William Henry McBrady.....South Portland
Howard Franklin McCracken.....Brewer
Ferguson Mactier Oliver.....Boston, Mass.
John Norton Paul.....York Beach
John Bréchemin Quinn, *With Highest Distinction*..Wilmington, Delaware
William Rossing.....North Quincy, Mass.
Laurence Towle Small.....Madison
Roger Carleton Williams.....Brighton

IN HOME ECONOMICS

Rachel Louise Adams.....Ellsworth
Ella Louise Blanch.....Lubec
Mary Luella Bussell.....Old Town
Methyl Bernice Coy.....Mechanic Falls
Beatrice Cummings, *With Distinction*.....Lewiston
Dorothy Fuller Davis.....Lexington, Mass.
Francelia Pearl Dean.....Waterville
Frances Marguerite Dodge.....Brewer
Dorothy Hartwell Fletcher.....Portland
Melba Nord Gifford.....Long Island
Selma Lavinia Gregory.....Boothbay Harbor
Ruth Elizabeth Hamor.....Hulls Cove
Maxine Ward Harding.....Brewer
Allegra Maxine Ingerson.....Vinalhaven
Elizabeth Gardner Kimball.....Old Town
Effie Adelaide Mayberry.....Auburn
Louise Caryl Milliken.....Corinna

Elizabeth Mary Myers.....Orono
Mabel Elizabeth Robinson.....Old Town
Drusilla Martha Roderick.....Augusta
Doris Eleanor Rosen.....New Sweden
Claire Sylvina Sanders.....Sangerville
Merle Shubert.....Ocean Grove, N. J.
Alicia Maude Tracy.....Lincoln
Doris Elizabeth Varnam.....Steep Falls
Ruth Isabel Vaughan, *With Distinction*.....Belfast

IN HORTICULTURE

Robert William Christensen.....Portland
Wesley Parkhurst Judkins, *With Distinction*.....Waterville
William Frederick Maden.....Milton, Mass.
George Everett Osgood.....Peabody, Mass.

IN POULTRY HUSBANDRY

Robert Leighton Cram.....Woodfords
Wilmot Stevens Dow.....Presque Isle

College of Arts and Sciences

BACHELOR OF ARTS

IN CHEMISTRY

Barbara Edes.....Dexter
Mark Langdon Hill.....Portland
Ruth Sherlock Walenta, *With Highest Distinction*.....South China

IN CLASSICS

Rebecca Hazel Feero.....Bath
Dorothy Helen Moynihan.....Madison

IN ECONOMICS AND SOCIOLOGY

John Rodney Ball, Jr.....Lawrence, Mass.
Eva Myrtle Bisbee, *With High Distinction*.....Portland
Madelene Weeks Bunker.....Calais
Muriel Tewksbury Covell.....Monmouth
Kenneth Colley Foster.....Augusta

JOHN TAYLOR GILMAN.....Newport
HAROLD MATHEWS HALL.....Auburn
ROGER HARTWELL HEFLER.....Harborside
THOMAS MERRILL HERSEY.....Bangor
CHARLES THEODORE JANNEY.....Orono
EVERETT CLIFFORD LADD.....Rockland
ALLAN MERTON LARRABEE.....Dover-Foxcroft
ELIZABETH ESTHER LYNCH.....Lawrence, Mass.
HENRY JAMES MCCUSKER.....East Braintree, Mass.
HENRY STACY MARSH.....Rockland
HOWARD PERLMUTTER.....Hartford, Conn.
GEORGE RAYMOND REES.....Orono
RICHARD LINDLEY RICE.....Bangor
STANWOOD ROWE SEARLES.....Cumberland Center
ABRAHAM STERN, *With Distinction*.....Bangor
JOHN EASTWOOD STINCHFIELD.....Orono
CHARLES GARFIELD STRAFFIN.....Brockton, Mass.

IN ENGLISH

DARRELL ENTHIA BROWN.....Old Orchard
JOSEPHINE DORR BURRILL.....Brewer
WILBURY ARTHUR CROCKETT.....Brewer
JAMES EDWARD DECOURCY.....Darien, Conn.
WILLIAM WOODBURY HOWARD.....Hingham, Mass.
PAUL RAYMOND LANGLOIS, *With Distinction*.....Springfield, Mass.
RUTH ESTHER LORD.....East Lebanon
ERNESTINE SOPHIA MOORE, *With Distinction*.....Morrill
FRANCES ESTELLA MORRISON.....Orono
LUCILLE POWERS SIMPSON.....Bucksport
RUTH ELEANOR SMITH.....Bangor
WILLIAM LAWRENCE THOMPSON.....Portland
MARTHA ILONA TUOMI, *With High Distinction*.....Monson
SHIRLEY CYNTHIA YOUNG.....Camden

IN GERMAN

ROBERT BERG.....Chelsea, Mass.
DOROTHY THELMA SHIRO.....Old Town

IN HISTORY AND GOVERNMENT

ELIZABETH GERTRUDE BLETHEN.....Dexter
CAROLINE HELEN COUSINS.....East Bluehill
HAROLD ARTHUR DAVIS.....Calais

ENID MARY HUMPHREYS.....Jackman Station
FREDERICK HENRY JONES.....Darien, Conn.
DORIS OBER NEWMAN.....Prospect Harbor
GEORGIA BELLE RYDER.....Brooks
ALMA AMANDA YORK.....Medway

IN MATHEMATICS

FERN ELIZABETH ALLEN.....Bangor
ROY BERNARD AUGENSTEIN.....Newark, N. J.
DELMONT LEWIS BALLARD.....Rockport
HESTER LOUISE CARTER.....Hancock Point
ANNA JOSEPHINE FRANZEW.....Bangor
ELEANOR ESTES GRINNELL.....Bath
EVELYN EDNA JALBERT.....Fort Kent
NATHAN STANLEY MORSE.....Islesford
THOMAS SMYTH MORSE.....Islesford
CHARLES ARTHUR SINCLAIR.....Westbrook
HELEN ANNE WILLIAMS.....Guilford

IN PHILOSOPHY

JOHN ROBERT BARTLETT.....Orono

IN PSYCHOLOGY

PAUL MARKS CROXFORD.....Orono
STEPHEN JOSEPH GRADY.....Winthrop, Mass.
MILDRED MAE HANEY.....Bangor
EDWARD MERLE HILDRETH.....Milford
ELIZABETH GENEVIEVE MEAD.....Bangor
DOROTHY EDITH ROMERO, *With Distinction*.....Bangor
ALPHA POWERS THAYER.....South Paris
LILLIAN FRANCES WALL.....Bangor

IN PUBLIC SPEAKING

ERROL VERLANE HIGGINS.....Mapleton
ROBERT CROSSLAND RUSS.....Bangor

IN ROMANCE LANGUAGES

LIONEL LOUIS DESJARDINS.....Old Town
ORISSA ERMA FROST.....Dexter
MARION ESTHER HUGHES.....Bangor
RITA ELEANOR LANCTO, *With High Distinction*.....Springfield, Mass.

Romeo Francis Pascarelli.....Dorchester, Mass.
Virginia Florence Young.....Newton Highlands, Mass.

IN ZOOLOGY

Edson Leavitt Collamore.....Great Works
Edward Hatfield Cook.....Calais
Samuel Morton Cope.....Portland
Winifred Virginia Cushing.....Freeport
Alice Carolyn Dyer.....Freeport
James Rodolph Morin.....Old Town
Carmela Frances Profita.....Bangor
Abraham Everett Rosen, *With Distinction*.....Bangor
Benjamin Shapero.....Bangor
John Eldrid Smith.....Calais
Priscilla Brooks Whittemore.....Auburn

School of Education

Bachelor of Arts in Education

Jeanne Irene Morneault.....Bangor
Harold Vincent Perkins.....Orono
Ruth Richard Russell.....Brownville
June MaKinney Wheeler.....Millinocket

Bachelor of Science in Education

Clara Elizabeth Bunker.....Orono
Orville Jewett Guptill, Jr.....Bar Harbor
Laura Frances Litz.....Limestone
Mary Patricia McGurn.....Bangor
Arlene Carr Merrill.....Bluehill
Clara Harriet Owen.....Milo
Malcom Pennell Noyes.....Franklin
Hilda Maria Packard.....Skowhegan
Irving Kitchen Smith.....Presque Isle
Edward Fitzgerald Steenstra.....Westbrook, Conn.
Harry Randolph Tyler.....West Buxton
Helen Frances Walker.....Castine

College of Technology

Bachelor of Science

IN CHEMISTRY

Kenneth Richardson Barker.....East Vassalboro
Edward Hutchins Beazley.....Bucksport
John Wayne Crosson.....Millinocket
Carroll Allen Durgin.....Brownfield
Charles Edward Finks.....Portland
Francis Jordan Lord, *With Highest Distinction*.....Old Town
Richard Glenn Lull.....Augusta
Rodney Everett Noyes.....Dover-Foxcroft
Remsen Stoddard Vaughn.....Pleasantville, N. Y.

IN CHEMICAL ENGINEERING

Robert Gray Adams.....Portland
Lawrence Richmond Adkins.....Auburn
Richard Carter Alden.....Portland
Isadore Louis Alpert.....Bangor
William Ernest Beazley.....Bucksport
Harry Colby Boyd.....Bangor
William Holmes Davis.....York Village
Lloyd Edwin Goodwin.....East Corinth
Irving Leavitt Grodinsky.....Bangor
Irving Wilson Harvey.....Saco
Waldon Houston Hastings.....Bangor
Freeman Lincoln Otis Hussey.....Old Town
Joseph Massaro, *With Distinction*.....South Manchester, Conn.
Ardon Clark Mercier.....Portland
Richard Edwin Moore, *With Highest Distinction*.....Rangeley
John Edward Pearson.....Lyme, Conn.
John Alexander Pollock.....Fitchburg, Mass.
Freeland Lewis Ramsdell.....Augusta
Elliott Austin Reid.....Bangor
Herbert Mark Roylance.....Hasbrouck Heights, N. J.
Joseph Francis Senuta.....Fitchburg, Mass.
Albert Justin Smith.....Miamisburg, Ohio
Irving Nelson Thorner.....Biddeford
William Joseph White, *With High Distinction*.....Chillicothe, Ohio
John Cameron Wilson.....Augusta

IN CIVIL ENGINEERING

Aldo Andrew Bartlett.....Stonington
Frederick Adolf Bendtsen.....Lewiston
Kenneth Sharrock Cleaves.....Bar Harbor
Stuart Leslie Deane.....Milo
Ward Moulton Fall.....Sanford
Charles Everett Holyoke.....Brewer
Arthur Elbert Hoyt, Jr.....Presque Isle
James Murphy Jackson.....Bath
Lewis Olof Johnson.....Bangor
Edward Clarence Jordan.....Portland
Peter Charles Karalekas.....Dorchester, Mass.
Alpheus Crosby Lyon, Jr., *With Distinction*.....Bangor
James Hampton Page.....Fort Kent
Otto Oswald Pasanen.....Fitchburg, Mass.
James John Pisco.....Bangor
Gordon Twitchell Richardson.....Beverly, Mass.
Norman Webb Turner, *With Distinction*.....Isle au Haut
Paul Hartley Winchenbaugh.....Bedford, Mass.

IN ELECTRICAL ENGINEERING

Carlton Mayo Babbidge.....Mt. Desert
Lloyd Weatherbee Burr, *With High Distinction*.....Mattawamkeag
William Ernest Canders, Jr., *With Distinction*.....Rumford
Jerome Harris Comins.....Rockland
Robert Earle Crockett.....Millinocket
Ralph Millar Dougherty.....Houlton
Millard George Dow.....Stillwater
Henry Bernard Gersoni.....Chichester, N. Y.
Frederick Weeks Hinton.....Bangor
Roger Wallace Hodgkins.....Bar Harbor
Mayland Lester Delano Jewett.....Augusta
John Edward Johnson.....Milford
Robert Edward Lawrence.....Augusta
Bruce Spruance Longfellow, *With High Distinction*.....Machias
Carlton Franklin Noyes.....Waterville
Kenneth Langmaid Parsons.....Old Town
Hayden Sewall Rogers.....Bath
Melbert Thomas Stantial.....Houlton
Jesse Remington Wadleigh.....Old Town

EDWARD WARREN WEEKS, *With Distinction*.....Ellsworth
CARROLL NEWTON WORKS, *With Distinction*.....Portland

IN GENERAL ENGINEERING

WAYNE BURCHARD DOW.....Skowhegan

IN MECHANICAL ENGINEERING

THADDEUS WILLIAM AUSTIN.....Brooks
CLAUDE KNEELAND BAKER.....Millinocket
CARL SPRATT BAUMANN.....Bangor
FREDERICK ROSS BLACK.....Searsport
ROBERT BRUCE BRADFORD.....Carmel
BENSON EMERTON CASWELL.....North Belgrade
HENRY GILDER CONKLIN.....New London, Conn.
GILBERT MERTON COX.....New Sharon
NORRIS WILFRED CROSBY.....Bangor
LORENZO MAYO CROWELL.....Bangor
CARLETON FREDERIC DAVIS.....Biddeford
ARMAND MARC GIGUERE, *With Distinction*.....Rumford
HARRY EVERETT HASEY.....Ashland
RICHARD LAURENCE HILL.....Malden, Mass.
ROBERT ARTHUR HILL, *With Highest Distinction*.....Orono
COLGATE STANLEY JORDAN.....Seal Harbor
AMBROSE MATHIAS KEYSER.....Ellsworth
THOMAS GEORGE MCGUIRE.....Stonington
GREGG CLARKE MCLEOD.....Stillwater
VERNON MURRAY.....Brownville Junction
DONALD OSCAR NELDER.....Houlton
LAURENCE JOSEPH O'CONNELL.....Bangor
NORMAN GILMAN PRATT.....Kezar Falls
CHARLES EDWARD PRINN, JR.....Portland
ARTHUR PETER SCHELLER.....Irvington, N. J.
DWIGHT LEROY SOMERS.....Waterbury, Conn.
HOWARD WINCHESTER STEVENS.....Portland
ROBERT EDGAR SYLVESTER.....Brewer
JOHN WILEY TOMPKINS.....Bangor
LEWIS BISHOP VARNEY.....Gorham
IERDELL CLARK WARD.....Caribou
STANLEY PAUL YOUNG.....Camden
WILLIS HAROLD YOUNG.....Houlton

Degrees Out of Course

Bachelor of Science in Education

Linwood Lyle Dwelley.....Auburn
(As of the Class of 1925)

Bachelor of Science

Gerald Coker Marble (In Mechanical Engineering).....Skowhegan
(As of the Class of 1917)

Bachelor of Laws

Peter Michael MacDonald.....Rumford
(As of the Class of 1914)

Advanced Degrees

Master of Arts

in chemistry

Gladys Garland (B.S., Simmons, 1918).....Somerville, Mass.
An Investigation of the Comparative Toxic Effects of Nickel Carbonyl and Carbon Monoxide on a Closely Inbred Stock of Mice

in economics

Robert Donald Goode (B.A., Maine, 1931).....Bangor
The Economic Development of the Pulp and Paper Industry in Maine

Thomas Anson Knowlton (B.A., Maine, 1933).....Bangor
The Economic Theory of George Bernard Shaw

in education

Howard Lancaster Bowen (B.A., Maine, 1924).....Bingham
The History of Secondary Education in Somerset County in Maine

DONALD HERBERT FOGG (B.A., Maine, 1931) ..... Bangor
An Evaluation of Grades Given by the College of Arts and Sciences at the University of Maine During the First Semester, 1932-1933

IN ENGLISH

LUTHERA HILT BURTON (B.A., Maine, 1933) ..... Thomaston
Seven American Humorists: Selections, Edited with an Introduction

LEOLA BOWIE CHAPLIN (B.A., Maine, 1917) ..... Cornish
The Life and Work of Nathaniel Deering (1791-1881)

MARTHE CLEO DEGAGNÉ (B.A., Maine, 1930) ..... Portland
A Study of Hypotaxis in Old English Prose and Poetry

RUFUS MANLEY GRINDLE (A.B., Colby, 1927) ..... Monarda
Irony in the Novels of Fielding

MARY STALEY LEFLER (A.B., Indiana, 1929) ..... Orono
Anti-Slavery Sentiment in American Literature before 1808

JAMES MORELAND (B.A., Georgetown College, 1924) ..... Orono
A History of the Theatre in Portland from 1794 to 1850

DELYTE WESLEY MORRIS (A.B., Park, 1928) ..... Orono
A Study of Literary Style in Galsworthy's Novels

RUTH MADELINE TAYLOR (B.S., Simmons, 1930) ..... Calais
A Chronological Outline of American Literature from 1607 to 1820

IN HISTORY AND GOVERNMENT

DONALD MUNROE MCCORMICK (B.A., Maine, 1932) ..... Orono
A Cross-Section of Maine History During the Civil War Period

IN MATHEMATICS AND ASTRONOMY

ERNEST HOWARD GRANT (B.A., Maine, 1927) ..... Washburn
The Application of Complex Numbers to the Proof of Theorems in Plane Geometry

FRED LINCOLN LAMOREAU (B.A., Maine, 1930) ..... Orono
The Change in the Observer's Zenith as a Function of the Moon's Position

IN PHYSICS

EDWARD BRADFORD COOPER (B.A., Berea, 1930) ..... Orono
A Study of the Kerr Cell

IN PHYSIOLOGY

ELIZABETH FLORENCE MURPHY (B.A., Maine, 1930) ..... Bangor
An Experimental Study of the Relation between the Uropygial Gland and Vitamin D Deficiency in Birds

IN ZOOLOGY

HOWARD LEWIS MENDALL (B.A., Maine, 1931) ..... Augusta
The Economic Status of Certain Shore Birds, Especially Larus argentatus, Larus atricilla, and Sterna hirundo

MASTER OF SCIENCE

IN BACTERIOLOGY

KEITH H. LEWIS (B.A., Wisconsin, 1932) ..... Madison, Wisconsin
Bacteriological Studies of Slow Lactose Fermenting Bacteria, Pathogenic for Young Chicks

IN BOTANY

MERLE TYSON HILBORN (B.S., Maine, 1932) ..... Orono
An Investigation of the Decay of Wood With Special Reference to the Formation of Black Zones and the Calorific Value of Decayed Cordwood

EUGENE CECIL OGDEN (B.S., Michigan State, 1932) ..... Orono
The Herbaceous Flowering Plants (Exclusive of Grasses and Sedges) Growing without Cultivation in the Vicinity of the University of Maine

IN CHEMISTRY

CLARENCE SHAPERO (B.S., Maine, 1932) ..... Bangor
An Investigation of the Composition of the Two-phase System Resulting from the Addition of Dioxane to Grignard Reagents

IN CHEMICAL ENGINEERING

ROGER LEE ANNIS (B.S., Maine, 1931) ..... Old Town
The Effect of the Addition of Selected Organic Compounds on the Tensile Strength of Mortars

WESLEY SANGER CORBIN (M.E., Cornell University, 1931) .....
..... Williamsport, Pa.
The Use of Bleached Soda and Sulphate Pulps in Paper Towel and Hygienic Tissue Furnishes

Leon John Paquin (B.S., Maine, 1933) ..... Waterville
The Use of Bleached Soda and Sulphate Pulps in Paper Towel and Hygienic Tissue Furnishes

William Eaton Smith (B.S., Maine, 1931) ..... Bucksport
An Investigation of Glycol-Hydrochloric Acid Lignin Determination

Oscar Thomas Thompson (B.S., Maine, 1932) ..... Lincoln
The Deposition of Molybdenum at a Mercury Cathode

IN DAIRY INDUSTRY

Fred Eugene Blanchard (B.S., Vermont, 1931) ..... Orono
Factors Tending to Cause Blue Color in Milk Below the Cream Line

IN HOME ECONOMICS

Dorothy Marie Somers (B.S., Maine, 1932) ..... Bangor
An Investigation of the Vitamin C Content of Commercial Tomato Juice Cocktails

IN MATHEMATICS

Winston Sedgeley Hoyt (B.S., Maine, 1933) ..... Phillips
An Investigation of the Trends in Secondary School Geometry

Master of Science in Education

Sister Mary Teresita Larkin (B.S.E., St. Joseph's, 1919) ..... Bangor
The History of the Development of Catholic Education in the State of Maine from 1604 to 1933

Electrical Engineer

Philip Harold Trickey (B.S., M.S., 1928, 1931) ..... Springfield, Mass.

The following senior who left the University for Military Service is graduated as of the Class with which he entered:

As of the Class of 1917

Mark Langdon Hill ..... Portland

Departmental Honors

College of Arts and Sciences

in chemistry

Ruth Sherlock Walenta

in economics and sociology

Eva Myrtle Bisbee
Abraham Stern

in english

Darrell Enthia Brown
William Lawrence Thompson
Martha Ilona Tuomi

in german

Robert Berg

in history and government

Harold Arthur Davis

in mathematics and astronomy

Roy Bernard Augenstein
Eleanor Estes Grinnell
Nathan Stanley Morse
Thomas Smyth Morse

in psychology

Dorothy Edith Romero

in romance languages

Rita Eleanor Lancto

in zoology

Abraham Everett Rosen

College of Technology

IN CHEMISTRY AND CHEMICAL ENGINEERING

Robert Gray Adams
Francis Jordan Lord
Richard Glenn Lull
Richard Edwin Moore
John Alexander Pollock
William Joseph White

IN CIVIL ENGINEERING

Edward Clarence Jordan
Norman Webb Turner

IN ELECTRICAL ENGINEERING

Lloyd Weatherbee Burr
Roger Wallace Hodgkins
Bruce Spruance Longfellow

IN MECHANICAL ENGINEERING

Gilbert Merton Cox
Robert Arthur Hill
Norman Gilman Pratt
Dwight LeRoy Somers
Robert Edgar Sylvester

The following received commissions as Second Lieutenant, Officers' Reserve Corps

ORDNANCE DEPARTMENT

Frederick Ross Black
Armand Marc Giguere

ENGINEER CORPS

Edward Clarence Jordan
Leonard Roberts Hunt

SIGNAL CORPS

HENRY BERNARD GERSONI

CHEMICAL WARFARE SERVICE

ARDON CLARK MERCIER
THAXTER WEYMOUTH SMALL, JR.
ALBERT JUSTIN SMITH
JOHN CAMERON WILSON

INFANTRY

FRANK RODWELL BLAISDELL, JR.
FRED STANLEY BULLOCK
LORENZO ARTHUR GAGNON
JOHN BRÉCHEMIN QUINN
WILLIAM ROSSING
CHARLES ARTHUR SINCLAIR
IERDELL CLARK WARD

Honorary Degrees

PAUL CLOKE, Doctor of Engineering
ARTHUR LOWELL DEERING, Doctor of Science
CARL NATHANIEL GARLAND, Doctor of Humane Letters
ADELBERT WILLIS GORDON, Master of Arts
HANNIBAL EMERY HAMLIN, Doctor of Laws
JOHN CHARLES SCHROEDER, Doctor of Letters
HARRY TRUST, Doctor of Letters
BLAINE SPOONER VILES, Master of Arts
FRANK ELWIN WEYMOUTH, Doctor of Engineering

Catalog of Students

Major subjects are indicated as follows:: Ae. Agricultural Education, Ag. Agronomy, Agr. Agriculture, An. Animal Husbandry, Bc. Biological Chemistry, Bt. Botany, By. Bacteriology, Ch. Chemistry, Ch. Eng. Chemical Engineering, Ce. Civil Engineering, Cl. Classics, Dh. Dairy Husbandry, Di. Dairy Industry, Dr. Drama, Dt. Dairy Technology, Ed. Education, Ee. Electrical Engineering, Eh. English, En. Entomology, Eng. Engineering (Course not specified), Es. Economics and Sociology, Fm. Agricultural Economics and Farm Management, Fr. French, Fy. Forestry, Ge. General Engineering, Gm. German, Hy. History and Government, He. Home Economics, Ht. Horticulture, Lt. Latin, Me. Mechanical Engineering, Ms. Mathematics, Pa. Pulp and Paper Technology, Pc. Physiological Chemistry, Pg. Physiology, Ph. Poultry Husbandry, Pl. Philosophy, Pp. Plant Pathology, Ps. Physics, Py. Psychology, Rl. Romance Languages, Sp. Spanish, Zo. Zoology. Chemistry in the College of Arts and Sciences is indicated by Ch.A.

GRADUATE STUDENTS

Allen, Roger Aylmer, B.S., Ps. Parsons, 1933	*Orono*	74 North Main Street
Angus, Douglas Ross, B.A., Eh. Acadia, 1934	*Amherst, N. S.*	25 Grove Street
Bisbee, Eva Myrtle, B.A., Py. Maine, 1934	*Portland*	56 North Main Street
Buck, Margaret Anna, B.A., Zo. Maine, 1932	*Bangor*	235 French Street, Bangor
Carter, Mary Rich, B.A., Fr. Maine, 1931	*Orono*	60 Park Street
Calderwood, Neil Moody, B.S., Ms. Maine, 1932	*Vinalhaven*	Φ Γ Δ House
Davis, Garnet Edward, B.S., Di. Maryland, 1934	*Rocks, Maryland*	25 Myrtle Street
Dirks, Charles Orville, B.S., M.S., En. Kansas State College, 1924; Iowa State College, 1925	*Orono*	9 Peters Street
Ebbeson, Gertrude Elvira, B.Arch., Hy. Massachusetts Institute of Technology, 1933	*Bangor*	30 Vernon Street, Bangor

Hawkins, John Henry, B.S., M.S., En. Illinois, 1926; Maine, 1927	*Orono*	Main Road
Hook, Arnold Evans, B.S., By. Wisconsin, 1934	*Fort Atkinson, Wis.*	59 College Road
Husson, Chesley Haywood, B.S. Ed., Ed. Salem State Teachers, 1926	*Bangor*	76 Sanford Street, Bangor
Hyland, Fay, B.S., M.S., Bt. Michigan State College, 1925; Maine, 1929	*Orono*	180 Main Street
Jasper, Rufus Guy, B.S., Ce. Maine, 1930	*Auburn*	8 Middle Street
Keirstead, Kathryn Jean, B.A., Ed. Maine, 1931	*Westfield*	144 South Brunswick Street, Old Town
Lampropoulos, Charles Louis, B.A., Hy. Maine, 1933	*Orono*	North Main Street
Largay, John Edward, A.B., Es. Manhattan, 1931	*Bangor*	80 Birch Street, Bangor
Light, Elden Everett, B.S., Ch.Eng. Maine, 1931	*Orono*	48 Pine Street
Linscott, Edward Lyon, B.S. in Ed., Ed. Maine, 1933	*Bluehill*	Bluehill
Lloyd, Clifford Egerton, B.S., Bt. Cornell University, 1932	*Bloomingburg, N. Y.*	33 Peters Street
Loring, Fred Perley, B.S., Fm. Maine, 1916	*Orono*	42 Forest Avenue
McCormick, Malcolm Young, B.A., Py. Maine, 1932	*Bangor*	201 Cedar Street, Bangor
Magee, John Henry, B.A., M.A., M.S., Pl. Maine, 1917, 1931, 1933	*Bangor*	130 Cedar Street, Bangor
Miller, Stacy Ross, B.S., Fm. Maine, 1932	*Carmel*	56 Park Street
Profita, Carmela Frances, B.A., Zo. Maine, 1934	*Bangor*	4 Essex Street, Bangor
Rich, Wayne Schermerhorn, B.S., Bc. Maine, 1934	*Charleston*	A Γ P House
Sawyer, Ralph Albert, B.S., Ce. Norwich, 1925	*Orono*	17 Oak Street
Snider, Rose, B.A., Eh. Maine, 1933	*Portland*	North Hall

Stewart, John Emmons, B.A., M.A., Ms. Maine, 1927, 1928	*Old Town*	136 Middle Street, Old Town
Thompson, Oscar Thomas, B.S., M.S., Ch.Eng. Maine, 1932, 1934	*Lincoln*	48 Pierce Street
Thompson, William Lawrence, B.A., Eh. Maine, 1934	*Portland*	4 Myrtle Street
Tuomi, Martha Ilona, B.A., Eh. Maine, 1934	*Monson*	15 Pierce Street
Wadsworth, Clarence Kirby, B.S., By. Maine, 1934	*Gardiner*	Φ K Σ House
Watson, Andrew Elwell, B.S., Fm. Maine, 1934	*Oakland*	164 College Road
Young, Robert McColl, B.S., Pa. Michigan, 1931	*Prospect Park, Pa.*	227 Main Street

SENIORS

Adams, Carolyn Louise, Ch.A.	*Portland*	Balentine Hall
Aiken, Mary Claire, He.	*Brewer*	North Hall
Allan, Albert Sawyer, Hy.	*Machias*	Δ X A House
Alpert, Sylvia, He.	*Bangor*	Balentine Hall
Anderson, Donald LeRoy, Zo.	*Caribou*	Θ X House
Anderson, Henry Carlton, Ht.	*Cape Elizabeth*	Φ M Δ House
Anderson, Karl Valentine, Zo.	*Derby*	College Road
Arey, Robert Cushman, Ce.	*Milford, Mass.*	Σ N House
Armstrong, Carroll Ralph, Ed.	*Machias*	A T Ω House
Avery, Byron George, Ch.Eng.	*Woodland*	College Road
Badger, Darrel Earl, Me.	*St. Albans*	Δ T Δ House
Barrett, Daniel Joseph, Ed.	*Danforth*	210 H. H. Hall
Barrows, Ruth Evelyn, He.	*Orono*	40 Myrtle Street
Barstow, Richard Parker, Ce.	*Auburn*	A T Ω House
Bates, Silas Loring, Me.	*Portland*	Φ Γ Δ House
Bean, Paul Webster, Ce.	*Auburn*	A T Ω House
Bearce, Wesley Sayles, Eh.	*Foxboro, Mass.*	Δ T Δ House
Beers, Ralph Emerson, Me.	*Boston, Mass.*	Σ N House
Benjamin, Spurgeon Kearney, Fm.	*Mars Hill*	Φ H K House
Berry, Leslie Murch, Ee.	*South Portland*	A T Ω House
Bessom, William Herbert, Me.	*Cape Porpoise*	Σ A E House
Beverage, Wentworth Ernest, Ch.Eng.	*Oakland*	25 Grove Street

Bicknell, Charles Edmund, Me.	*Rockland*	Β Θ Π House
Birchall, Natalie Marie, He.	*Port Washington, Long Island, N. Y.*	32 Mill Street
Black, Ernest Thayer, Eh.	*Portland*	Φ Κ Σ House
Black, Kenneth Dinsmore, Fy.	*Portland*	Φ Κ Σ House
Blackington, Thelma Lee, Py.	*Rockland*	Colvin Hall
Blaisdell, Frank Rodwell, Ce.	*Bangor*	283 Forest Avenue, Bangor
Blake, Helen Mabel, He.	*Lagrange*	36 College Road
Blom, Bernhard, Ph.	*Brooklyn, N. Y.*	College Road
Boone, Donald Henry, Fy.	*Portland*	Θ Χ House
Boothby, Adney Hamilton, Hy.	*Livermore Falls*	College Road
Bottume, Carl Huntington, Eh.	*Hamden, Conn.*	6 Mill Street
Bradbury, Orrin Samuel, Es.	*Rockland*	13 Mill Street
Brann, Henry Alden, Zo.	*Augusta*	Β Θ Π House
Brewer, Lyman Fowles, Ee.	*Portland*	384 College Road
Briggs, Carl Aaron, Ch.Eng.	*Bangor*	Κ Σ House
Brill, Miriam, He.	*Bangor*	88 Palm Street, Bangor
Brountas, Charles George, Es.	*Bangor*	108 Third Street, Bangor
Brown, Frances Janet, Eh.	*Skowhegan*	Balentine Hall
Bucknam, Richard Drinkwater, Ee.	*Yarmouth*	Δ Χ Α House
Bucknam, Robert Field, Fy.	*Dexter*	Β Θ Π House
Budge, Pauline Smith, He.	*Mattawamkeag*	North Hall
Buker, George Haskell, Ch.	*Auburn*	Φ Μ Δ House
Butler, Edward Leroy, Jr., Es.	*Portland*	Β Θ Π House
Campbell, Janet, Ed.	*Brewer*	Balentine Hall
Captain, Richard Harrison, Fy.	*Montclair, N. J.*	Δ Τ Δ House
Carlisle, George Davis, Fy.	*Bangor*	Φ Γ Δ House
Carr, Malcolm Frederick, Me.	*Dexter*	Α Τ Ω House
Chase, Jane Gerry, Rl.	*Bucksport*	Balentine Hall
Church, Marjorie Esther, He.	*Corinna*	20 Forest Avenue
Clark, Harland Bailey, Dh.	*Brooks*	Α Γ Ρ House
Cobb, George Lane, Hy.	*Lewiston*	106 H. H. Hall
Coffin, John Rodney, Ed.	*Ashland*	Θ Χ House
Cohen, Monte, Es.	*Winthrop, Mass.*	Τ Ε Φ House
Cohen, Nathan Arthur, Gm.	*Bangor*	50 East Summer Street, Bangor
Cole, William Bruce, Hy.	*Prospect Harbor*	Φ Κ Σ House
Collins, Earle Oliver, Ee.	*Anson*	Φ Μ Δ House
Colson, Velma Ina, Eh.	*Guilford*	Balentine Hall
Colson, Violet Dora, Ed.	*Guilford*	Balentine Hall

Cook, Herbert Kenerson, Ch.Eng.	*Calais*	43 Main Street
Cooney, Wilfred Omara, Me.	*Brownville Junction*	Θ X House
Copeland, Margaret Standish, Zo.	*Arlington, Mass.*	Colvin Hall
Copeland, Ralph Lincoln, Jr., Ee.	*Brewer*	Δ T Δ House
Corban, Paul Johnson, Ch.	*Hartford, Conn.*	Λ X A House
Cram, Ernest Mayland, Ch.	*East Auburn*	College Road
Crandall, Horace Martin, Fm.	*Presque Isle*	Φ H K House
Creamer, Everett Charles, Ee.	*Greene*	48 Pine Street
Crocker, James Douglas, Ch.Eng.	*Patten*	310 Oak Hall
Cronkite, Clayton Russell, Ed.	*Skowhegan*	36 College Road
Crowley, Agnes Katherine, Eh.	*Biddeford*	Colvin Hall
Crowley, Elizabeth Anne, He.	*Lewiston*	North Hall
Curran, William Jeffery, Ed.	*Milo*	Φ K House
Cutter, Ivel Helen, Cl.	*Bangor*	237 Parkview Avenue, Bangor
Danforth, Roger Clarke, Ms.	*Castine*	19 Park Street
Davis, Betty Lou, He.	*Monson*	20 Forest Avenue
Day, Harry Horace, Es.	*Orono*	1 Bridge Street
Desjardins, George Eloi, Ee.	*Old Town*	28 Willow Street, Old Town
DeWitt, John Hamilton, Dh.	*Sherman Mills*	A Γ P House
Diamon, David Lester, Zo.	*Portland*	12 Park Street
Dwinal, Charles Frank, Jr., Pa.	*Bangor*	218 Essex Street, Bangor
Eaton, Hilda Titus, Ed.	*Little Deer Isle*	Balentine Hall
Elliott, Christine, He.	*Portland*	Balentine Hall
Ellsworth, Edward Charles, Ce.	*Bloomfield, Conn.*	College Road
Emerson, Walter Lee, Jr., Es.	*Portland*	B Θ Π House
Etter, Howard Ernest, Ps.	*Bar Harbor*	85 Main Street
Fales, Henry Whitman, Me.	*Thomaston*	Φ K Σ House
Farwell, William Nathan, Dh.	*Unity*	A Γ P House
Favor, Samuel Tucker, Me.	*Norway*	Φ K Σ House
Fellows, Oscar, Hy.	*Orono*	83 Park Street
Field, Horace Stanley, Fy.	*Dexter*	B Θ Π House
Fifield, Charlotte Osgood, He.	*Bangor*	230 State Street, Bangor
Fifield, Wilbert Hammond, Ce.	*Auburn*	Σ N House
Fitch, George Evans, Ms.	*East Sebago*	Λ X A House
Freeman, Isabel Josephine, He.	*Brewer*	30 Holyoke Street, Brewer
Frost, Parker Horace, Me.	*Caribou*	Φ Γ Δ House

Frye, Dorothy Constance, Eh.	*Portland*	Balentine Hall
Fuller, Alfred Wallace, Ee.	*Pittsfield*	Κ Σ House
Gaffney, Richard Vaughan, Fy.	*Great Neck, Long Island, N. Y.*	Φ Γ Δ House
Gagnon, Lorenzo Arthur, Ee.	*Brunswick*	Δ Τ Δ House
Galbraith, Albert Henry, Me.	*Pleasant Plains, Staten Island, N. Y.*	Β Θ Π House
Gallison, Henry Ball, Ce.	*Hancock Point*	85 Main Street
Gallop, Richard Alfred, Me.	*Ridlonville*	College Road
Gay, Donald Merritt, Es.	*Casco*	Φ Μ Δ House
Getchell, John Simmons, Zo.	*Oakland*	Λ Χ Α House
Gibbs, Roland Ernest, Eh.	*Bangor*	23 Spring Street, Bangor
Gilbert, Cecil Alden, An.	*Greene*	Α Γ Ρ House
Goddard, Maurice Kimball, Fy.	*Portland*	Φ Κ Σ House
Good, Jack Charles, Hy.	*Portland*	Φ Γ Δ House
Goode, Paul Edmund, Es.	*Bangor*	228 Palm Street, Bangor
Gotlieb, Hyman, Ch.	*Bangor*	121 Grove Street, Bangor
Gould, William Oliver, Ch.	*Bangor*	263 French Street, Bangor
Gowen, Eleanor Genevieve, Rl.	*Biddeford*	Balentine Hall
Grange, Etta Mae, He.	*Smyrna Mills*	North Hall
Gray, Allen Redlon, Fy.	*Westport*	56 Park Street
Gray, Ira Church, Jr., Ch.	*Mansfield, Mass.*	36 College Road
Gray, Mary Elizabeth, Ed.	*Van Buren*	Colvin Hall
Gray, Rhona Roberta, Ms.	*Bangor*	20 Forest Avenue
Green, Donald Thomas, Dt.	*North Waterford*	Φ Μ Δ House
Hadlock, Wendell Stanwood, Hy.	*Ellsworth*	Stillwater
Hagerthy, Albert Lindley, Ag.	*Ashland*	24 Parkview Avenue, Bangor
Hall, Frederick Milton, Ch.	*Rockland*	24 Oak Street
Hallenbeck, Marcus George, Zo.	*Westwood, Mass.*	Κ Σ House
Halpine, William Conway, Es.	*Portland*	12 Park Street
Hamilton, John Newcomb, Ee.	*Belfast*	Σ Ν House
Hancock, Sumner Orrin, Hy.	*Casco*	Φ Μ Δ House
Hannigen, Howard William, Fy.	*Amesbury, Mass.*	15 Park Street
Hanson, James Dennis, Ce.	*York Village*	Φ Κ House
Hanson, Otis Turner, Ee.	*Houlton*	Σ Ν House
Harding, Ruth Clifford, Zo.	*Stockton Springs*	Balentine Hall
Hardy, Kathleen Eda, Eh.	*Bangor*	560 Ohio Street, Bangor
Harmon, Norman Howard, Hy.	*Limerick*	Stillwater

Harris, Joanna Sharpe, He.	*Milo*	104 Main Street
Hatch, Shirley Libby, Rl.	*Shirley, Mass.*	Balentine Hall
Hathorne, Raymond Corliss, Fy.	*Wiscasset*	Φ K Σ House
Hayes, Prudence Elaine, Rl.	*Orono*	29 Spencer Street
Helfand, Harry, Zo.	*Milford, Mass.*	T E Φ House
Henderson, Stanley David, Me.	*Bath*	Φ Γ Δ House
Higgins, Henry Russell, Ce.	*Newport*	K Σ House
Higgins, Robert Gage, Ch.	*Lewiston*	Λ X A House
Hill, Earle William, Ms.	*Bingham*	A T Ω House
Hodsdon, Clara Leslie, He.	*Stillwater*	Stillwater
Homer, Mary Christine, Py.	*Franklin*	175 Main Street
Honer, Carl Nicholas, Es.	*Hartford, Conn.*	A T Ω House
Hoyt, John Winston, Fm.	*Easton*	Φ H K House
Hunt, Leonard Roberts, Ce.	*Orono*	53 Bennoch Street
Ingalls, Elston Paul, Eh.	*Buxton*	Σ A E House
Ingalls, Hollis Page, Ed.	*Machias*	15 Park Street
Ingraham, Carl Franklin, Ch.	*South Portland*	Θ X House
Jackson, Norman Mason, Zo.	*Rumford*	391 College Road
Jenkins, Annie Elizabeth, Hy.	*Houlton*	Colvin Hall
Johnson, Harvey Ralph, Ed.	*Sanford*	66 Pine Street
Johnson, Mildred Frances, Es.	*LaTuque, Quebec*	Colvin Hall
Johnson, Phyllis Wing, Eh.	*LaTuque, Quebec*	Colvin Hall
Jones, Merle Sewall, Ed.	*Weeks Mills*	47 Mill Street
Jordan, Eugene Adelbert, Es.	*Lisbon*	67 North Main Street
Kaminsky, Florence Ida, He.	*Bangor*	46 Leighton Street, Bangor
Kaplan, Arnold, Es.	*Roxbury, Mass.*	T E Φ House
Kennard, Edith Carolyn, Eh.	*Bangor*	14 Savage Street, Bangor
Kimball, Kenneth Jordan, Pa.	*Camden*	Δ T Δ House
Knight, Frances Silsby, He.	*Derby*	Balentine Hall
Knight, Paul Irving, Ch.Eng.	*South Eliot*	Φ M Δ House
Koonz, Lloyd Albert, Zo.	*Augusta*	B K House
Kyer, Donald Louvell, Zo.	*Brewer*	236 Wilson Street, Brewer
Lachance, Charlotte Marguerite, Rl.	*Biddeford*	Colvin Hall
Larcom, Raymond Bennett, Dh.	*Farmington*	Farm Boarding House
Larrabee, Harold O'Roak, Ee.	*Dover-Foxcroft*	Σ X House
Lawrence, Doris Evelyn, Ms.	*Arrowsic*	Balentine Hall

Lawrence, Roy Ibra, Ee.	*Arrowsic*	Φ K Σ House
Levy, Samuel, Es.	*Calais*	T E Φ House
Lewis, Roberta Anne, Eh.	*Newport*	Balentine Hall
Libby, Ruth Martha, He.	*Caribou*	Balentine Hall
Linscott, Miriam West, Gm.	*East Milton, Mass.*	Balentine Hall
Littlefield, Emery Stanley, Jr., Ce.	*Alfred*	Σ A E House
Look, Sidney Lincoln, Ce.	*Jonesboro*	Σ A E House
Lord, Harold Nathan, Jr., Es.	*Cumberland Mills*	Λ X A House
Lord, Robert Douglas, Fy.	*Ipswich, Mass.*	18 Oak Street
Lord, Wallace Wendell, Ce.	*East Lebanon*	Stillwater
Lothrop, Carolyn Frances, Eh.	*Auburn, R. I.*	Colvin Hall
MacBride, Merle Milton, Fm.	*Easton*	Φ H K House
McCann, Donald Edward, Me.	*East Millinocket*	230 Silver Road, Bangor
McCollum, Frank Leslie, Ch.	*Jonesport*	35 Grove Street
McDonnell, Paul Joseph, Es.	*Portland*	Φ Γ Δ House
MacLellan, Annie Estelle, Gm.	*Weeks Mills*	Balentine Hall
Mansfield, Clifford Shedd, Ce.	*Wakefield, Mass.*	Φ M Δ House
Mansur, Richard Herman, Ch.Eng.	*Augusta*	Σ A E House
Marcille, James Woodrow, Pa.	*Biddeford*	Λ X A House
Marsh, Joel White, En.	*Scarsdale, N. Y.*	308 H. H. Hall
Marshall, Stephen Samuel, Jr., Ce.	*Bath*	Σ N House
Marson, Chester Joseph, Ee.	*Gardiner*	Σ A E House
Martin, Marion Ella, Es.	*Bangor*	166 Webster Avenue, Bangor
Matheson, Wilfrid Gordon, Ee.	*Portland*	Φ M Δ House
Mathews, Edna Louise, Eh.	*Belfast*	39 Mill Street
Meltzer, Sara, He.	*Auburn*	Balentine Hall
Merrill, Dudley Sperry, Es.	*Bronxville, N. Y.*	Φ K Σ House
Merrill, L. Robert, Ms.	*Orono*	178 Main Street
Miller, Ruth Marie, Ed.	*Newport*	66 College Road
Miniutti, Angelo Guy, Ee.	*North Berwick*	20 Grove Street
Monroe, Roy Howard, Ch.	*Milo*	36 College Road
Moody, Paul Warren, Ed.	*Gorham*	B Θ Π House
Morong, Francis Goodwin, Ce.	*South Portland*	Σ A E House
Morrill, George William, Jr., Fy.	*Concord, N. H.*	29 Forest Avenue
Morrison, Louis Henry, Ee.	*Bangor*	Union Street, Bangor
Morrison, Vernon Chase, Ee.	*Bangor*	Union Street, Bangor
Mosher, Stuart Holt, Es.	*Orono*	6 Middle Street

Murphy, Donald Joseph, Es.	*Bangor*	Θ X House
Myers, Frank William, Hy.	*Old Town*	24 Congress Street, Old Town
Nichols, Arthur Ames, Zo.	*Newtonville, Mass.*	18 Oak Street
Norton, Aldiverde Isaac, Me.	*Camden*	Φ K Σ House
Norton, Wesley Spaulding, Dh.	*Strong*	25 Grove Street
Otis, Arthur Brooks, Zo.	*Bridgton*	Λ X A House
Packard, Ira Joseph, Dh.	*Belfast*	Farm Boarding House
Packard, Vernon Loring, Ce.	*Warren*	Δ T Δ House
Page, Woodrow Evans, Ce.	*East Corinth*	Δ T Δ House
Palmer, Woodrow Lenox, Fy.	*Fryeburg*	Σ X House
Parrott, Louis Rocheleau, Fm.	*Plandome, N. Y.*	Φ K House
Pease, Omar Chase, Fy.	*North New Portland*	K Σ House
Peavey, Phyllis Cathrine, He.	*Bangor*	128 Cumberland Street, Bangor
Pedersen, Donald Lincoln, Me.	*Peaks Island*	Σ N House
Pendell, Philip Greenlaw, Eh.	*Caribou*	Σ N House
Perkins, Ralph Linwood, Jr., Me.	*Bangor*	R.F.D. #7, Bangor
Plummer, Curtis Blood, Ee.	*Alfred*	384 College Road
Powell, Floyd Llewellyn, Ed.	*Pittsfield*	12 Park Street
Pratt, Warren Thompson, Es.	*Westbrook*	Λ X A House
Pratt, Willis Grover, Ce.	*Hinckley*	23 Crosby Street
Pressey, Charles Darius, Ce.	*Bangor*	487 Union Street, Bangor
Pronovost, Wilbert Lucien, Jr., Ms.	*Watertown, Conn.*	15 Park Street
Rand, Paige Butler, Fy.	*Lisbon*	Θ X House
Randall, Elmer Woodbury, Jr., Ee.	*Westbrook*	18 Oak Street
Rawding, Norman Julian, Ce.	*Harmony*	Σ N House
Read, Stephen Lovell, Ag.	*Belfast*	Δ X A House
Reese, Samuel Hill, Fy.	*Wilmington, Del.*	A T Ω House
Richard, Thomas Elie, Ee.	*Bangor*	170 Garland Street, Bangor
Richardson, Walter Allen, Jr., Me.	*Port Clyde*	Σ A E House
Ripley, Lucinda Elizabeth, Es.	*South Paris*	Balentine Hall
Roberts, Fred Carroll, Ee.	*Andover*	Φ Γ Δ House
Roche, Gwendolyn Gunn, Py.	*Portland*	Balentine Hall
Ross, John Albert, Ch.Eng.	*Orono*	356 College Road
Rowe, Ella May, Rl.	*Bar Harbor*	Balentine Hall
Rubin, David Harred, Ch.	*Bangor*	312 French Street, Bangor

Ryan, Hugh Edward, Hy.	*Stamford, Conn.*	Φ K House
Ryan, Philip Aloysius, Ms.	*Bucksport*	Φ K House
Sabin, John Stuart, Fy.	*Putnam, Conn.*	Φ Γ Δ House
Sanborn, James Wilson, Ge.	*Gorham*	B Θ Π House
Sanborn, Maurice Lee, Fm.	*Belfast*	University Place
Saunders, Harry Clayton, Jr., Ed.	*Brunswick*	Φ Γ Δ House
Sawyer, Ashton Parker, Ce.	*Portland*	Φ M Δ House
Sawyer, Dorothy Louise, Dr.	*Jonesport*	Colvin Hall
Sherry, Arthur Browning, Jr., Ch.Eng.	*Portland*	Φ K Σ House
Shurtleff, Ruth Elizabeth, He.	*Portland*	Balentine Hall
Sisco, Alice Elizabeth, Dr.	*Portland*	Colvin Hall
Small, John Foster, Dh.	*Orono*	27 Park Street
Smart, Wendall Temple, Es.	*Bangor*	B Θ Π House
Soule, Glendon Arthur, Pa.	*Freeport*	B K House
Spalding, Edward Lewis, Fy.	*Newburyport, Mass.*	K Σ House
Sparrow, Kenrick Anderson, Ce.	*South Orleans, Mass.*	Δ X A House
Staples, Basil George, Bc.	*Kittery*	A Γ P House
Stetson, Edward, Ht.	*Portland*	Φ H K House
Stevens, Joseph Ayer, Ce.	*Lincoln*	Φ K Σ House
Stevens, Joyce Cheney, Eh.	*Orono*	3 University Place
Stewart, Donald Merwyn, Eh.	*New Haven, Conn.*	83 Park Street
Stoddard, Richard St. Clair, Es.	*Rockland*	B K House
Stone, Flora Elizabeth, He.	*Fort Fairfield*	Balentine Hall
Stone, Ralph Donald, Ce.	*Gardiner*	Λ X A House
Strout, Margaret Deering, He.	*Bogota, N. J.*	North Hall
Stubbs, Arthur Perry, Ch.Eng.	*Orono*	Park Street
Sullivan, Kenneth Prince, Me.	*Bangor*	Φ Γ Δ House
Taylor, Oscar Moores, Me.	*Rumford*	Φ Γ Δ House
Tebbets, Lawrence Morton, Me.	*Auburn*	B K House
Temple, Dorothea Louise, Es.	*Richmond*	Balentine Hall
Thaxter, Elizabeth Taylor, Ed.	*Machias*	11 Oak Street, Old Town
Thorne, Raymond Burgess, Me.	*St. Albans*	A T Ω House
Titcomb, Carl Alden, Ph.	*Dexter*	Φ M Δ House
Todd, Ruth Josephine, He.	*Caribou*	20 Forest Avenue
Topolosky, Francis Lawrence, Zo.	*Portland*	Φ K House
Totman, Clayton Osborne, Fy.	*Greenfield, Mass.*	Σ N House
Towle, Charles Edgar, Ms.	*Fort Fairfield*	Φ H K House
Trundy, Virginia Elizabeth, Py.	*Searsport*	20 Forest Avenue

Turner, Max Elvin, Ht.	*Augusta*	Α Γ Ρ House
Turner, Robert Frank, Me.	*Veazie*	R.F.D. #7, Bangor
Venskus, John Paul, Ce.	*Mexico*	Φ Μ Δ House
Wadleigh, Ralph Leith, Ee.	*Old Town*	127 Fourth Street, Old Town
Walker, Jean Grant, Eh.	*Millinocket*	Balentine Hall
Walker, Warren Littlefield, Me.	*Kennebunk*	Φ Κ Σ House
Wallace, Rachel Katherine, He.	*Orono*	North Hall
Walton, Russell Archer, Es.	*Wellesley, Mass.*	Α Τ Ω House
Warner, Beryl Elisabeth, Ms.	*Bangor*	192-14th Street, Bangor
Warren, George William, Ee.	*Dover-Foxcroft*	Σ Χ House
Wasgatt, Cynthia Helen, Zo.	*Rockland*	Balentine Hall
Welch, Craig Jameson, Me.	*Madison*	Φ Η Κ House
Wesolowska, Laura Margaret, Ed.	*Shirley, Mass.*	Balentine Hall
Weymouth, Donna Victoria, Hy.	*Abbot*	Balentine Hall
Whitaker, Preston Clarence, Dt.	*Bangor*	Α Γ Ρ House
White, Nathan William, Ed.	*Presque Isle*	34 Pine Street
White, Walter Alfred, Me.	*Saco*	Φ Κ House
Whitman, Carl Addison, Ms.	*East Auburn*	Σ Ν House
Whitman, Hope Bradford, Eh.	*Turner*	Balentine Hall
Wilbur, Herbert Tilden, Jr., Zo.	*Bar Harbor*	Σ Α Ε House
Wilhelm, Louise Elizabeth, Eh.	*New Haven, Conn.*	The Maples
Willard, Mildred Sarah, Ms.	*Orono*	100 Bennoch Street
Willard, Robert Pierce, Me.	*Malden, Mass.*	Α Τ Ω House
Willey, John Coffin, Eh.	*Cherryfield*	Σ Χ House
Wilson, Eino Edward, Es.	*Peabody, Mass.*	54 Pine Street
Wishart, Robert Frederick, Zo.	*Rumford*	Φ Γ Δ House
Wood, Elmore Laurence, Ge.	*Waterville*	Φ Γ Δ House
Wood, Frank Theodore, Es.	*Shelburne Falls, Mass.*	Δ Χ Α House
Wooster, Richard Poole, Eh.	*Old Town*	258 Center Street, Old Town
Young, Leslie Clough, Me.	*Onawa*	Φ Η Κ House
Young, Margaret Ross, He.	*Camden*	34 Forest Avenue

JUNIORS

Abbott, Actor Thompson, Jr., Ce.	*Trevett*	Σ Χ House
Aldrich, Robert Edwin, Ce.	*Winchendon, Mass.*	Δ Τ Δ House

Allen, Marcia, Eh.	*Bangor*	110 Center Street, Bangor
Allen, Rena Maria, He.	*Bangor*	R.F.D. #7, Bangor
Anderson, Fred Andrew, Zo.	*Milo*	College Road
Archer, Marie Clover, Zo.	*Milbridge*	Balentine Hall
Arno, John Raymond, Ag.	*Dexter*	Α Γ Ρ House
Asnip, Margaret Irene, Eh.	*Saco*	Balentine Hall
Averill, Roswell Pierce, Es.	*Old Town*	32 High Street, Old Town
Bacheller, Chester Daniel, Ph.	*Oakland*	Α Γ Ρ House
Backer, Edward Adolph, Zo.	*Portland*	Θ Χ House
Barker, William Francis, Me.	*Stamford, Conn.*	77 Mill Street
Bartlett, John Orrin, Ee.	*Bangor*	51 Maple Street, Bangor
Beal, Frederick Martin, Ce.	*Darien, Conn.*	29 Forest Avenue
Beverage, Gerald Gibson, Ge.	*North Haven*	Σ Α Ε House
Bickford, Kenneth James, Ee.	*Readfield*	148 Main Street
Birchard, Junius Wilson, Hy.	*Warren, Pa.*	Campus
Blake, William Douglass, Fy.	*Greenfield, Mass.*	Σ Ν House
Blanchard, Estelle Sheldon, He.	*Cumberland Center*	Colvin Hall
Blanchard, Nelson Sweetser, Dt.	*Cumberland Center*	25 Grove Street
Boardman, Harold Thomas, Fy.	*Skowhegan*	Λ Χ Α House
Boardman, James Alden, Ge.	*Orono*	172 Main Street
Boardman, Rosemary, He.	*Orono*	172 Main Street
Bragdon, Merle Henry, Ps.	*Westfield*	25 Grove Street
Brooks, Willard Nash, Ce.	*Addison*	Λ Χ Α House
Brown, David Springer, Hy.	*Ellsworth*	134 College Road
Brown, Donald Marshall, Ce.	*Marion, Conn.*	Φ Η Κ House
Brown, Donald Warren, Es.	*South Portland*	Θ Χ House
Brown, Eileen Elizabeth, Ed.	*Brewer*	Balentine Hall
Brown, Paul Coolidge, Pa.	*Norway*	Φ Μ Δ House
Bryer, Giles Samuel, Ee.	*Boothbay*	Σ Ν House
Buck, Pearl Parshley, Rl.	*Bangor*	23 Elizabeth Avenue, Bangor
Buker, Helen Louise, Eh.	*Auburn*	Balentine Hall
Burke, Roger Wallace, Es.	*Portland*	Φ Γ Δ House
Burns, Robert Aloysius, Hy.	*Albany, N. Y.*	308 Center Street, Bangor
Bussell, Catharene Anne, Eh.	*Old Town*	11 Oak Street, Old Town

Callaghan, Frances Catherine, He.

Cameron, Roger Tarr, Ph.

Campbell, Alice Wood, Ms.
Campbell, Truman Frederick, Ms.
Cann, Dorothy Virginia, He.
Carr, Kenneth Wayne, Ed.

Carroll, Rachel, Eh.
Chadwick, Frank Newton, Jr., Dh.

Chapman, Franklin Sproat, Fm.
Chittick, Robert Harris, Fm.
Chute, Kenneth Merton, Ce.
Clarke, George Ahrens, Ch.A.
Clunie, Robert Lyall, Ch.A.
Coburn, Winifred Louisa, He.
Coffin, Alice Carolyn, Zo.
Cohen, Mae Elouise, Py.

Collette, Myron Gilbert, Ps.
Colwell, Gladys Mae, Zo.
Coombs, John Matthews, Ee.
Cooper, Almon Bird, Jr., Fy.
Corbett, Alan Campbell, Dh.
Corey, George Thomas, Zo.
Corrigan, Ralph Jerome, Es.
Côté, Lawrence Frederick, Ce.
Cowan, Frank Raymond, Me.
Cox, Alfred Bentley, Ee.
Craigie, Robert Schumann, Ms.
Crockett, Charles, Es.
Crowder, Albert Philip, Jr., Es.
Crowell, Alice Gammon, Es.
Currie, Darrel Bishop, Hy.
Currie, Gustavus Noel, Fm.
Currier, Carolyn Emily, Ms.

Day, James Otto, Eh.

Dean, John Reynolds, An.

South Brewer
10 DeRusha Court, South Brewer
Gloucester, Mass.
Experiment Poultry Plant
Machias 162 College Road
Boothbay Harbor 35 Grove Street
Higganum, Conn. Colvin Hall
Howland
107 Center Street, Old Town
Southwest Harbor Balentine Hall
Ward Hill, Mass.
Experiment Poultry Plant
Bethel Σ N House
Portland Θ X House
Harrison Σ A E House
South Portland 5A Mill Streeet
Rumford Σ X House
Greene Colvin Hall
Bar Harbor Balentine Hall
Bangor
50 East Summer Street, Bangor
Spencer, Mass. 302 H. H. Hall
Hancock Colvin Hall
Boothbay Harbor 85 Main Street
Rockland B K House
Orono Φ M Δ House
Caribou Θ X House
Millinocket Θ X House
Caribou Farm Boarding House
Brewer 30 School Street, Brewer
Livermore Φ M Δ House
Stoneham, Mass. Φ H K House
Stonington T E Φ House
Bangor 310 Broadway, Bangor
Bangor 41 Fifth Street, Bangor
Hartland Σ N House
Presque Isle Φ H K House
Bangor Colvin Hall

Beverly Farms, Mass.
36 College Road
Waterville K Σ House

DeCormier, Phyllis Delaney, Eh.	*Westbrook*	162 College Road
Delaney, Catherine Eleanor, Ed.	*Dorchester, Mass.*	Colvin Hall
Demont, Ralph Lewis, Ch.	*Old Town*	33 Oak Street, Old Town
Dennett, Firth Lombard, Pa.	*Brownfield*	Δ T Δ House
Dexter, Charles Francis, Me.	*Norwood, Mass.*	K Σ House
Doherty, Albert Vincent, Es.	*Bangor*	202 Oak Hall
Dole, Ira Frederic, Ce.	*Bangor*	Λ X Λ House
Dorr, Leonore Evelyn, He.	*Brewer*	236 Center Street, Brewer
Dow, Vivian Jennie, Rl.	*Stillwater*	Stillwater
Dowd, Maxim James, Es.	*Portland*	Φ K Σ House
Downey, Adrian Kenneth, Zo.	*Arlington, Mass.*	Θ X House
Durkee, John Alba, Fy.	*Waterbury, Vermont*	Φ K House
Eliasson, Ann Elizabeth, He.	*Ellsworth*	Balentine Hall
Epstein, Geneva Rheta, Gm.	*Bangor*	Colvin Hall
Etter, John Marshall, Ee.	*Bar Harbor*	85 Main Street
Farrer, Lawrence Arnold, Ce.	*Easton*	13 Mill Street
Fitch, Donald Max, Eh.	*Orono*	32 College Road
Fitz, Arland Andrew, Ee.	*Kenduskeag*	73 North Main Street
Flanagan, John Wilfrid, Ee.	*Bangor*	207 Maple Street, Bangor
Fogarty, John Joseph, Ms.	*West Haven, Conn.*	Σ X House
Foley, Howard William, Zo.	*Marblehead, Mass.*	Λ T Ω House
Foster, Ruel Marshal, Fy.	*Milford*	Milford
Fowles, Rachel, He.	*Belfast*	Balentine Hall
Frame, George Marshall, Es.	*Searsport*	K Σ House
Frost, Susan Belle, Hy.	*Kingman*	23 Pond Street
Fuller, Charlotte Ann, Rl.	*Hallowell*	Colvin Hall
Fuller, Georgia Isabel, Eh.	*Togus*	Colvin Hall
Gailey, Raymond Henry, Hy.	*Portland*	12 Park Street
Galbraith, Joseph, Me.	*Pleasant Plains, Staten Island, N. Y.*	B Θ Π House
Gardner, Edith Oak, He.	*Orono*	133 Main Street
Gardner, John Cook Moore, Jr., Ed.	*Castine*	35 Grove Street
Garvin, Paul Lester, Ht.	*Alfred*	Δ T Δ House
Giddings, Elizabeth Helen, Zo.	*Saco*	Balentine Hall
Gifford, Elizabeth Annette, Eh.	*Dorchester, Mass.*	Balentine Hall
Gleszer, Roland Merrill, Es.	*Bangor*	T E Φ House
Golobski, Bruno, Eh.	*Lawrence, Mass.*	408 Oak Hall

Gonya, Helen Elizabeth, Rl.	*Millinocket*	Colvin Hall
Goodwin, Ruth Emma, Eh.	*Alfred*	Balentine Hall
Gordon, Richard Oliver, Ch.	*Portland*	Σ N House
Grant, Clarice Jeanette, Cl.	*Sandy Point*	43 Main Street
Grant, Gerald Virgil, Ce.	*Sandy Point*	45 Mill Street
Guptill, Arnold Artemus, Me.	*Bangor*	165 Hammond Street, Bangor
Haggett, James Wilder, Ge.	*North Edgecomb*	Δ T Δ House
Haggett, Robert Marshall, Ee.	*Portland*	Δ T Δ House
Hall, Chester Fullerton, Ce.	*Brewer*	7 Prospect Street, Brewer
Hall, Margaret Elizabeth, Eh.	*Castine*	Colvin Hall
Hallé, Lionel Paul, Eh.	*Skowhegan*	K Σ House
Hamilton, Phylis Brander, He.	*South Portland*	Balentine Hall
Hamilton, Robert John, Ch.Eng.	*Madison*	Φ Γ Δ House
Hanson, Edward Coe, Me.	*South Swansea, Mass.*	Φ M Δ House
Harriman, Margaret Agnes, Ms.	*Ellsworth*	162 College Road
Harrison, George Jewett, Zo.	*Houlton*	74 North Main Street
Hathorn, Vincent Laforest, Me.	*Pittsfield*	24 Mill Street
Hayes, Ralph Franklin, Ch.Eng.	*Portland*	Λ X Λ House
Heath, Gordon Richardson, Fy.	*Worcester, Mass.*	Φ Γ Δ House
Hennings, John Porter, Ce.	*Portland*	Φ K Σ House
Hickey, Frederick Henry, Es.	*Old Town*	19 High Street, Old Town
Higgins, Clyde Elwyn, Dt.	*Lewiston*	102 Oak Hall
Higgins, Ralph Percy, Eh.	*Old Town*	201 Stillwater Avenue, Old Town
Higgins, Richard Eugene, Es.	*Bangor*	706 Broadway, Bangor
Hill, Edith Bradley, He.	*Orono*	9 Kell Street
Hill, Elinor Margueritta, He.	*Orono*	162 College Road
Hill, Thomas Mason, Es.	*Bucksport*	K Σ House
Hilton, Marion Agnes, He.	*Anson*	Colvin Hall
Hinckley, William Peters, Pa.	*Bluehill*	Σ X House
Hinkley, Ruth Constance, Eh.	*Brewer*	1 Chamberlain Street, Brewer
Hinman, Louise Jackson, Py.	*Skowhegan*	162 College Road
Hirshon, Selvin, Zo.	*Portland*	4 Myrtle Street
Hoctor, Cathryn Rita, Ed.	*Old Orchard Beach*	Balentine Hall
Holden, Faith Whittier, Cl.	*Bangor*	9 Charles Street, Bangor
Holmes, Franklin Joseph, Ee.	*Stillwater*	Stillwater

Homan, Carroll Alfred, Pa.	*Portland*	Σ X House
Homer, Margaret Sibyl, He.	*Franklin*	175 Main Street
Hotz, Joseph Matthew, Gm.	*Orono*	Φ K House
Huff, Donald Albert, Hy.	*Lynnfield Center, Mass.*	312 H. H. Hall
Hutchins, Roger Dexter, Me.	*Cape Porpoise*	Σ A E House
Ireland, Kenneth Lawrence, Ge.	*Biddeford*	Φ K Σ House
Jacques, Charles Wesley, Jr., Es.	*Bangor*	63 Congress Street, Bangor
Johnson, Donald Goodwin, Zo.	*Bar Harbor*	Λ X A House
Johnson, Thomas Cabot, Fy.	*Nahant, Mass.*	Θ X House
Johnstone, Kenneth Horace, Ms.	*Portland*	Φ K Σ House
Jones, William French, Es.	*Darien, Conn.*	Σ N House
Jordan, Elizabeth Pennell, Py.	*Portland*	Balentine Hall
Keene, Norton Preston, Dh.	*Buckfield*	A Γ P House
Keirstead, Marjorie Jane, Ed.	*Presque Isle*	15 Pierce Street
Keller, Lyndon Maynard, Ce.	*Pripet*	52 North Main Street
Kenny, John Charles, Ch.Eng.	*Palmer, Mass.*	Θ X House
King, Frances Edith, Zo.	*Bethel*	Colvin Hall
Langille, Ranald, Es.	*York Village*	18 Oak Street
Larson, Karl Vincent, Zo.	*Machias*	Λ X A House
Levenseller, Gorham Henry, Es.	*Bangor*	B Θ Π House
Levenson, Roger, Eh.	*Bangor*	12 Park Street
Lewis, William Wyman, Me.	*Oakland*	25 Grove Street
Little, Henry Phinney, Me.	*Augusta*	Φ Γ Δ House
Littlefield, Edward, Fm.	*Springvale*	Δ T Δ House
Littlehale, Robert Lowe, Es.	*Belmont, Mass.*	B Θ Π House
Litz, Margaret Jane, He.	*Limestone*	Balentine Hall
Lord, Richard Newell, Zo.	*Brewer*	74 State Street, Brewer
Lull, David Thomas, Ch.	*Augusta*	87 Park Street
Lunt, Richard Royal, Ch.Eng.	*Portland*	Φ K Σ House
Lynch, James Clifford, Eh.	*Bangor*	244 Birch Street, Bangor
McAlary, Francis James, Ce.	*Rockland*	K Σ House
McCausland, Dexter Linwood, Ee.	*Portland*	384 College Road
MacDonald, Donald Francis, Zo.	*Bangor*	259 State Street, Bangor
McDougall, John Robert, Ee.	*Bangor*	442 Hancock Street, Bangor

MacLean, Charles Buck, Ce.	*Hartford, Conn.*	Λ X Α House
McPherson, Harland Franklin, Ee.	*Gray*	25 Grove Street
Mann, Margaret, Ms.	*Norfolk, Mass.*	Balentine Hall
Matchett, Wendell Eugene, Ee.	*Bangor*	28 Fern Street, Bangor
Mehann, Royal Orman, Ch.	*Old Town*	74 South Brunswick Street, Old Town
Merrill, Arlene, Ms.	*Bangor*	349 Center Street, Bangor
Merriman, Eleanor, Eh.	*Topsham*	Colvin Hall
Meyer, Lester Jacob, Gm.	*Brookline, Mass.*	Τ Ε Φ House
Mills, Frederick Otis, Es.	*Wellesley Hills, Mass.*	Α Τ Ω House
Mongovan, William David, Ch.A.	*Bangor*	4 Graham Avenue, Bangor
Moran, William Henry, Es.	*Brewer*	30 Blake Street, Brewer
Morrison, Robley Howe, Ce.	*Norway*	Φ Μ Δ House
Morrow, John Lockard, Ch.	*Great Neck, Long Island, N. Y.*	Φ Γ Δ House
Morton, Rutledge, Me.	*Portland*	Λ X Α House
Mouw, John Willard, Ms.	*Hospers, Iowa*	104 Main Street
Mullen, Burton Edward, Eh.	*White Valley, Mass.*	85 Main Street
Mullen, Joseph Thomas, Es.	*Bangor*	Κ Σ House
Murry, Gertrude Louise, Cl.	*Bangor*	159 Maple Street, Bangor
Nash, Kenneth Bonney, En.	*Augusta*	24 Mill Street
Naugler, Reginald Whitfield, Ce.	*Topsham*	Β Θ Π House
Naviski, Justin Joseph, Ee.	*Lewiston*	5 Main Street
Nelson, Virginia Cobb, Cl.	*Guilford*	Balentine Hall
Neville, George Malcolm, Zo.	*Bangor*	291 Pine Street, Bangor
Newman, William Proctor, Jr., Ch.Eng.	*Bangor*	90 Royal Road, Bangor
Northup, George Henry, Fy.	*Morristown, N. J.*	Φ Μ Δ House
Nutt, Dorothy Parker, Py.	*West Rockport*	Balentine Hall
O'Connell, Edward William Carmel, Hy.	*North Bridgton*	Commons
O'Connell, Herschel Eugene, Es.	*Millinocket*	Θ X House
Page, Luther Alden, Me.	*Waterville*	5 Main Street
Palmer, Martha Virginia, He.	*Orono*	32 Myrtle Street
Parker, Carroll Curatia, Ch.Eng.	*North Livermore*	134 College Road
Parker, Douglas Gray, Es.	*Lewiston*	Β Θ Π House

Peaslee, Frank Danforth, Es.	*Portland*	Θ X House
Peavey, Anora Howard, He.	*Bangor*	128 Cumberland Street, Bangor
Perkins, Edward Arnold, Ed.	*Castine*	35 Grove Street
Perry, Mary Katherine, Ms.	*Orono*	39 Pine Street
Perry, Ruth Elizabeth, He.	*Orono*	39 Pine Street
Philbrook, Elisabeth, Es.	*Brookline, Mass.*	Balentine Hall
Piper, Donald Albert, Ag.	*Stetson*	35 Hill Street
Pollard, Thomas Lenard, Ed.	*Brewer*	49 State Street, Brewer
Porter, John Langley, Es.	*Randolph, Mass.*	Φ Γ Δ House
Powell, Raymond Appleton, Dt.	*Carmel*	Δ X A House
Prince, Alton Ernest, Fy.	*Brewer*	35 Chamberlain Street, Brewer
Pruett, Kenneth Sherwood, Fy.	*Kittery*	102 H. H. Hall
Ramirez, Xavier Hall, Zo.	*Bangor*	Σ A E House
Raymond, Gordon Byron, Ee.	*Robinson's*	Φ K Σ House
Reed, Thomas Frank, Ch.Eng.	*Bangor*	31 Parkview Avenue, Bangor
Roberts, Arthur Leon, Fy.	*Kennebunk*	Λ X A House
Rollins, Donald Louis, Es.	*Bangor*	76 Summer Street, Bangor
Roussin, Paulette Louise, Ed.	*Biddeford*	Colvin Hall
Salisbury, Robert Holmes, Hy.	*Ellsworth*	A T Ω House
Sanborn, Barbara May, Eh.	*Portland*	Balentine Hall
Saunders, Claire Curtis, Eh.	*Bluehill*	33 Bennoch Street
Saunders, Ernest, Jr., Eh.	*Lewiston*	Σ A E House
Sawyer, Mildred Lucile, Gm.	*Bangor*	706 Hammond Street, Bangor
Schiro, Elizabeth Madeline, Zo.	*Bangor*	Colvin Hall
Scott, Hilda Gertrude, Ed.	*Bath*	Colvin Hall
Sealey, John Clifford, Jr., Fm.	*Orono*	111 H. H. Hall
Sewall, Margaret Grazebrook, Eh.	*Old Town*	332 Stillwater Avenue, Old Town
Shaw, Leonard Frederick, Fy.	*Newton Centre, Mass.*	Λ X A House
Shiro, Samuel Herman, Zo.	*Old Town*	30 South Fourth Street, Old Town
Sidelinger, Dana Peabbles, Eh.	*South Portland*	Φ K Σ House

Simpson, Robert Waldo, Ch.Eng.	*Corinna*	20 Peters Street
Sisco, Elmer Ashburn, Es.	*Portland*	Bridge Street
Slosberg, Gerald Arthur, Ch.	*Portland*	Τ Ε Φ House
Smith, Chester Williams, Fm.	*Fairfield*	204 H. H. Hall
Smith, James Jacob, Fy.	*Waterville*	31 Mill Street
Smith, William Arthur, Me.	*Dennysville*	Δ Τ Δ House
Snow, Philip Porter, Ce.	*Biddeford Pool*	Κ Σ House
Sprague, Frederick Nelson, Ch.Eng.	*Bangor*	223 Maple Street, Bangor
Stanley, Rebecca Jean, Ms.	*Cranberry Isles*	34 Forest Avenue
Steeves, Louise Elizabeth, Ed.	*Lincoln*	Balentine Hall
Steinberg, Howard Gerard, Me.	*Brooklyn, N. Y.*	Τ Ε Φ House
Stinchfield, John Clark, Ch.	*Wayne*	Λ Χ Α House
Striar, Abraham, Ch.Eng.	*Bangor*	14 Adams Street, Bangor
Sturke, Ralph Chester, Ed.	*Pembroke*	35 Grove Street
Sullivan, Bettina Frances, Dr.	*Orono*	54 Main Street
Swasey, Samuel Elliot, Me.	*Marblehead, Mass.*	Λ Χ Α House
Sylvester, Asher Elwood, Me.	*Eustis*	Φ Κ Σ House
Sylvester, Ruth Natalie, Zo.	*Eustis*	Colvin Hall
Tanner, Alfreda Mae, Eh.	*South Portland*	Colvin Hall
Taylor, Carleton Lewis, Jr., Ch.Eng.	*Litchfield*	87 Park Street
Taylor, Paul Edward, Zo.	*Kittery*	384 College Road
Thompson, John Francis, Ch.	*Bangor*	State Hospital, Bangor
Tilton, Malcolm Louville, Fm.	*Burnham*	Α Γ Ρ House
Torrey, Glen Willard, Dt.	*Auburn*	Farm Boarding House
Tracy, Lillian Evelyn, He.	*Bangor*	Colvin Hall
Treinor, Mary Reedy, He.	*Bangor*	96 Cedar Street, Bangor
Tropp, Charles Clarence, Fy.	*Orono*	32 Pierce Street
Verrill, Albert, Jr., Es.	*Cumberland Mills*	Λ Χ Α House
Wakefield, James Adelbert, Jr., Ce.	*Cumberland Center*	Φ Κ Σ House
Wakely, Eugene True, Rl.	*Topsham*	Β Θ Π House
Warren, Margaretta, Ht.	*Lincolnville*	Balentine Hall
Washington, Donald, Pa.	*Sanford*	Λ Χ Α House
Webber, Philip Shepard, Es.	*Belfast*	30 Blake Street, Brewer
Webster, Edwin Parker, Ce.	*Auburn*	Σ Α Ε House
Wellman, David Peirce, Me.	*Lewiston*	Λ Χ Α House
Weston, Lowell Nathan, Es.	*Augusta*	Β Θ Π House
White, David Fletcher, Es.	*Augusta*	Φ Κ Σ House
Wilcox, Granville Herbert, Hy.	*Mapleton*	Φ Η Κ House
Winch, Fred Everett, Jr., Fy.	*Framingham, Mass.*	45 Oak Street

Woelfel, Charles, Fy.	*Peabody, Mass.*	B K House
Wood, William Sylvester, Es.	*Old Orchard Beach*	Φ Γ Δ House
Woodbury, Harold Mace, Fm.	*Portland*	Φ K Σ House
Woodcock, Dorothy Lois, He.	*Ripley*	150 Park Street
Woods, Eldredge Brown, Ce.	*Kittery*	Σ X House
Worcester, Alfred Small, Fy.	*Southwest Harbor*	Λ X A House
Wormwood, Kathleen Bradbury, He.	*Portland*	Balentine Hall
Worthley, Carl Allen, Fm.	*Strong*	A Γ P House
Wright, Almira Powell, He.	*Gardiner, N. Y.*	Colvin Hall
Yeomans, Bernice Isabelle, Eh.	*Danforth*	15 Pierce Street

SOPHOMORES

Aliberti, Henry Joseph, Ce.	*Portland*	Θ X House
Allen, Robert Laurie, Arts	*Rockland*	K Σ House
Alpert, Sylvia Elizabeth, Arts	*Bangor*	Balentine Hall
Ames, Kenneth Green, Arts	*Bridgton*	Φ M Δ House
Andersen, Henry Testman, Ge.	*Lyme, Conn.*	Δ T Δ House
Ashby, Hope Elizabeth, He.	*Caribou*	Balentine Hall
Ashworth, Mabelle Elizabeth, Arts	*Orono*	88 North Main Street
Austin, Frances Elizabeth, Arts	*Milbridge*	Colvin Hall
Averill, John Frank, Arts	*Fort Fairfield*	Σ N House
Avery, Newell Albert, Arts	*Bangor*	77 Parkview Avenue, Bangor
Bagley, Wendell Merton, Ge.	*Troy*	56 North Main Street
Barry, Manley Leroy, Arts	*Orono*	80 Pine Street
Bartlett, Charles Maynard, Ee.	*Orono*	74 North Main Street
Bates, Edwin Hill, Ee.	*Bath*	Φ M Δ House
Bedrick, David Norman, Arts	*Clinton, Mass.*	T E Φ House
Beisel, Ralph Anthony, Fy.	*Lehighton, Pa.*	29 Forest Avenue
Bell, Alton Leroy, Ge.	*Dennysville*	Oak Hall
Bennett, John Francis, Jr., Ce.	*Portland*	Θ X House
Berry, Richard Nathaniel, Ge.	*Malden, Mass.*	B Θ Π House
Bertels, Barbara, Arts	*Bangor*	Colvin Hall
Bessom, John Albert, Pa.	*Marblehead, Mass.*	Σ A E House
Bingle, Ethel Annette, Arts	*Lynn, Mass.*	Colvin Hall
Bishop, Audrey Elaine, He.	*Caribou*	Balentine Hall
Bishop, William Freeman, Arts	*Caribou*	Φ H K House
Black, Ruby Virginia, He.	*Woodfords*	Balentine Hall

Blake, Kenneth Stanford, Arts	*Dexter*	Α Τ Ω House
Bower, Philip Nichols, Me.	*Auburn*	Δ Τ Δ House
Boyle, Francis Waldemar, Arts	*Old Town*	21 Summer Street, Old Town
Braley, Richard Donald, Fm.	*Augusta*	Α Τ Ω House
Brarmann, Edward Francis, Ht.	*Englewood, N. J.*	Α Τ Ω House
Brewer, Everett Leighton, Ch.Eng.	*Portland*	384 College Road
Brewster, Wendell Swanton, Arts	*Dexter*	Α Τ Ω House
Briggs, Richard Wilbur, Fm.	*Canton*	380 College Road
Brown, Carolyn May, Arts	*Skowhegan*	Balentine Hall
Brown, Henry Maxson, Ee.	*Francestown, N. H.*	Σ Χ House
Brown, Raynor Keith, Fy.	*Norway Lake*	Σ Χ House
Brown, Woodford Bradbury, Ee.	*Bangor*	Φ Η Κ House
Brush, Frederick Hale, Arts	*Arlington, Vermont*	12 Park Street
Bryant, Elwood Danton, Me.	*Bangor*	Φ Γ Δ House
Buck, Charles Barstow, Ph.	*Naples*	Σ Ν House
Buckminster, Lloyd Allen, Me.	*Sedgwick*	Δ Τ Δ House
Bunker, Katherine Cook, Arts	*Calais*	Balentine Hall
Burke, Paul Webber, Arts	*Bangor*	Water Works, Bangor
Burnett, Ruth Charlotte, Arts	*South Brewer*	447 South Main Street, South Brewer
Butterfield, Walter Lamont, Jr., Arts	*Dexter*	Α Τ Ω House
Button, Thomas Byron, Ch.Eng.	*Newton Highlands, Mass.*	Θ Χ House
Calderwood, Louise Rand, Arts	*Bath*	Balentine Hall
Calvert, Pauline, Ht.	*Orono*	84 College Road
Cameron, James Craig, Ch.Eng.	*Old Town*	156 North Fourth Street, Old Town
Carlisle, Norman Davis, Arts	*Bangor*	Φ Γ Δ House
Carr, Robert Venn, Ce.	*Bridgeport, Conn.*	Α Τ Ω House
Carroll, Clifton Lewis, Fy.	*New Harbor*	Φ Μ Δ House
Casasa, Philip Thomas, Arts	*Portland*	Θ Χ House
Chapman, William Follett, Fy.	*Portland*	Φ Κ Σ House
Chase, Richard Getchell, Arts	*Limestone*	Σ Α Ε House
Childs, Edwin, Jr., Fm.	*Lewiston*	Φ Μ Δ House
Ciomei, Aldo, Pa.	*Stonington*	Α Τ Ω House
Clark, William Frank, Ce.	*Sanford*	Δ Τ Δ House
Cliff, Henrietta, He.	*Lincoln*	Balentine Hall

Coffin, Eugene, Fm.	*Harrington*	Stillwater
Cohen, Celia, Arts	*Portland*	Balentine Hall
Colbert, Roger Edward, Fy.	*South Portland*	Σ A E House
Conner, Harry Brooks, Ch.Eng.	*Castine*	K Σ House
Corbett, Robert Francis, Dt.	*East Parsonsfield*	K Σ House
Cotes, Kermit Rodney, Ch.Eng.	*Derby*	Φ H K House
Cotton, Edward Burnham, Ge.	*Houlton*	80 North Main Street
Cousins, Helene Elwood, Arts	*Stonington*	Balentine Hall
Covell, Mildred Edith, He.	*Monmouth*	Bennoch Street
Crabtree, Harry Lynwood, Jr., Arts	*Ellsworth*	Σ A E House
Crabtree, Theodore Jesse, Fy.	*North Jay*	Φ K Σ House
Crane, Donald Clyde, Arts	*Whiting*	Λ X A House
Crockett, Leonard Emerson, Ee.	*Houlton*	Σ N House
Crockett, Maurice Harold, Eh.	*Stonington*	T E Φ House
Crouse, Margaret Eleanor, Arts	*Crouseville*	Colvin Hall
Crowell, William Eleazor, Me.	*South Portland*	Λ X A House
Crowley, Elmer Francis, Me.	*Greenville*	Φ H K House
Crozier, Thomas Joseph Allen, Arts	*Portland*	Θ X House
Cunningham, James Herbert, Arts	*Bar Harbor*	K Σ House
Currie, Anna Ruth, Arts	*Bangor*	75 Maple Street, Bangor
Cyr, Joseph Wilfred, Jr., Ch.	*Bath*	Φ K House
Dalot, Philip Latimer, Ee.	*Addison*	Σ N House
Dascombe, C. Burr, Ee.	*Livermore Falls*	Σ N House
Davenport, Constance Lucille, He.	*Oak Park, Ill.*	Balentine Hall
Davis, Charlotte Irma, Arts	*Milford*	Milford
Davis, Helen Crawford, Arts	*Port Clyde*	Balentine Hall
Day, Maurice Goodwin, Arts	*Princeton*	Σ N House
Delano, Charles Herbert, Fm.	*Bucksport*	Φ K House
Dennis, Lawrence, Arts	*Ellsworth*	24 Oak Street
DeWick, Robert Ellison, Dt.	*Wiscasset*	Kell Street
Dill, Elizabeth Wadlia, Arts	*Bangor*	Colvin Hall
Dimitre, Phyllis Marie, Arts	*Calais*	Balentine Hall
Dingwall, Douglas, Ce.	*Presque Isle*	Φ H K House
Dinneen, William Robert, Fy.	*Willimantic, Conn.*	56 Park Street
Dinsmore, Ernest Lowell, Arts	*Queens Village, N. Y.*	Λ X A House
Dionne, Bernard Edward, Ch.Eng.	*Van Buren*	114 North Main Street
Dixon, Mildred Mae, Arts	*South Eliot*	Balentine Hall
Dow, James Frederick, Me.	*Houlton*	Φ Γ Δ House
Duff, Alan Dallas, Jr., Me.	*Augusta*	A T Ω House

Dunlevy, Raymond Knowles, Fy.	*Brockton, Mass.*	25 Grove Street
Dunton, Mary Alice, Arts	*Bath*	Balentine Hall
Edwards, George Everett, Arts	*Lincoln*	Φ M Δ House
Eldridge, Oliver Fuller, Arts	*North Adams, Mass.*	Φ H K House
Elmore, Emily Meribah, He.	*Augusta*	Balentine Hall
Elwell, Floyd Maynard, Fm.	*East Wilton*	25 Grove Street
Emerson, Jerome Adolphus, Arts	*Corinna*	391 College Road
Evans, Thomas Bramlett, Fy.	*Long Branch, N. J.*	29 Forest Avenue
Fay, Gardner Wilcox, Arts	*Needham, Mass.*	K Σ House
Felberg, Leonard, Me.	*Brooklyn, N. Y.*	T E Φ House
Fellows, Frank, Fm.	*Bangor*	395 Union Street, Bangor
Feyler, Richard Whitney, Arts	*Thomaston*	Φ K Σ House
Findlen, George Louis, Fm.	*Fort Fairfield*	A Γ P House
Flint, Ernest Edgar, Ee.	*Roslindale, Mass.*	Σ N House
Flynn, James Hammond, Arts	*Machiasport*	85 Main Street
Folger, Faith Gertrude, Arts	*Fryeburg*	Colvin Hall
Folley, Cranston Wesley, Me.	*South Portland*	382 College Road
Folley, Gayland Earl, Ht.	*South Portland*	382 College Road
Forman, William Nelson, Fm.	*Fitchburg, Mass.*	A Γ P House
Foster, Ernest Maxwell, Ch.Eng.	*Weld*	Φ H K House
Frazier, Madeline Louise, Arts	*Norwood, Mass.*	Balentine Hall
Frost, Kenneth Albert, Ag.	*Charleston*	A Γ P House
Gaetz, Leonard Halley, Pa.	*White Plains, N. Y.*	Σ N House
Gardner, Elizabeth, Arts	*Orono*	133 Main Street
Gatti, John Anthony, Ag.	*Portland*	Φ M Δ House
Golden, Evelyn Gertrude, Arts	*Bangor*	326 State Street, Bangor
Golding, Carl Foulkes, Me.	*Milo*	K Σ House
Goldsmith, Jeannette, Ed.	*South Paris*	Balentine Hall
Gonya, Yvonne Marie, Arts	*Millinocket*	Balentine Hall
Googins, Elva Elizabeth, Arts	*Ellsworth*	Balentine Hall
Grange, George Robert, Fm.	*Smyrna Mills*	Φ Γ Δ House
Grant, Gardner Coffin, Arts	*Cherryfield*	Σ X House
Grant, Mary Josephine, Arts	*Bangor*	275 Essex Street, Bangor
Greene, John Cornell, Fy.	*Pomfret, Conn.*	29 Forest Avenue
Grindell, Francis, Ht.	*Lincoln*	Φ H K House
Hamlin, Joseph Hamor, Arts	*Bar Harbor*	B Θ Π House
Harmon, Charles Arthur, Fm.	*Caribou*	Θ X House

Harrison, George Ogilvie, Arts	*Portland*	Σ X House
Hart, Elizabeth, Arts	*East Orange, N. J.*	Colvin Hall
Haskell, Richard Henry, Arts	*Bath*	Σ N House
Hastings, Louise Eliza, Arts	*Bangor*	Balentine Hall
Hawkes, Ralph Wilson, Jr., Arts	*York Village*	Σ X House
Heald, Almon Francis, Dh.	*Union*	College Road
Hebel, Carl Gustave, Me.	*Brewer*	178 Parker Street, Brewer
Hickey, William Edward, Pa.	*Old Town*	19 High Street, Old Town
Hinckley, Jerold Maxwell, Arts	*Bluehill*	Σ X House
Hitchings, George Philip, Arts	*Orono*	2 Summer Street
Hobson, Herbert Neil, Fy.	*Portland*	Φ K Σ House
Holmes, Ruth Kimball, He.	*Belfast*	Balentine Hall
Homstead, Robert Howard, Ch.	*Orono*	150 Park Street
Hooper, William Howard, Fy.	*Biddeford*	Λ X A House
Hopkins, Bernice Willard, Arts	*Belfast*	Balentine Hall
Houghton, Thomas Edward, Jr., Fm.	*Fort Fairfield*	Σ N House
Houston, George Laurence, Fy.	*Bangor*	B K House
Hubbard, Ira Chase, Jr., Fy.	*Gardiner*	B K House
Hunnewell, William French, Ch.Eng.	*Madison*	Σ A E House
Hunt, William Scott, Me.	*Mount Washington, Mass.*	Σ X House
Hutchings, Leslie Morton, Dt.	*Portland*	Φ M Δ House
Hutchinson, Dorothy Beatrice, He.	*Old Town*	305 Center Street, Old Town
Inglee, Lewis, Jr., Arts	*Amityville, Long Island, N. Y.*	B K House
Jackson, Nolan Berry, Fm.	*Norway*	Φ M Δ House
Jackson, Ruth Maida, Arts	*Bridgewater, Mass.*	Colvin Hall
Jeffers, Emmett Thomas, Ce.	*Winchendon, Mass.*	Δ T Δ House
Jones, Beatrice Florence, He.	*Orono*	164 College Road
Jones, Frances Allanna, Arts	*Bangor*	133 Main Street
Jones, Robert Carroll, An.	*Wales*	18 Myrtle Street
Jude, Judson Austin, Ch.Eng.	*Ellsworth Falls*	K Σ House
Judkins, Fred Sanborn, Dh.	*Upton*	25 Grove Street
Keegan, Clarence Kermit, Fm.	*Robinson's*	Φ H K House
Kierstead, William Irving, Ch.Eng.	*Rockland, Mass.*	Δ T Δ House
Kilgour, Donald Campbell, Me.	*Lovell*	Φ K Σ House

Kimball, Ruth, Arts	*Old Town*	2 Gilman Falls Avenue, Old Town
Koran, Adolph Adam, Arts	*Houlton*	170 Hancock Street, Bangor
Ladd, Elizabeth Crossgrove, Arts	*Pripet*	Balentine Hall
Lancaster, Barbara Alice, Arts	*Old Town*	154 Stillwater Avenue, Old Town
Lancaster, Vaughan Handy, Fy.	*Brownville*	Κ Σ House
Landers, Albert Schoppee, Fy.	*Bangor*	21 Parkview Avenue, Bangor
Landers, Jacqueline Cecilia, He.	*Waterville*	28 Crosby Street
Landon, Miriam, Arts	*Bangor*	22 Boutelle Road, Bangor
Lane, Moses Harold, Arts	*Dorchester, Mass.*	Τ Ε Φ House
Lane, Stuart Pinkham, Fy.	*Lincoln*	Φ Μ Δ House
Laverty, Robert Edward, Fy.	*Newton, Mass.*	Λ Χ Α House
Lawless, Sumner, Ee.	*Auburn*	Σ Α Ε House
Leavitt, Charles Ralph, Arts	*West Enfield*	Φ Κ Σ House
Lennox, Donald Joseph, Ce.	*Bath*	Σ Ν House
Levine, Samuel Jack, An.	*Waterville*	43 Main Street
Lewis, Ruth Edith, Arts	*Springfield*	Colvin Hall
Lindenberger, Frank Wilbur, Arts	*Portland*	47 Mill Street
Litchfield, Leonard Percy, Me.	*Bath*	Φ Γ Δ House
Littlefield, George Leon, Ce.	*Boothbay Harbor*	Σ Ν House
Littlefield, George Wentworth, Fm.	*Albion*	College Road
Lloyd, Raymond Arthur, Me.	*Portland*	Α Τ Ω House
Lovejoy, Avis Bowker, He.	*Rockland*	Balentine Hall
Loveless, Robert Morrill, Me.	*Melrose, Mass.*	Φ Κ Σ House
Lowell, Henry True, Jr., Ee.	*Auburn*	Λ Χ Α House
Lutz, Flora Hermion, Arts	*Old Town*	45 South Fourth Street, Old Town
McCready, Donald Everett, Fy.	*Bangor*	Σ Α Ε House
McCrum, Ralph Charles, Fm.	*Portland*	Δ Τ Δ House
McDonough, Martin Joseph, Jr., Arts	*Bangor*	96 Otis Street, Bangor
McKenney, Edward Fuller, Arts	*Lincoln*	Α Τ Ω House
MacKinnon, Marjorie, Arts	*Topsham*	Balentine Hall
McKusick, Robert Elwin, Dh.	*Guilford*	Veazie
MacLaren, Robert James, Es.	*Wiscasset*	Β Θ Π House
McLaughlin, Gustavus Abbott, Fm.	*Dyer Brook*	Farm Boarding House

McLellan, George William, Arts	*Old Town* 144 South Brunswick Street, Old Town
McMullen, Alice Mary, Arts	*Old Town* 240 South Main Street, Old Town
Mack, Everett Belknap, Ee.	*Bangor* 359 State Street, Bangor
Mader, George Holland, Me.	*Beverly, Mass.* Φ Γ Δ House
Marcionette, Robert Jerome, Arts	*Parsonsfield* Β Θ Π House
Marr, James Archibald, Ee.	*Millinocket* Φ Η Κ House
Martin, Wesley Maxwell, Ce.	*Vineyard Haven, Mass.* Φ Μ Δ House
Mayo, Ronald Ira, Ce.	*Brewer* 137 Wilson Street, Brewer
Merrill, Edward Osgood, Ch.Eng.	*Orono* 178 Main Street
Messeck, William Henry, Jr., Fy.	*Bradford, Mass.* Φ Μ Δ House
Miller, Charlotte Patterson, He.	*Old Town* 50 Veazie Street, Old Town
Miller, John Fessenden, Arts	*Camden* Σ Α Ε House
Miniutti, John Joseph, Me.	*North Berwick* 20 Grove Street
Morgan, Russell Lermond, Ch.	*Thomaston* Δ Χ Α House
Morrison, James Bryan, Jr., Ch.Eng.	*Bradford Center* Φ Κ Σ House
Mosher, Howard Cornell, Ch.Eng.	*North Dartmouth, Mass.* Φ Μ Δ House
Mullaney, Roderick Edward, Jr., Ce.	*Bangor* 72 Garland Street, Bangor
Murch, Marjorie Olive, He.	*Portland* Balentine Hall
Murphy, Leo Joseph, Arts	*Eastport* 67 Mill Street
Murphy, Reginald Frey, Me.	*Bangor* Σ Α Ε House
Murray, John Joseph, Arts	*Bath* Κ Σ House
Naylor, Josie Victoria, He.	*Cumberland Mills* Balentine Hall
Nelson, Francis Aloysius, Ed.	*Old Town* Box 250, Old Town
Newell, Charlotte Naomi, He.	*Bangor* 59 Kenduskeag Avenue, Bangor
Nivison, Robert, Jr., Pa.	*Waterville* Β Θ Π House
Oakes, Maurice Andrew, Arts	*West Enfield* 12 Park Street
Oakman, Theresa, Arts	*Danvers, Mass.* Balentine Hall
O'Connor, James Francis, Arts	*Augusta* 6 Mill Street
Ohler, Robert Loring, Fy.	*Newton Centre, Mass.* Λ Χ Α House
Olsen, Irene Annie, Arts	*Patten* Balentine Hall
Olson, Frank Richard, Ce.	*Worcester, Mass.* Φ Μ Δ House

Page, David Donnell, Arts	*Fort Kent*	Φ Γ Δ House
Palmer, Ralph Simon, Arts	*Brunswick*	College Road
Parsons, Frederick Webster, Arts	*West Medford, Mass.*	A T Ω House
Parsons, Shirley Robinson, Pa.	*South Paris*	Φ M Δ House
Peabody Arland Wentworth, Ee.	*Exeter*	Σ X House
Perkins, Bernard Gordon, Arts	*Orono*	80 North Main Street
Perkins, Irving Joseph, Arts	*Brookline, Mass.*	T E Φ House
Perkins, Muriel, Arts	*Ogunquit*	Colvin Hall
Peterson, Gardner Henry, Ch.Eng.	*Wakefield, Mass.*	6 Mill Street
Pfuntner, Richard Alonzo, Ee.	*Guilford*	55 Park Street
Phair, Willis Ralph, Fy.	*Limestone*	47 Mill Street
Phillips, Phyllis Richert, Arts	*Ellsworth*	Colvin Hall
Pierce, David Purington, Arts	*Guilford*	224 State Street, Bangor
Poulsen, Andrew Waldemar, Fy.	*Hudson Heights, N. J.*	148 Main Street
Proctor, Morris Dewing, Ge.	*Portland*	B Θ Π House
Rand, Beverly Patterson, Fm.	*Sherman Mills*	Φ H K House
Redman, Edward Homer, Arts	*Bangor*	42 Elizabeth Avenue, Bangor
Rich, Avery Edmund, Fm.	*Charleston*	25 Grove Street
Rich, Lucinda Ewer, He.	*Charleston*	Balentine Hall
Rinn, Frank Burton, Arts	*Portland*	Φ Γ Δ House
Robinson, Benjamin Gale, Ch.	*Longmeadow, Mass.*	Σ N House
Roderick, Burleigh Houston, Ed.	*Augusta*	B Θ Π House
Rokes, Nelson Ulmer, Ce.	*Rockland*	Δ T Δ House
Roussin, Madeleine Andrea, Arts	*Biddeford*	Colvin Hall
Rowlands, Willett, Fy.	*Needham, Mass.*	K Σ House
Russell, Chauncey Leach, Arts	*Camden*	K Σ House
Russell, David Alexander, Dt.	*North Jay*	Φ M Δ House
Russell, Sargent, Ht.	*North Leeds*	83 Park Street
Sanders, Naida Barrows, Arts	*Portland*	Balentine Hall
Saunders, Wesleyan Bell, Arts	*New York, N. Y.*	33 Bennoch Street
Sawyer, Carl Frederick, Fy.	*Saco*	Σ A E House
Scamman, Lucian Hollis, By.	*Portland*	Φ M Δ House
Schriver, Alfred Bradbury, Arts	*Bangor*	16 Parkview Avenue, Bangor
Severy, Lawrence Arthur, Me.	*Marblehead, Mass.*	Σ A E House
Shannon, Florence Catherine, Arts	*Bangor*	779 Essex Street, Bangor
Shaw, Howard Earle, Jr., Ce.	*Portland*	Φ H K House

Sibley, Charles Byron, Fm.	*Stillwater* Stillwater
Silsby, Edward Homer, Ce.	*Bangor* Κ Σ House
Simmons, Herbert Carlson, Arts	*Wollaston, Mass.* Φ Γ Δ House
Simpson, Austin Amos, Me.	*Hampden Highlands* Hampden Highlands
Singer, John Thomas, Ce.	*Thomaston* Δ Τ Δ House
Smith, George Arthur, Arts	*Saugus, Mass.* Δ Τ Δ House
Smith, Hubert Mortimer, Fm.	*Westfield* Φ Η Κ House
Smith, Lester Hurlin, Dh.	*Gorham* 25 Grove Street
Smith, Louis, Arts	*Portland* 47 Mill Street
Smith, Roger William, Arts	*Presque Isle* Φ Η Κ House
Smith, Winslow Baker, Ge.	*Brewer* 32 Grove Street, Brewer
Snare, Josephine Weick, Arts	*Hampden Highlands* Balentine Hall
Snow, Margaret, Arts	*Portland* Balentine Hall
Spear, Richard Marcus, Me.	*Thomaston* Δ Τ Δ House
Sproul, Manley James, Arts	*Augusta* Δ Τ Δ House
Stagg, Howard Josiah, Arts	*Syracuse, N. Y.* 77 Bennoch Street
Staples, Richard Byron, Ce.	*Gardiner* Λ Χ Α House
Stevens, Carol Elizabeth, Arts	*Bath* Balentine Hall
Stevens, Edith Harriet, Arts	*Pleasant Point* Balentine Hall
Stewart, Alice Rose, Arts	*Brunswick* Balentine Hall
Stewart, Gordon Alexander, Arts	*Pittsfield* Β Θ Π House
Stillman, Jane, Arts	*Northeast Harbor* Balentine Hall
Stillman, William Phillips, Pa.	*Providence, R. I.* Λ Χ Α House
Story, Elizabeth Marion, Arts	*Pigeon Cove, Mass.* Balentine Hall
Stoughton, Gerald Earle, Ge.	*Orono* 84 College Road
Stuart, Edward, Jr., Fy.	*Rockport, Mass.* Φ Η Κ House
Sturgis, Elliott Augustus, Arts	*Portland* 134 College Road
Sullivan, Jane, Arts	*Orono* 54 Main Street
Sumner, Merton Rogers, Me.	*Rockland* 36 College Road
Sylvester, Mervale Wesley, Fm.	*Mars Hill* Φ Η Κ House
Temple, James William, Arts	*Bath* Σ Χ House
Thayer, Arthur Linwood, Jr., Me.	*Bangor* 13 Hayward Street, Bangor
Thayer, Margaret Llewelyn, He.	*Bangor* 13 Hayward Street, Bangor
Thomas, Orin Ansel, Jr., Fy.	*Rutland, Vermont* Κ Σ House
Thompson, Dana, Fm.	*Presque Isle* Φ Η Κ House
Thomsen, Leonard Alton, Ch.Eng.	*Portland* 391 College Road
Titcomb, Gertrude Althea, He.	*Dexter* 150 Park Street

Titcomb, Helen Ernestine, Arts	*New Gloucester*	Balentine Hall
Todd, Louise Jeannette, He.	*Lisbon*	Balentine Hall
Trimble, George Richard, Jr., Fy.	*Stowe*	Stillwater
Tripp, Arnold Riggs, Ch.Eng.	*Gray*	Δ T Δ House
True, Robert Moody, Fy.	*Newburyport, Mass.*	K Σ House
Verzoni, Ralph Peter, Fy.	*Waterville*	21a Mill Street
Weatherbee, George Bradford, Jr., Arts	*Hampden Highlands*	10 Oak Street, Old Town
Webb, Harold Lewis, Fm.	*Augusta*	Φ K Σ House
Wentworth, Ralph Eugene, Arts	*Bangor*	30 Linden Street, Bangor
Wescott, Emery Newhall, Ch.Eng.	*Portland*	Λ X A House
Whiting, William Lawrence, Arts	*Portland*	K Σ House
Willett, Raymond Stanley, Arts	*Stetson*	35 Hill Street
Williams, George Seth, Jr., Me.	*Augusta*	B Θ Π House
Wilson, Newell Johnson, Ee.	*Bath*	Φ Γ Δ House
Wilson, Paul Burns, Arts	*Bath*	Φ Γ Δ House
Wing, Hope Eleanor, Arts	*Fairfield*	Colvin Hall
Wood, Edward Parsons, Ge.	*North Edgecomb*	Δ T Δ House
Woods, Nancy Cushing, Arts	*Bar Harbor*	Balentine Hall
Woods, Paul Campbell, Arts	*Newton Centre, Mass.*	Δ T Δ House
Wooster, Helen Elizabeth, He.	*Old Town*	258 Center Street, Old Town
Young, Barbara Jean, Arts	*Fort Fairfield*	Colvin Hall
Young, Harland Avery, Ce.	*Matinicus*	Φ M Δ House
Young, Harold Edle, Fy.	*Miami, Florida*	45 Oak Street
Young, Marjorie Louise, Arts	*Foxboro, Mass.*	Balentine Hall

FRESHMEN

Adams, Andrew William, Arts	*South Bristol*	304 Oak Hall
Adams, Cynthia Marie, He.	*Bangor*	Balentine Hall
Adams, Donald Sanford, Ce.	*Watertown, Mass.*	306 H. H. Hall
Adams, Dustin Stetson, Eng.	*Boothbay Harbor*	408 H. H. Hall
Adams, Ernest Eugene, Ch.Eng.	*South Brewer*	412 South Main Street, South Brewer
Additon, Elwood Prince, Ch.Eng.	*Rumford*	206 H. H. Hall

Adriance, Evelyn Buck, Arts	*Maplewood, N. J.* The Maples
Allen, Hervey Clifford, Jr., Eng.	*Rockland* 104 H. H. Hall
Alpert, Sidney, Arts	*Bangor* 137 State Street, Bangor
Ames, Sidney Ernst, Arts	*Orono* 13 Mill Street
Andrews, Ernest Frederick, Pa.	*Ticonderoga, N. Y.* 209 H. H. Hall
Andrews, Ernestine Elizabeth, Arts	*Bingham* Balentine Hall
Armstrong, James Oliver, Jr., Fy.	*Norwich, Conn.* 302 H. H. Hall
Ashmore, Arthur Henry, Ee.	*Lamoine* 73 North Main Street
Ashmore, James Newton, Ee.	*Lamoine* 73 North Main Street
Averill, Anna Louise, Arts	*Fort Fairfield* Balentine Hall
Axelrod, Joseph Harold, Arts	*Chestnut Hill, Mass.* 303 H. H. Hall
Barker, Richard Norton, Arts	*Bucksport* Bucksport
Barnard, John Everett, Agr.	*Kittery* 210 H. H. Hall
Barnes, Ronald Eugene, Agr.	*Fort Fairfield* 101 Oak Hall
Bartlett, Russell Doe, Fy.	*Rockland* 104 H. H. Hall
Bates, Keith Malcolm, Agr.	*Groton, Mass.* 204 H. H. Hall
Bean, James Lyle, Fy.	*Easton* 207 H. H. Hall
Beck, Fred Nelson, Arts	*Washburn* 402 Oak Hall
Belding, Robert Edward, Arts	*Watertown, Mass.* 412 H. H. Hall
Benjamin, Marguerite Mary, He.	*Mars Hill* Balentine Hall
Berkowitz, Leonard Irving, Arts	*Mattapan, Mass.* 302 H. H. Hall
Berry, William Hapgood, Jr., Ce.	*East Brownfield* 405 Oak Hall
Best, Douglas Raymond, Fy.	*St. Albans, Vermont* 203 H. H. Hall
Beverage, Ray Jasper, Eng.	*North Haven* 409 H. H. Hall
Billings, Hester Anita, Arts	*Bangor* 50 Smith Street, Bangor
Billings, Paul Clayton, Ch.Eng.	*Stonington* 403 H. H. Hall
Bither, Richard, Arts	*Dexter* 208 Oak Hall
Blanchard, Bert Fernald, Ce.	*Farmington* 204 H. H. Hall
Bottcher, Alfred Oscar, Ce.	*Worcester, Mass.* 410 Oak Hall
Bouchard, Roger Gerald, Arts	*Caribou* 403 Oak Hall
Boyer, Azalea Ladner, Arts	*Kittery Point* The Maples
Boyer, Richard Porter, Jr., Ee.	*Newton, Mass.* 212 H. H. Hall
Boynton, Robert Stephens, Ee.	*Portland* 203 Oak Hall
Bradbury, Francis Wilson, Arts	*Brewer* 224 Wilson Street, Brewer
Brant, Gerard Lane, Arts	*Stamford, Conn.* 77 Mill Street
Britt, Richard Horn, Ce.	*Rockland* 404 H. H. Hall
Brookes, Leslie, Arts	*Rockville, Conn.* 409 H. H. Hall
Brown, Barbara True, Arts	*Bath* Balentine Hall
Brown, Gilbert Merrill, Agr.	*Gloucester, Mass.* 304 H. H. Hall

Brown, Lloyd Fremont, Ge.	*Augusta* 312 Oak Hall
Bruce, Bettina Evelyn, He.	*Nahant, Mass.* The Maples
Bryant, Stuart Graham, Ch.Eng.	*Newcastle* 112 Oak Hall
Bucklin, Dunbar Richard, Eng.	*South Warren* 311 H. H. Hall
Buker, Myron William, Ce.	*Bridgton* 402 H. H. Hall
Burgess, Richard Furniss, Fy.	*Meriden, Conn.* 102 H. H. Hall
Butler, Ralph William, Ce.	*South Berwick* 110 H. H. Hall
Cain, Charles Yetts, Ch.Eng.	*Portland* 309 Oak Hall
Calderwood, George Curtis, Arts	*Roxbury, Mass.* 102 H. H. Hall
Call, George Furbush, Arts	*Lewiston* 102 H. H. Hall
Cameron, David, Arts	*Gloucester, Mass.* Experiment Poultry Plant
Carter, Nelson Bradford, Ch.Eng.	*Brewer* 12 Brimmer Street, Brewer
Carter, Robert Warren, Ee.	*Garden City, N. Y.* 391 College Road
Cary, Hugh Rudolph, Arts	*Newport* 104 Oak Hall
Chatterton, Alfred Francis, Arts	*Lynn, Mass.* 404 H. H. Hall
Chute, Gordon Libby, Fy.	*Harrison* 405 H. H. Hall
Clark, Albert Lewis, Fy.	*Camden* 307 H. H. Hall
Clark, John Tolman, Pa.	*Portland* 401 H. H. Hall
Clark, Milton Jeremiah, Agr.	*Brooks* 304 H. H. Hall
Clement, June Vinette, He.	*Wellesley, Mass.* The Maples
Clifford, Ralph Edward, Fy.	*Dexter* 47 Mill Street
Clough, Susie Betty, He.	*Lewiston* Balentine Hall
Cobb, Lucy Margaret, He.	*Belfast* Balentine Hall
Coffin, John Wilbur, Eng.	*Caribou* 403 Oak Hall
Cohen, Sylvia Esther, Arts	*Bangor* 50 East Summer Street, Bangor
Cole, Howard Leighton, Fy.	*Gray* 405 Oak Hall
Collins, Alice Gertrude, He.	*Lewiston* The Maples
Costrell, Edwin Solomon, Arts	*Bangor* 233 Parkview Avenue, Bangor
Costrell, Rose Lillian, Arts	*Bangor* 233 Parkview Avenue, Bangor
Cotting, Duncan, Arts	*Newton, Mass.* 109 Oak Hall
Cox, Catherine Ella, He.	*Sea Cliff, N. Y.* The Maples
Crafts, Howard Jefferson, Ch.Eng.	*Portland* 401 H. H. Hall
Cramer, Francis Leroy, Ce.	*Bristol* 80 North Main Street
Crocker, Frederick Leon, Agr.	*Old Town* 18 Bradbury Street Old Town

Crouse, Arthur Leroy, Agr.	*Crouseville*	311 H. H. Hall
Currier, Ethel Mae, He.	*Caribou*	The Maples
Cushman, Maurice Edward, Me.	*Portland*	97 Fern Street, Bangor
Cushman, Paul Dinsmore, Arts	*Ellsworth*	38 Oak Street
Dauphine, Mildred Evelyn, Arts	*Bangor*	60 Sixth Street, Bangor
Davis, Adelaide Marjorie, Arts	*York Village*	34 Forest Avenue
Davis, Marguerite Alma, Arts	*Old Town*	11 North Fourth Street, Old Town
Davis, Walter Francis, Jr., Ee.	*Old Town*	202 North Brunswick Street, Old Town
Dean, Buel David, Pa.	*Pittsfield, Mass.*	306 H. H. Hall
DeCoster, James Robert, Ch.Eng.	*South Portland*	104 H. H. Hall
Deering, Mary Lowell, He.	*Orono*	160 College Road
DeLong, John Barker, Arts	*Glens Falls, N. Y.*	466 North Main Street, Brewer
Denning, Lawrence Francis, Agr.	*Orono*	16 Pine Street
Diehl, Helene Winifred, Arts	*Portland*	34 Forest Avenue
Donagan, Ernest Hall, Agr.	*West Medford, Mass.*	104 H. H. Hall
Doubleday, Edward Sherburne, Fy.	*St. Albans, Vermont*	201 H. H. Hall
Douglass, John Quinn, Arts	*Hallowell*	109 Oak Hall
Dow, Avard Morton, Arts	*West Baldwin*	201 H. H. Hall
Doyle, Edward Houlton, Jr., Arts	*Caribou*	312 H. H. Hall
Drake, Elmer Cecil, Agr.	*Caribou*	202 H. H. Hall
Drisko, Arnold Wakefield, Eng.	*Addison*	391 College Road
Drummond, Elizabeth Beverly, Arts	*Orono*	The Maples
Duncan, Maurice Lynn, Fy.	*Rockland*	24 Oak Street
Dunlap, Stanley Thomas, Arts	*Portland*	412 H. H. Hall
Dyer, Allen Lyford, Ee.	*Camden*	308 H. H. Hall
Edison, Harold, Ch.Eng.	*Brooklyn, N. Y.*	12 Pleasant Street
Edwards, Lewis William, Ce.	*South Portland*	112 H. H. Hall
Edwards, Richard Stephen, Arts	*Malden, Mass.*	301 H. H. Hall
Eldridge, Merrill, Eng.	*Bangor*	26 Plaisted Street, Bangor
Ellingson, Albert Martin, Me.	*Milo*	301 H. H. Hall
Elliott, Roderick Rogers, Me.	*Montreal, West, Quebec*	311 Oak Hall
Ernst, Morris Alonzo, Ce.	*York Village*	54 Forest Avenue, Bangor
Erskine, Chauncey Lee, Agr.	*Waterville*	301 H. H. Hall

Fairfield, Loran Radford, Me.	*South Portland*	112 H. H. Hall
Fellows, Nathan Warren, Jr., Fy.	*Scarsdale, N. Y.*	310 H. H. Hall
Ferrante, Constantine, Ee.	*Portland*	409 H. H. Hall
Fillebrown, Charles Augustus, Agr.	*Waterford*	401 Oak Hall
Fish, Lincoln, Arts	*Concord, Mass.*	411 H. H. Hall
Fitch, Harlan Pratt, Fy.	*Groton, Mass.*	301 H. H. Hall
Fitch, Karl Albert, Arts	*Orono*	32 College Road
Fitz, Glendon Chapin, Me.	*Kenduskeag*	73 North Main Street
Fleischmann, Irving Samuel, Eng.	*Foxboro, Mass.*	303 H. H. Hall
Fogg, Carleton Thayer, Ch.Eng.	*Yarmouth*	112 Oak Hall
Ford, Mary Ella, Arts	*Brooklin*	Balentine Hall
Forde, Madison Shepherd, Fy.	*Kingston, N. Y.*	47 Mill Street
Fortin, Theora Hildegard, He.	*Bucksport*	The Maples
Foster, Laurence Herbert, Arts	*Winthrop*	201 Oak Hall
Fournier, Mary Elizabeth, He.	*Bingham*	The Maples
Fowler, George Turner, Agr.	*Fort Fairfield*	101 Oak Hall
Fox, Basil Sterling, Agr.	*Washburn*	311 H. H. Hall
Freel, Robert Gerard, Arts	*Clinton, Mass.*	66 Pine Street
Frost, Ernest Merrill, Arts	*Waterville*	201 Oak Hall
Frost, John Eldridge, Arts	*York Village*	210 H. H. Hall
Frost, Mary Eldridge, He.	*York Village*	The Maples
Füger, Albert Stanley Tennant, Jr., Arts	*Cape Elizabeth*	310 H. H. Hall
Fuller, Constance, He.	*Marblehead, Mass.*	34 Forest Avenue
Fuller, Robert Lendall, Arts	*Portland*	208 H. H. Hall
Gerry, Richard Woodman, Agr.	*Lewiston*	111 H. H. Hall
Getchell, Amasa Stanley, Ee.	*Bangor*	267 Forest Avenue, Bangor
Getchell, Frances Louise, Arts	*Bar Harbor*	The Maples
Getchell, Ralph, Jr.,, Ee.	*Brewer*	294 South Main Street, Brewer
Gilbert, Hamlin Miller, Arts	*Hartford, Conn.*	205 H. H. Hall
Ginsberg, Sewall Jerome, Arts	*Old Town*	144 Main Street, Old Town
Glass, Hyman Sidney, Arts	*Brookline, Mass.*	402 H. H. Hall
Gleason, Wallace Fred, Jr., Arts	*South Portland*	112 H. H. Hall
Glover, William Albert, Jr., Eng.	*Rockland*	310 H. H. Hall
Goding, Clarence Howard, Ch.Eng.	*South Berwick*	110 H. H. Hall
Goodwin, Howard Mayo, Ge.	*Brewer*	119 Parker Street, Brewer
Gould, Eleanor Sargent, Arts	*New York, N. Y.*	The Maples
Gowell, John Robert, Eng.	*South Portland*	407 H. H. Hall
Graham, Lester Charles, Arts	*Brewer*	11 Brimmer Street, Brewer

Grant, Douglas Creighton, Fy.	*Medford, Mass.*	209 H. H. Hall
Grant, Lester Benn, Fy.	*Oakfield*	212 Oak Hall
Gray, Earle Edwin, Agr.	*Anson*	401 H. H. Hall
Greene, Leon Ardane, Eng.	*Auburn*	110 H. H. Hall
Greenlaw, Donald Olive, Arts	*Jay*	110 H. H. Hall
Greenlaw, Joseph Milton, Ce.	*Camden*	302 H. H. Hall
Gregory, Philip Neil, Arts	*Caribou*	312 H. H. Hall
Grodinsky, Harold Morris, Arts	*Bangor*	187 Ohio Street, Bangor
Haggerty, Leo Francis, Ch.Eng.	*Rockland, Mass.*	391 College Road
Haggett, John Daniel, Ge.	*North Edgecomb*	202 H. H. Hall
Hamilton, Bernice Mae, Arts	*North Uxbridge, Mass.*	The Maples
Hamor, George Howard, Jr., Me.	*Hulls Cove*	310 H. H. Hall
Hanaburgh, Walter Balentine, Agr.	*Buchanan, N. Y.*	206 H. H. Hall
Hanscom, Carolyn Perkins, Arts	*Ogunquit*	The Maples
Hanson, Herbert Dale, Ce.	*Mattawamkeag*	12 Park Street
Harding, Theodore Parker, Arts	*Arlington, Mass.*	410 H. H. Hall
Hardison, Waldo Flanders, Agr.	*Caribou*	202 H. H. Hall
Harris, Robert Tyler, Arts	*Salem, Mass.*	211 H. H. Hall
Hart, Gerald Farrington, Ee.	*Brewer*	R. #5, Brewer
Hart, Ida Mae, Arts	*Milbridge*	6 Pond Street
Harvey, Alice Marcia, Arts	*Fort Fairfield*	Balentine Hall
Harvey, Robert Willis, Me.	*New Haven, Conn.*	408 H. H. Hall
Hatch, Marion Estelle, Arts	*Melrose, Mass.*	The Maples
Hatt, Raymond Harold, Ge.	*South LaGrange*	36 College Road
Havener, Charles Edward, Ge.	*Rockland*	412 H. H. Hall
Hawkes, Mary Adelaide, Arts	*York Village*	Balentine Hall
Hayes, Richard Edmund, Eng.	*Lewiston*	101 H. H. Hall
Healy, Richard Wyman, Arts	*Augusta*	212 H. H. Hall
Heistad, Solveig Elizabeth, Arts	*Rockport*	The Maples
Hemingway, Robert Edward, Ee.	*Presque Isle*	111 H. H. Hall
Henderson, William Elmer, Agr.	*Fort Fairfield*	111 H. H. Hall
Hennings, Nancy, Arts	*Portland*	The Maples
Hersey, Alvin Kingsbury, Agr.	*North Waterford*	405 H. H. Hall
Hewitt, Clare Benham, Arts	*Bangor*	38 Pier Street, Bangor
Higgins, Frances Elizabeth, Arts	*South Brewer*	R.F.D. 8, South Brewer
Higgins, Orin Jackson, Arts	*Mapleton*	148 Main Street
Hight, Diana Elizabeth, Arts	*Skowhegan*	The Maples
Hill, Arthur Greenwood, Agr.	*New Gloucester*	25 Grove Street
Hilton, Miriam Ada, He.	*Mercer*	The Maples

Hinkley, Margaret Emerson, Arts	*Brewer*	1 Chamberlain Street, Brewer
Hodges, Arthur Webster, Jr., Arts	*Newton Centre, Mass.*	212 H. H. Hall
Hodgkins, Beatrice Louise, He.	*Bar Harbor*	The Maples
Hodgkins, Ellen Bailey, Arts	*Bath*	Balentine Hall
Holman, Blanche Bertha, Arts	*Norwood, Mass.*	The Maples
Holt, Erastus Eugene, Eng.	*Portland*	403 H. H. Hall
Hooper, John Francis, Ch.Eng.	*Old Town*	154 Brunswick Street, Old Town
Horblit, David Mordecai, Arts	*Brookline, Mass.*	108 Oak Hall
Howard, Sheldon Kenneth, Eng.	*North Monmouth*	409 Oak Hall
Hunter, James Harold, Ch.Eng.	*West Roxbury, Mass.*	103 H. H. Hall
Huntoon, Charles Rounds, Jr., Eng.	*Rumford*	309 H. H. Hall
Hurwitz, Sidney Nathaniel, Eng.	*Roxbury, Mass.*	303 H. H. Hall
Hussey, Robert Sylvanus, Arts	*Bangor*	11 Pond Street
Hussey, William Penn, Ch.Eng.	*Old Town*	290 South Main Street, Old Town
Ireland, Richard Maxwell, Ge.	*Biddeford*	110 Oak Hall
Jones, Chester Warren, Ch.Eng.	*Canaan*	25 Grove Street
Jones, Francis Clough, Agr.	*Orono*	164 College Road
Jones, Madelin Frances, Arts	*Millinocket*	The Maples
Keef, Bernard Charles, Me.	*Vanceboro*	204 Oak Hall
Kelley, Donald Palmer, Eng.	*South Portland*	407 H. H. Hall
Kenneson, Harvey Carl, Ee.	*Augusta*	312 Oak Hall
Kent, Jean Stafford, Arts	*Bangor*	16 Sixth Street, Bangor
Kimball, Bartlett, Ge.	*Wollaston, Mass.*	311 H. H. Hall
Laing, Edmond Taylor, Arts	*Bangor*	69 Harthorn Avenue, Bangor
Lane, Arnold Sterling, Fy.	*Reading, Mass.*	107 Oak Hall
Lang, Charles Henry, Me.	*Belfast*	408 Oak Hall
Laputz, Alexander Harry, Fy.	*New Haven, Conn.*	411 Oak Hall
Larrabee, Edward Whittum, Me.	*Belfast*	411 H. H. Hall
Laurin, Irving Jefferson, Arts	*Lowell, Mass.*	211 H. H. Hall
Leavitt, Earl Edward, Agr.	*Wytopitlock*	103 H. H. Hall
Lees, Harry Thomas, Arts	*Manchester, Mass.*	412 H. H. Hall
Leighton, Mary Elizabeth, Arts	*Alfred*	The Maples

Levitan, Leon Bernard, Arts	*Dorchester, Mass.*	203 H. H. Hall
Lewis, Helen Baker, Arts	*Bar Harbor*	The Maples
Lewis, Joseph Henry, Eng.	*Springfield*	305 Oak Hall
Lieberman, Leo, Arts	*Bangor*	49 Parkview Avenue, Bangor
Lief, Irving Harold, Arts	*Dorchester, Mass.*	108 Oak Hall
Lippa, Elmer Nathan, Arts	*Peabody, Mass.*	402 H. H. Hall
Littlefield, Betty Holmes, He.	*Portland*	Balentine Hall
Littlefield, Sarah Wells, He.	*Brewer*	The Maples
Long, Carolyn Martha, Arts	*Bangor*	213 Elm Street, Bangor
Lord, Dwight Elmer, Ge.	*Camden*	Stillwater
Lord, Jean, He.	*West Lebanon*	38 Forest Avenue
Lord, Moses Stuart, Ch.	*Old Town*	238 Main Street, Old Town
Lovejoy, George Norman, Ce.	*Bedford, Mass.*	211 H. H. Hall
Lowe, Charles Herman, Fy.	*Camden*	307 H. H. Hall
Lowe, Henry Francis, Arts	*Brooks*	305 Oak Hall
Lueders, Norma Caecelia, He.	*Marblehead, Mass.*	34 Forest Avenue
Lull, Sumner Hale, Eng.	*Augusta*	303 Oak Hall
Lynch, Thomas Elwin, Ee.	*South Portland*	405 Oak Hall
Lynds, Marjorie Clara, Arts	*Meredith, N. H.*	The Maples
McCann, Eugene Cyril, Arts	*Portland*	308 Oak Hall
McDonough, William Thomas, Ee.	*Portland*	308 Oak Hall
McElwain, Marion Blanche, He.	*Caribou*	The Maples
McGinley, Raymond Powell, Ce.	*Danvers, Mass.*	209 H. H. Hall
McKeen, Harold Havener, Arts	*Bangor*	257 Center Street, Bangor
McKenzie, Charles Kennedy, Agr.	*Augusta*	391 College Road
McMahon, Henry Aloysius, Jr., Arts	*Lucerne-in-Maine*	391 College Road
McNulty, James Matthew, Jr., Ch.Eng.	*Brewer*	302 North Main Street, Brewer
Mahan, John Wesley, Me.	*Pemaquid Harbor*	407 Oak Hall
Markle, Prentiss Brown, Arts	*Old Town*	17 North Fourth Street, Old Town
Mayhew, Mabel Eleanor, Arts	*Old Town*	42 Stillwater Avenue, Old Town
Mayo, Donald Babson, Fy.	*Providence, R. I.*	408 H. H. Hall
Meade, Arland Ritchie, Agr.	*Auburn*	25 Grove Street

Merrifield, Carleton Eddy, Agr.	*Stoneham, Mass.*	212 Oak Hall
Merrill, Wilford Jewett, Fy.	*Solon*	410 H. H. Hall
Miller, Arthur William, Jr., Me.	*Old Town*	50 Veazie Street, Old Town
Miller, Margaret Mary, He.	*Portland*	The Maples
Millett, Althea Hope, He.	*Norway*	The Maples
Minott, Helen Claire, He.	*Bath*	Balentine Hall
Mitchell, Anna Jean, Arts	*Bar Harbor*	The Maples
Mitchell, Elizabeth Helen, He.	*Oakland*	The Maples
Mitchell, Lillian Mae, Arts	*Millinocket*	14 Park Street
Moore, Frederic David, Eng.	*Bar Harbor*	412 H. H. Hall
Moore, Muriel Virginia, He.	*Bar Harbor*	The Maples
Morse, Henry Irwin, Agr.	*Kittery*	25 Grove Street
Mosher, Dorothy Conrey, He.	*Bangor*	89 Royal Road, Bangor
Moulton, Arthur Charles, Me.	*West Newfield*	411 H. H. Hall
Murphy, Edella Robinson, He.	*Solon*	The Maples
Murphy, Katherine Louise, Arts	*Fort Fairfield*	34 Forest Avenue
Murray, William Lawrence, Pa.	*Livermore Falls*	106 Oak Hall
Mutty, John Barry, Arts	*Bangor*	168 Grove Street, Bangor
Myers, Howard Morrison, Agr.	*Orono*	19 Forest Avenue
Nadeau, Walter Henry, Ch.Eng.	*Old Town*	44 Union Street, Old Town
Nason, Frances Mary, Arts	*Hampden*	15 Park Street
Neal, Francis Forrest, Agr.	*North Berwick*	209 Oak Hall
Neal, Oliver Meader, Jr., Agr.	*North Berwick*	211 Oak Hall
Nelder, Maurice Augustus, Ch.Eng.	*Houlton*	80 North Main Street
Newcomb, Hugh Ross, Fy.	*Newton Centre, Mass.*	212 H. H. Hall
Nightingale, Philip Simeon, Agr.	*Fort Fairfield*	311 H. H. Hall
Norris, Russell Taplin, Fy.	*Newburyport, Mass.*	205 Oak Hall
Oliver, John Wesley, Arts	*West Paris*	104 Oak Hall
Orr, Dana Rowell, Arts	*Wilton*	203 Oak Hall
Osgood, Carl Chapin, Ch.Eng.	*Ellsworth*	411 H. H. Hall
Owens, Albert Llewellyn, Agr.	*Portland*	111 Oak Hall
Owens, Thomas William, Agr.	*Portland*	311 Oak Hall
Page, Leland Vernon, Ce.	*Easton*	207 H. H .Hall
Palmer, Paul Dunbar, Ee.	*South Brewer*	459 South Main Street, South Brewer

Parker, Robert George, Arts	*Sherman Mills*	103 H. H. Hall
Parlin, Lillian Maxine, Arts	*New Sharon*	The Maples
Pearlmutter, William Herbert, Arts	*Roxbury, Mass.*	402 H. H. Hall
Pendell, Mary Elizabeth, Arts	*Caribou*	The Maples
Perkins, Audrey Helene, Arts	*Sherman Mills*	Balentine Hall
Perry, Margaret Elizabeth, He.	*Easton*	20 Forest Avenue
Peterson, Philip Francis, Arts	*Caribou*	409 H. H. Hall
Pettengill, Lewis Albert, Eng.	*Rumford*	409 Oak Hall
Philbrook, George Edwin, Ch.	*Tenafly, N. J.*	301 Oak Hall
Picard, Marguerite Mary, Arts	*Augusta*	The Maples
Pierce, Edward Wiggin, Fy.	*Portland*	404 H. H. Hall
Pippin, Richard Peter, Arts	*Rockville, Conn.*	303 Oak Hall
Plesset, Abraham Eli, Ch.Eng.	*Fort Kent*	12 Pleasant Street
Plimpton, Robert Hall, Fy.	*Newton Centre, Mass.*	103 H. H. Hall
Plummer, Richard Alden, Arts	*Skowhegan*	410 H. H. Hall
Prahar, Louis Benjamin, Fy.	*Englewood, N. J.*	111 Oak Hall
Pratt, Leonard Melvin, Ee.	*Greenville Junction*	204 H. H. Hall
Preble, Harold Grant, Agr.	*Addison*	404 Oak Hall
Prescott, Estella Anne, He.	*Sanford*	Balentine Hall
Prince, Vinton MacIntyre, Ce.	*Kittery*	109 H. H. Hall
Profita, Josephine Mary, Arts	*Bangor*	4 Essex Street, Bangor
Pruett, Muriel, He.	*Kittery*	Campus
Rafuse, Lena Marion, He.	*Lynn, Mass.*	The Maples
Ranco, Bertha Elizabeth, Arts	*Old Town*	Indian Island, Old Town
Ranco, Sadie Theresa, He.	*Old Town*	Indian Island, Old Town
Rankin, Lucille Anne, He.	*Rockland*	The Maples
Raye, Mary Helen, Arts	*Eastport*	Balentine Hall
Raymond, Richard Watt, Pa.	*St. Albans, Vermont*	109 H. H. Hall
Reid, Eleanor Cooper, He.	*Lisbon Falls*	Balentine Hall
Reidman, Ernest John, Ch.Eng.	*Auburn*	209 H. H. Hall
Robbins, Arthur William, Agr.	*Gouldsboro*	25 Grove Street
Robinson, Ruth Alice, He.	*Lewiston*	Balentine Hall
Robinson, Verna Ellen, Arts	*Gloucester, Mass.*	Balentine Hall
Rogers, Philip Morris, Agr.	*Mars Hill*	109 H. H. Hall
Rosen, Leo Robert, Arts	*Boston, Mass.*	303 H. H. Hall
Ross, John Buchanan, Fy.	*Bridgeport, Conn.*	112 H. H. Hall

Ross, John Hart, Me.	*Belmont, Mass.*	107 Oak Hall
Roundy, George, Fy.	*Walpole, Mass.*	204 Oak Hall
Rowe, Catharine Lancaster, Arts	*Bangor*	The Maples
Rowe, Ernest York, Arts	*Eliot*	210 H. H. Hall
Rubin, Morris David, Arts	*Bangor*	55 Elm Street, Bangor
Russell, Cedric Porter, Agr.	*Rumford*	25 Grove Street
Russell, Charles Stanward, Ee.	*Stillwater*	Stillwater
Sadler, Rudolph Charles Albert, Ee.	*Limerick*	210 Oak Hall
Saltzman, William Clarence, Ch.Eng.	*Bangor*	303 Broadway, Bangor
Schoppe, Robert Pilsbury, Arts	*Auburn*	201 Oak Hall
Seavey, Ruthe Shirley, He.	*Cape Porpoise*	15 Pierce Street
Shamban, William Samuel, Ch.Eng.	*Boston, Mass.*	306 Oak Hall
Shannon, Thomas Rae, Arts	*Glens Falls, N. Y.*	402 H. H. Hall
Sharon, Cora Edra, Arts	*Wrentham, Mass.*	Balentine Hall
Shea, Merrill Arthur, Fy.	*Wilton*	105 Oak Hall
Sherry, Edward Chaplin, Arts	*Portland*	208 H. H. Hall
Shute, Harry David, Ch.Eng.	*Augusta*	105 Oak Hall
Siegel, James Howard, Arts	*Bangor*	22 Hazel Street, Bangor
Small, Gerald Turner, Arts	*Bangor*	18 Elizabeth Avenue, Bangor
Smart, Walter Elden, Jr., Ch.Eng.	*Portland*	309 Oak Hall
Smith, Arthur Grant, Ch.	*Oakland*	25 Grove Street
Smith, Donald Arlington, Fy.	*Brewer*	18 Washington Street, Brewer
Smith, Frances Sargent, Arts	*South Portland*	30 Oak Street
Smith, Francis Wager, Jr., Fy.	*New Haven, Conn.*	403 H. H. Hall
Smith, Gordon Gilman, Arts	*Bangor*	514 Broadway, Bangor
Smith, Hiram LeRoy, Jr., Ch.	*Newton Highlands, Mass.*	102 Oak Hall
Smith, Randolph Chester, Agr.	*Shrewsbury, Mass.*	211 H. H. Hall
Smith, Walter Marstom, Jr., Ce.	*Surry*	109 H. H. Hall
Smith, Wendell Walker, Arts	*Westfield*	404 Oak Hall
Spavin, Henry Arnold, Ch.	*West Roxbury, Mass.*	103 Oak Hall
Spence, Fred Albert, Ch.Eng.	*Springvale*	103 Oak Hall
Stanley, James Sterling, Arts	*Mattawamkeag*	410 H. H. Hall
Staples, Walter Sylvester, Agr.	*Kittery*	25 Grove Street
Starrett, Douglass Granville, Ch.Eng.	*Warren*	205 H. H. Hall
Stern, Herbert, Arts	*Bangor*	416 Hancock Street, Bangor

Stevens, Richard Merle, Arts	*Bangor*	67 Otis Street, Bangor
Stoddard, James Merrill, Fy.	*Eastport*	80 North Main Street
Stone, Charles Taylor, Fy.	*Bridgton*	407 Oak Hall
Story, Joseph Woodberry, Ce.	*West Boothbay Harbor*	302 Oak Hall
Stromberg, Edwin Knight, Ch.	*North Berwick*	211 Oak Hall
Strout, Vincent Dickey, Arts	*Jay*	302 Oak Hall
Stuart, Joanne Morse, He.	*Brewer*	Balentine Hall
Studley, Francis Wayne, Fy.	*Spencer, Mass.*	202 Oak Hall
Sturgis, Frederic Sweeney, Arts	*Portland*	402 Oak Hall
Sturtevant, George Ralph, Me.	*Somerville, Mass.*	410 Oak Hall
Susee, Paul Gilbert, Fy.	*Vanceboro*	204 Oak Hall
Sutton, Mary-Hale, He.	*West Roxbury, Mass.*	The Maples
Swan, Rosa Elizabeth, He.	*Brewer*	25 Prospect Street, Brewer
Swenson, Alfred August, Me.	*Millinocket*	310 Oak Hall
Tarbell, Lester Joseph, Ch.Eng.	*Smyrna Mills*	304 H. H. Hall
Taylor, Georgia Hawkes, He.	*South Portland*	The Maples
Taylor, Harold Stone, Arts	*Bangor*	223 Essex Street, Bangor
Taylor, Roy Arnold, Jr., Agr.	*Waltham, Mass.*	403 H. H. Hall
Thibodeau, Lawrence O'Neil, Me.	*Fairfield*	Bangor House, Bangor
Thomas, Edith Louise, Arts	*Skowhegan*	Balentine Hall
Thompson, Earle Francis, Jr., Me.	*Rockland, Mass.*	406 Oak Hall
Thompson, James Douglas, Arts	*South Bristol*	304 Oak Hall
Thompson, Marjorie Evelyn, He.	*Biddeford*	Balentine Hall
Thompson, Marjorie Mason, He.	*Brewer*	The Maples
Thompson, Norman Herbert, Eng.	*Biddeford*	108 Oak Hall
Thompson, William Raymund, Jr., Agr.	*Caribou*	312 H. H. Hall
Thurston, Oscar Herbert, Arts	*McKinley*	24 Pierce Street
Thurston, Ruth Mae, Arts	*Southwest Harbor*	162 College Road
Timson, George Edwin, Jr., Arts	*Lynn, Mass.*	206 Oak Hall
Tobey, Robert Leonard, Ce.	*Wareham, Mass.*	406 Oak Hall
Toms, Robert Henry, Me.	*Portland*	412 Oak Hall
Trask, Allen Dudley, Ch.Eng.	*Melrose Highlands, Mass.*	410 H. H. Hall
Troland, Edwin Parker, Eng.	*Malden, Mass.*	309 H. H. Hall
Trott, Caleb Merritt, Arts	*Bath*	206 Oak Hall
Tsoulas, George Louis, Eng.	*Bangor*	83 Elm Street, Bangor

Umphrey, Phyllis Esther, Arts	*Washburn*	Balentine Hall
VanGundy, William Weston, Ch.Eng.	*Portland*	401 H. H. Hall
Vannah, Sherman, Me.	*Waldoboro*	404 H. H. Hall
Varney, Richard Harrison, Agr.	*Jonesboro*	208 Oak Hall
Veague, Arnold Leolin, Arts	*Castine*	406 H. H. Hall
Veague, William Everett, Arts	*Harborside*	406 H. H. Hall
Viola, Ralph Thomas, Fy.	*Orono*	Main Road
Voegelin, Adolphine, He.	*Boonton, N. J.*	The Maples
Waddington, Norman, Fy.	*Rumford*	309 H. H. Hall
Waldron, Richard Phailer, Me.	*Dexter*	210 Oak Hall
Wanagel, Michael, Eng.	*Newburyport, Mass.*	301 Oak Hall
Ward, Richard, Arts	*Houlton*	36 College Road
Ward, William Howard, Ch.Eng.	*North Uxbridge, Mass.*	203 H. H. Hall
Ware, Barbara Emily, He.	*South Portland*	The Maples
Wardwell, Frederick Sargent, Ce.	*Castine*	408 H. H. Hall
Watson, Festus George, Ee.	*Portland*	412 Oak Hall
West, Howard Fletcher, Arts	*Canton*	203 H. H. Hall
Whitmore, Rose Frances, Arts	*Rockland*	The Maples
Whittier, Rufus Greenleaf, Ee.	*East Machias*	305 H. H. Hall
Willey, Baxter Leone, Ch.Eng.	*Cherryfield*	304 H. H. Hall
Willey, James Frederick, Fy.	*St. Johnsbury, Vermont*	305 H. H. Hall
Williams, John Perkins, Arts	*Ogunquit*	201 H. H. Hall
Williams, Margaret Eleanor, Arts	*South Portland*	Balentine Hall
Williams, Richard Eaton, Fy.	*Framingham, Mass.*	201 H. H. Hall
Williams, Thomas Arthur, Ee.	*Springfield, Mass.*	101 H. H. Hall
Williston, Margaret Ruth, Arts	*Bangor*	264 French Street, Bangor
Wishart, Douglas James, Ch.Eng.	*Rumford*	309 H. H. Hall
Witherspoon, Donald Francis, Fy.	*North Haven*	80 North Main Street
Woodland, Edwin Conrad, Agr.	*Watertown, Mass.*	101 H. H. Hall
Woodman, Amelia Anne, He.	*Washburn*	34 Forest Avenue
Wright, Mary Louise, He.	*Portland*	Balentine Hall
Wright, Virgil Roswell, Pa.	*Livermore Falls*	106 Oak Hall
Wyeth, Barbara Mildred, Agr.	*Dighton, Mass.*	Balentine Hall

Young, Kenneth Bradford, Ce.		*Sherman Mills*	101 H. H. Hall
Youngs, Annette Helen, He.		*Bangor*	225 Center Street, Bangor
Zoidis, Peter, Ge.		*Bangor*	125 Grove Street, Bangor

UPPERCLASS STUDENTS CONDITIONED FOR ADMISSION

Cavanaugh, Martin Thomas, Ee.	('37)	*Portland*	Θ X House
Erskine, Robert Joseph, Eh.	('36)	*Randolph*	Φ Γ Δ House
Goudy, Edwin Horace, Arts	('37)	*York Village*	Δ T Δ House
Hanscom, Frank Edward, Arts	('37)	*Franklin*	391 College Road
Horne, Allan Edgerly, Arts	('37)	*Milo*	K Σ House
Jordan, Darrel Francis, Pa.	('37)	*Orono*	56 Forest Avenue
Lesses, Harrison Jacob, Arts	('37)	*Salem, Mass.*	T E Φ House
Lucey, Daniel Augustin, Jr., Arts	('37)	*Natick, Mass.*	A T Ω House
McNaughton, Donald Wesley, Arts	('37)	*Brunswick*	Φ Γ Δ House
Mutty, Victor Louis, Arts	('37)	*Bangor*	Σ X House
Oxner, Karl Robert, Es.	('36)	*South Berwick*	Φ K House
Phillips, James Albert, Ce.	('37)	*Auburn*	Σ A E House
Robertson, Clayton Marshall, Zo.	('35)	*Caribou*	Φ Γ Δ House
Simon, John Charles, Arts	('37)	*Millinocket*	34 Pine Street
Thompson, Robert Andrew, Pa.	('35)	*West Enfield*	Σ X House

SPECIAL STUDENTS

Adams, Winford Charles, By.		*Island Falls*	68 Main Street
Aikins, Nelson Brown, Ed.		*South Windham*	Stillwater
Aurelio, George Hillman, Fy.		*Newtonville, Mass.*	A Γ P House
Bailey, Charles Herbert, Fy.		*Lincoln*	202 H. H. Hall
Brookes, Kenneth, Arts		*Rockville, Conn.*	Bangor Theological Seminary
Cushman, J. Paul, Fy.		*Orono*	25 Myrtle Street
Davies, William Ellis, Arts		*Bangor*	264 Union Street, Bangor
Hackett, Ralph Blackwell, Fy.		*Old Town*	Θ X House
Johnson, Edith Althea, Arts		*Portland*	53 Bennoch Street
Kinney, William Thomas, Ce.		*Rumford*	Δ T Δ House
Lawson, Nelson Herbert, Ee.		*Bangor*	221½ Center Street, Bangor
Leathers, Kenneth Hewes, Arts		*Kennebunkport*	B Θ Π House

Lorimer, Phyllis Martin, Arts	*Bangor*	413 Hammond Street, Bangor
Mann, Lawrence Augustine, Cl.	*Bangor*	43 Parkview Avenue, Bangor
Michelson, Esther, Ed.	*Haverhill, Mass.*	Colvin Hall
Morgan, John Ellsworth, Arts	*Scranton, Pa.*	Bangor Theological Seminary
Plaisted, Leigh Charles, An.	*Orono*	Farm Boarding House
Polito, Armando Arnaldo, Arts	*Portland*	411 Oak Hall
Rand, Edwin Holmes, Arts	*Unity*	25 Grove Street
Renwick, Beatrice Brevoort, Arts	*Mt. Desert*	23 Park Street
Sawyer, Clayton Leonard, Ch.A.	*Orono*	Park Street
Sullivan, Martin William, By.	*Lynn, Mass.*	306 Oak Hall
Tewksbury, Edwin Fellows, Arts	*Bangor*	Bangor Theological Seminary
Wood, Dexter Hawkins, Agr.	*New Auburn, Wisconsin*	Main Road
Young, Ruth Kelsey, He.	*Orono*	277 Main Street

TWO-YEAR COURSE IN AGRICULTURE

First Year

Allen, Mark Parker	*Bryant Pond*	Σ N House
Coffin, William Artemus	*Cumberland Mills*	A Γ P House
Cripps, Chesley Leland	*Camden*	309 H. H. Hall
Felt, Lester Albert	*Bryant Pond*	25 Grove Street
Griffin, James Goodwin	*Lisbon Falls*	56 Park Street
Mosher, Glenn Harold	*North Jay*	90 Forest Avenue
Pratt, Lloyd Edgar	*Gorham*	Φ M Δ House
Sprowl, Earl Mills	*Appleton*	Stillwater
Wheeler, Samuel Edward	*Farmington*	Σ A E House

SHORT COURSE IN AGRICULTURE

Hilton, Robert Franklin	*Anson*	403 H. H. Hall
Reed, Carleton Gardner	*Hermon*	Hermon
Smith, Frank Robert	*New Portland*	107 H. H. Hall
Spear, Herbert Leroy	*Waldoboro*	14 Chapman Street, Brewer

SPRING SEMESTER, 1935

New Registrations

Graduate Students

Allen, Helen McDonough, B.S. in He., Ed. Farmington State Normal, 1930	*Bangor*	96 Otis Street, Bangor
Bonham, Eupha, A.B., Eh. Concord, 1924	*Princeton, W. Va.*	6 North Main Street
Loveitt, Lillian Frances, B.A., Hy. Maine, 1930	*South Portland*	North Hall
Mason, Irvin Carroll, B.S., M.S., Bt. Maine, 1930, 1932	*Locke's Mills*	24 Pierce Street
Schrumpf, Mildred Brown, B.S., He. Maine, 1925	*Orono*	6 University Place
Sweatt, John Henry, B.A., Ed. Maine, 1930	*Andover*	54 North Main Street

Seniors

Bailey, Dean Manter, Bt.	*Waterville*	Park Street
Brown, Earl Dresser, Zo.	*Norway Lake*	Σ X House
Cole, Stanley Goodman, Fy.	*Guilford, Conn.*	Pleasant Street
Downs, Walter Alanson, Ed.	*Bangor*	47 Kossuth Street, Bangor
Greaney, John Charles, Ed.	*Houlton*	86 Mill Street
Lindsey, Doris Emeline, Ed.	*East Machias*	Colvin Hall
Tarbell, Gridley Weatherbee, Ms.	*Bangor*	Β Θ Π House
Walker, Victor Laffin, Ed.	*Woodfords*	Β Θ Π House

Juniors

Cook, Enoch Standish, Ce.	*Oakland*	Λ X A House
Crane, Thomas Willard, Ee.	*South Portland*	Σ X House
Estabrook, Richard Winthrop, Ch.Eng.	*Portland*	Β Θ Π House
Mallett, Howard Pickering, Ce.	*Lee*	Φ Η Κ House

Sophomores

Boynton, Evelyn Frances, He.	*Millinocket*	Colvin Hall
Doe, Frank Eustace, Me.	*Concord, N. H.*	Λ X A House

Jackman, William Lounsbury, Arts	*Orono*	College Road
Stinchfield, Charles Howard, Ch.	*Wayne*	Λ X A House
Turner, Francis Eugene, Arts	*Bangor*	K Σ House

Freshmen

Mann, Lewis Jacob, Me.	*West Paris*	3 School Street
Norris, Robert Perley, Ge.	*Cambridge, Mass.*	43 Main Street
Swab, Robert Dubs, Fy.	*Lancaster, Pa.*	K Σ House

Specials

Blaisdell, William Bradley, Zo.	*North Sullivan*	College Road
Holyoke, Charles Everett, Jr., Ed.	*Brewer*	269 Wilson Street, Brewer
Read, Arthur Irvin, Eng.	*Stillwater*	Stillwater
Stone, Julius, Arts	*Bangor*	239 Pine Street, Bangor

SUMMER SESSION, 1934

Students Registered for Graduate Credit

Adriance, Sarah Ada, A.B., Ed. *Slingerlands, N. Y.*
New York State College for Teachers, 1920

Alderson, Florrie, B.S.S., Eh. *Hartford, Conn.*
Boston University, 1924

Allen, Irene, B.S. in Ed., Hy. *Somerville, Mass.*
Boston University, 1930

Allen, William Henry, B.A., Ed. *Brownville Junction*
Maine, 1919

Alley, Eva Lucille, A.B., Ed. *Calais*
Colby, 1925

Atwater, Donald Vince, B.S., Ed. *Limestone*
Maine, 1916

Avery, Blanche Deane, B.S., Ed. *Greenfield, Mass.*
Massachusetts State, 1928

Bonham, Eupha, A.B., Eh. *Princeton, W. Va.*
Concord State Teachers College, 1924

Brown, Harold Ellra, B.A., Ed. *Bath*
Maine, 1929

Brown, Helen Elisabeth, A.B., Eh. *Davidson, Conn.*
Eastern Nazarene College, 1932

Bunker, Miriam Sarah, A.B., Ed. *Orono*
Mount Holyoke, 1927

Bushell, Frances Isabel, A.B., Ed. *Ridgewood, N. J.*
New York State College for Teachers, 1926

Carter, Mary Rich, B.A., Rl. *Orono*
Maine, 1931

Chesterton, Allan Bowdoin, B.A., Ed. *West Jonesport*
Maine, 1927

Clark, Arthur Donald, B.S., Ed. *Caratunk*
Colby, 1928

Clement, Stanley Luther, B.S., Ed. *Milo*
Colby, 1932

Collins, Helen Stoddart, A.B., Ms. *Gloucester, Mass.*
Mount Holyoke, 1916

Cox, Edwin Allerton, B.S. in Ed., Ed. *Middleboro, Mass.*
Boston University, 1932

Crane, Josephine Fields, A.B., Rl. Elmira, 1926	*Afton, N. Y.*
Crocker, Richard Foster, B.S., Ed. Maine, 1914	*Fort Kent*
Crossland, Charles Edward, B.S., Es. Maine, 1917	*Orono*
Currier, Roland Ernest, B.S., Ed. Bates, 1926	*Mt. Vernon*
Cutts, Cecil Jewett, B.A., Ed. Maine, 1925	*Hartland*
Densmore, Ruth, B.S., Ed. Maine, 1928	*Portland*
Diggles, Verna Elisabeth, A.B., Rl. Bates, 1925	*Auburn*
Dorr, Frank Edward, A.B., Ed. Bates, 1925	*East Orland*
Dow, Grace Augusta, B.S., Eh. Columbia, 1930	*Saco*
Drinkwater, Vivian Marie, B.A., Ed. Maine, 1931	*Brewer*
Elliott, Linwood Shaw, B.A., Hy. Maine, 1932	*Portland*
Flack, Howard Watson, A.B., Hy. Syracuse, 1914	*Doylestown, Pa.*
Gibb, John Harold, B.S., Ed. Pennsylvania State, 1928	*Cresson, Pa.*
Green, Bernice Vivian, A.B., Eh. Colby, 1927	*Dover-Foxcroft*
Green, Verna Muriel, A.B., Eh. Colby, 1930	*Dover-Foxcroft*
Haskell, Ernest Edward, B.A., Ed. Maine, 1925	*North Anson*
Higgins, Barbara, B.S., Ed. Maine, 1930	*Dennysville*
Howe, Marion Olive, A.B., Lt. Tufts, 1928	*Hudson, Mass.*

Howe, Virginia de Borba, B.S., Ed. *Swampscott, Mass.*
Framingham Teachers College, 1931
Humes, Martha Ryland, B.S., Ed. *Central Falls, R. I.*
Rhode Island State, 1929

Ingersoll, Robert, B.S., Ed. *Orono*
Maine, 1923

Jones, Arthur Lewis, B.S. in Ed., Ed. *Framingham, Mass.*
Boston University, 1932

Keirstead, Kathryn Jean, B.A., Ed. *Westfield*
Maine, 1931
Keirstead, Lloyd Garrison, B.S., Pa. *Oakland*
Maine, 1933
Kelley, Norman James, B.S., Ed. *Waterville*
Maine, 1925
Kimball, Donald Stevens, B.M.E., Ed. *New Haven, Conn.*
Northeastern, 1925
Kingman, David Raymond, B.A., Ed. *South Hanover, Mass.*
Maine, 1930

Liebing, Frieda Elizabeth, B.S., Ms. *Cincinnati, Ohio*
Cincinnati, 1928
Linscott, Edward Lyon, B.S. in Ed., Ed. *Bluehill*
Maine, 1933
Loveitt, Rosella Adeline, B.A., Hy. *South Portland*
Maine, 1930
Lyons, Mary Frances, B.E., Eh. *Granite, N. H.*
Boston University, 1934

Maxwell, Lewis Joseph, B.S., Ed. *Stamford, Conn.*
Massachusetts State, 1927
McCluskey, Ray Emmett, A.B., Ed. *Houlton*
Bates, 1932
McCormick, Malcolm Young, B.A., Py. *Orono*
Maine, 1932
McGaughy, Clifford Joseph, B.S., Ed. *Presque Isle*
Colby, 1929
Mead, Katherine Kilgore, B.S., Ed. *Bangor*
Maine, 1932

Murchie, Ruth George, B.S., He. Maine, 1923	*Calais*
Murphy, Frederic Coleman, B.A., Ed. Maine, 1928	*Berlin, N. H.*
Newell, Harry Severy, A.B., Pa. Bates, 1921	*Orono*
Noyes, Worth Lankton, B.S., Ed. Maine, 1929	*Stetson*
O'Brien, Helen Marie, B.A., Eh. Boston University, 1930	*Somerville, Mass.*
Peck, Esther Alice, B.S. in Ed., Hy. Boston University, 1928	*Mt. Carmel, Conn.*
Percival, Maple Ismay, B.A., Hy. Maine, 1929	*Dexter*
Preston, Kenneth Frank, A.B., A.M., Ed. Cornell University, 1924; Columbia, 1929	*Great Barrington, Mass.*
Roney, Jeanette Marie, B.A., Hy. Maine, 1930	*Portland*
Saunders, Nellie Lee, B.A., Ed. Richmond, 1923	*Norfolk, Va.*
Shaw, Mason Dustan, B.S. in Ed., Ed. Maine, 1933	*East Holden*
Sinclair, Roy U., B.S., Ed. Bates, 1926	*Pittsfield*
Smith, Geneva May, B.S. in Ed., B.A., Ms. Boston University, 1924; Maine, 1931	*East Corinth*
Snow, Charles Augustus, B.A., Ed. Maine, 1920	*Fryeburg*
Spearin, Clarence Milton, B.S., Ed. Maine, 1924	*Wilton*
Stinneford, Jessie Sturtevant, B.A., Ed. Maine, 1917	*Hampton, Va.*
Tarr, Gladys Brownell, B.S. in Ed., Ed. Boston University, 1930	*Gloucester, Mass.*

Tobey, Martha Mae, A.B., Ed. Colorado Teachers College, 1920	*Westfield, Mass.*
Tolles, Marian Elizabeth, A.B., Hy. Middlebury, 1931	*Terryville, Conn.*
Watt, Arthur, B.S., Ed. Northeastern, 1928	*North Easton, Mass.*
Wescourt, Emanuel, A.B., Es. Syracuse, 1925	*Brooklyn, N. Y.*
White, Erma Elizabeth, B.A., Rl. Maine, 1929	*Monroe*
White, Katharine Howard, A.B., Ed. Smith, 1923	*Wellesley Hills, Mass.*
Wilder, Carroll Fred, B.A., Ed. Maine, 1926	*Cape May Court House, N. J.*
Wilson, Blair Cochran, B.S., Ed. Maine, 1928	*Bath*
Winslow, Daphne, B.A., Ed. Maine, 1927	*Rockland*
Wood, Benjamin Thomas, B.S., Ms. Maine, 1932	*Waterville*

OTHER SUMMER SESSION STUDENTS, 1934

Adams, Cynthia Marie	*Bangor*
Adams, Mildred Pauline	*Lowell, Mass.*
Adams, Orpha McLaughlin	*Rome, N. Y.*
Albert, Marcel Herve	*Van Buren*
Albert, Roland Laurier	*Lewiston*
Allen, Dorothy Louise	*Bangor*
Allen, Frances Hertha	*Somerville, Mass.*
Allen, Royce Page	*Brewer*
Almen, Aina Sofia	*New York, N. Y.*
Ambler, Lucille Rose	*Natick, Mass.*
Baker, Mary Josephine	*Woodcliff, N. J.*
Baldy, Frederic Carrol, B.A., LL.B. Minnesota, 1895, 1898	*Southborough, Mass.*
Ballantyne, Ruth Hall	*Lincoln*
Bartlett, Grace Mae	*Mt. Desert*
Barrett, Daniel Joseph	*Danforth*

Beal, Beulah	*Jacksonville, Fla.*
Birch, Olive G.	*New London, Conn.*
Blackhurst, Cora Martha, B.S. in Ed. Drake, 1932	*Herbert, Mich.*
Boner, Gladys Alice	*Philadelphia, Pa.*
Bradbury, Hortense	*Old Town*
Branch, John Balch	*Auburn*
Brooks, Mary Aldrich, A.B. Wheaton, 1934	*Addison*
Brooks, Mary Priscilla	*Eastport*
Brown, Geneva	*Hampden Highlands*
Brown, Ruth Eleanor, A.B. Colby, 1932	*Oakland*
Brown, Thersa Matoria	*South Paris*
Bucknam, George Wilson	*Waterville*
Bullard, Maurice Lucien	*Bluehill*
Bussell, Catharene Anne	*Old Town*
Buxton, Ada Maxwell	*Eustis*
Campbell, Lydia May	*East Corinth*
Carr, Kenneth Wayne	*Howland*
Cates, Helen Nancy	*East Vassalboro*
Chaffee, Howard Franklin	*Old Forge, N. Y.*
Chase, Jane Gerry	*Bucksport*
Chase, Mellissa	*Braintree, Mass.*
Clark, Georgiana Marie, A.B. Tufts, 1904	*Waterbury, Conn.*
Clark, Katharine Isabel	*Balboa Heights, Canal Zone*
Coffin, Clarine Mildred, B.A. Maine, 1932	*Bangor*
Connors, Rosalie Margaret	*Bangor*
Corcoran, Patrick Joseph	*New London, Conn.*
Corey, George Thomas	*Caribou*
Covell, Mildred Rebecca	*Orono*
Cox, Elsie Pauline	*Skowhegan*
Craig, Charlotte Isabelle	*Old Town*
Crane, Frederick Beach	*Afton, N. Y.*
Crockett, Charles	*Stonington*
Crosby, Ruth, B.S. Maine, 1918	*Bangor*
Culver, Lola Murch	*Jacksonville, Fla.*
Custen, Seymour Norton	*New York, N. Y.*

Daigle, Yvonne	*Fort Kent*
Dean, Dorothy Brown, A.B. Smith, 1924	*Amesbury, Mass.*
Denton, Margaret Eloise, B.A. Maine, 1933	*Caribou*
Dority, Reginald Harvard	*Brooklin*
Dougherty, John Francis	*Bath*
Dove, Ruth Stone, B.A., M.A. Ohio Wesleyan, 1930; Smith, 1931	*Orono*
Dow, James Frederick	*Houlton*
Draper, Louise	*Montclair, N. J.*
Duffy, Roberta	*Montgomery, La.*
Duffy, Ruth	*Montgomery, La.*
Dyer, Alice Magee	*Waterville*
Dyer, Madelyn Edith	*Winter Harbor*
Eastman, Eleanor	*Wollaston, Mass.*
Eaton, Hilda Titus	*Little Deer Isle*
Edwards, Florence Marie, B.S., A.M. Conn. College for Women, 1920; Columbia, 1930	*Hamden, Conn.*
Faulds, Ella Annie, A.B. Pembroke, 1929	*West Warwick, R. I*
Fellows, Oscar	*Bangor*
Fields, Margaret McDowell, A.B., A.M. Elmira, 1927; Columbia, 1932	*Mineola, L. I., N. Y.*
Files, Harry Paul	*West Buxton*
Finnegan, Wilfred Augustine, Jr.	*Bangor*
Fleischl, Ruth Shirley	*New York, N. Y.*
Flint, Ernest Edgar	*Roslindale, Mass.*
Foster, Arthur Powe, B.S. Mississippi State, 1933	*Rumford*
Frame, George Marshall	*Searsport*
Gage, DuRelle, Jr., B.S. Haverford, 1933	*Boston, Mass.*
Garland, Cecil Gladstone, B.A., A.M. Maine, 1924; Brown, 1927	*Bangor*
Gastonguay, Roland Francis	*Chisholm*
Gibbs, Roland Ernest	*Bangor*

Gillis, Georgina	*Calais*
Godbout, Berthe Augustine	*Hartford, Conn.*
Golden, Evelyn Gertrude	*Bangor*
Good, Jack Charles	*Portland*
Gorman, Lucille Elaine	*Stoneham, Mass.*
Grant, Clarice Jeanette	*Sandy Point*
Grant, Grace Edna, A.B. Adelphi, 1915	*Brooklyn, N. Y.*
Gray, Lester Colby	*Bucksport*
Griffin, Charles Frederick	*Fitchburg, Mass.*
Griffin, William Frank	*Pittsfield*
Guptill, Orville Jewett, Jr.	*Bar Harbor*
Hackett, Ralph Blackwell	*Old Town*
Hahn, Helen Moister	*Greenwich, Conn.*
Halpine, William Conway	*Portland*
Hand, Mary Muriel	*Houlton*
Hanscom, Wallace Clair	*Bar Harbor*
Hanscom, William Asa, B.S. Maine, 1927	*Presque Isle*
Harvey, Ilga Frances, A.B. Wesleyan, 1902	*New Britain, Conn*
Hayes, Frances Osgood	*Bangor*
Hedin, Constance Lowell	*Bangor*
Hews, Ruth Lanpher	*Mt. Desert*
Higgins, Henry Russell	*Newport*
Higgins, Robert Gage	*Lewiston*
Hodsdon, Clara Leslie	*Stillwater*
Homer, Margaret Sibyl	*Franklin*
Hood, Grace Lucille	*Gladstone, Mich*
Hurd, Earl Norman	*Hancock, N. Y.*
Hurn, Myra	*Amesbury, Mass.*
Hussey, Ruby Young	*Old Town*
Ingalls, Hollis Page	*Machias*
Inman, Helen Laura	*Orono*
Jaffe, Saul, B.S. New York University, 1922	*Brooklyn, N. Y.*
Jellison, George Edward	*North Sullivan*
Jenkins, William Henry	*Presque Isle*

Jones, Errold Gordon	*Brownville*
Jordan, Darrel Francis	*Orono*
Jordan, Ralph Leo	*Bangor*
Keen, Harriet Elizabeth	*Rochester, N. Y.*
Keyes, Carolyn Hill	*West Pembroke*
Keyes, Merle Roliston, B.S. Colby, 1908	*West Pembroke*
Kirsopp, Parmella Balfour	*Mt. Lebanon, Pa.*
Knapp, Leda Burrill	*Old Town*
Knight, Frances Silsby	*Derby*
Knox, Marion E.	*Dexter*
Lancaster, Helen Frances	*Old Town*
Landon, Miriam	*Bangor*
LaPointe, Doris Elizabeth	*Orono*
Leavitt, Charles Ralph	*West Enfield*
Leavitt, Dorothy Martha	*West Enfield*
Leighton, Lillian May	*Pembroke*
Leighton, Melvin Theodore	*Bangor*
Libby, Beatrice Lavina	*Newfield*
Libby, Gladys Mary	*Watertown, Mass.*
Lindsey, Doris Emeline	*East Machias*
Litz, Laura Frances	*Limestone*
Litz, Margaret Jayne	*Limestone*
Logan, Ruth Mae	*Lansdowne, Pa.*
Lord, Frederick Clarence	*Saco*
Lovejoy, Avis Bowker	*Rockland*
McCain, Dorothy May	*Houlton*
McCloskey, Francis Hartley	*Howland*
McCobb, Helen Gertrude	*Center Lincolnville*
McCusker, Henry James	*East Braintree, Mass.*
MacDonald, Charles Wilbur	*Pittsburgh, Pa.*
McDougall, John Robert	*Bangor*
MacDougall, Mary Blanche	*Bangor*
McGray, Helen Elizabeth	*Andover, Mass.*
McLaughlin, Ruth Helen	*Washburn*
Madden, Veda Thomas	*Milford*
Malcolm, Leon Tibbetts	*Augusta*
Malone, Mary Loretta	*Rutland, Vt.*
Mann, Lawrence Augustine	*Bangor*

Mann, Lewis Jacob	*West Paris*
Martin, Marion Ella	*Bangor*
Mead, Charles Stewart, A.B. Bowdoin, 1933	*Bangor*
Merriman, William V.	*Weedsport, N. Y.*
Meyer, Margaret Catherine	*West Los Angeles, Calif.*
Miller, Muriel Herbert, B.S. Cornell University, 1925	*Plainfield, N. J.*
Morgan, Jeannette Maria	*West Pembroke*
Morgan, Joseph William, A.B. Dartmouth, 1929	*Garden City, L. I., N. Y.*
Morrison, Anne Louise	*Orono*
Morrison, George Ira	*Milford, Conn.*
Morrow, William Wheelock, A.B., M.B.A. Hamilton, 1932; Harvard, 1934	*Mt. Morris, N. Y.*
Motz, Doris Kelley	*Mt. Desert*
Motz, Rolf Brown	*Mt. Desert*
Munich, Jennie Eldredge	*Bridgeport, Conn.*
Munson, Margaret Glenn	*Windham, N. Y.*
Nanigian, Moses, B.A. Maine, 1928	*Madison*
Nicholson, Leeta Mae	*Port Jervis, N. Y.*
Nickerson, Alvah Lewis	*Damariscotta*
Nivison, Robert, Jr.	*Waterville*
Norcross, Gertrude Lillian, A.B. Mount Holyoke, 1905	*Waterbury, Conn.*
Noyes, Mina Ballard	*Andover, Mass.*
Noyes, Rodney Everett	*Dover-Foxcroft*
Oakes, Maurice Andrew	*West Enfield*
O'Connell, Edward William Carmel	*North Bridgton*
Oderkirk, Martha	*Brooklyn, N. Y.*
Pace, Margery Elizabeth	*Suffern, N. Y.*
Palmer, Frances Myrtle	*Pittsfield*
Palmer, Martha Virginia	*Orono*
Paul, Bertha Lavina	*Skowhegan*
Paul, Helen, A.B. Colby, 1930	*Fort Fairfield*

Peabody, Ralph Oakley	*Houlton*
Peavey, Phyllis Cathrine	*Bangor*
Peck, Helen Estelle	*Mt. Carmel, Conn.*
Perkins, Raymond Everett	*North Castine*
Peyser, Naomi Hazel	*Brooklyn, N. Y.*
Phillips, Florence Mildred	*Oneonta, N. Y.*
Pike, Sarah Comfort	*East Woodstock, Conn.*
Pillsbury, Avis Trafton	*Springvale*
Pillsbury, Mary Elizabeth Alma	*Bellows Falls, Vt.*
Porter, Percy Gowell	*Littleton*
Prussing, Emily Sue	*Traverse City, Mich.*
Puffer, Roberta	*Columbia*
Quinn, Mary Theresa, B.A., M.A. Maine, 1930, 1931	*Bangor*
Raby, Adrienne Marie, A.B. Smith, 1914	*New Britain, Conn.*
Reid, Mary Louise	*Bangor*
Richards, Bertha Clara, A.B. Boston University, 1899	*Danvers, Mass.*
Ricker, Pauline	*Portland*
Robarge, Frances Dorothy	*Waterville*
Robertson, Clayton Marshall	*Caribou*
Robinson, Orett Forest, B.S. in Ed. Boston University, 1928	*Thomaston*
Rodick, Albert Reginald	*Bar Harbor*
Roseman, Milton	*Philadelphia, Pa.*
Russell, Hawley	*Lynnfield Center, Mass*
Ryder, Elizabeth Herr, B.A., M.A. Pennsylvania State, 1928; Columbia, 1929	*Shippensburg, Pa.*
Sage, Edith Mabel	*Howland*
Salmonsen, Edward Otto	*Bloomfield, N. J.*
Samways, Mary Isabel, B.A. Maine, 1926	*Orono*
Sapiro, Sumner Merchant	*Portland*
Sargent, Helen Joy	*Andover, Mass.*
Saunders, Harry Clayton, Jr.	*New York, N. Y.*
Saunders, Wesleyan Bell	*New York, N. Y.*

Sauté, Aimee Alice, Ph.B., A.M. Brown, 1929; Western Reserve, 1932	*West Warwick, R. I*
Sawyer, Charles Kempton	*Searsport*
Sawyer, Gertrude Yeaton	*East Corinth*
Sawyer, Ruth Estelle	*Waterville*
Schneider, Frank Joseph, Jr.	*Lyndhurst, Ohio*
Seavey, Barbara Eunice	*Bangor*
Seavey, Gladys Hazel Stickney	*West Enfield*
Sewall, Margaret Grazebrook	*Old Town*
Shannon, Clayton William	*St. Petersburg, Fla.*
Shechtman, Leon	*Philadelphia, Pa.*
Sherman, Louise	*Sag Harbor, N. Y.*
Small, Alvah Clifford, Ph.B. Dickinson, 1927	*Upper Darby, Pa.*
Spear, Dorothy Gates	*Hartland, Vt.*
Spruance, Frank Palin	*Swarthmore, Pa.*
Stearns, Winthrop, Jr.	*Brooklyn, N. Y.*
Stevens, Helen Katherine	*Lansdowne, Pa.*
Stillman, Jane	*Northeast Harbor*
Stinson, Margaret Susan	*Stonington*
Stockham, Harriett Belle	*Detroit, Mich.*
Story, Ray Henry	*Gardiner*
Striar, Abraham	*Bangor*
Strout, Francis Leroy	*Milbridge*
Strout, Margaret Deering	*Bogota, N. J.*
Swab, Robert Dubs	*Lancaster, Pa.*
Thomas, Benjamin deWitt	*Howland*
Thomas, Everett Randall	*Rome, N. Y.*
Thompson, Mildred Ada	*Orono*
Thompson, Mildred Alice	*Groton, Conn.*
Thompson, Robert Andrew	*West Enfield*
Thornley, Mabel Towne, A.B. Middlebury, 1926	*East Providence, R. I.*
Todd, Arthur Lee	*Lisbon*
Todd, Louise Jeannette	*Lisbon*
Towle, Olive Leah	*Cambridge, Mass.*
Tracy, Lillian Evelyn	*Bangor*
Tripp, Lelia Knowles	*Salisbury Cove*
Tropp, Charles Clarence	*Orono*
Trussell, Howard Lloyd, M.A. Washington and Jefferson, 1910	*Pittsburgh, Pa.*

Tuck, Alonzo Henry	*Wytopitlock*
Tyler, Harry Randolph	*West Buxton*
Vinton, William Howard	*Brattleboro, Vt.*
Wagnis, Joseph John	*Rumford*
Waterhouse, Frank Chester, B.A. Maine, 1933	*Old Town*
Webber, Margaret Rachel	*Mapleton*
Weeks, Gertrude	*Patten*
West, Gardner Cone, B.A. Yale, 1934	*Portland, Conn.*
West, James Raymond	*Bangor*
Wetmore, Mary Lorette	*Cambridge, Mass.*
Weymouth, Frank Leslie Day, A.B. Clark, 1925	*Boston, Mass.*
White, Claire Lucile	*Malden, Mass.*
White, Nathan William	*Presque Isle*
White, Stephen Francis	*Biddeford*
Williams, Edna Elizabeth	*Jackson Heights, N. Y.*
Willis, Malcolm Ora	*Bangor*
Wilson, Eino Edward	*Peabody, Mass.*
Wittig, Grace Elizabeth	*Endicott, N. Y.*
Woodworth, Nancy MacDowell	*New York, N. Y.*
Worthen, Jennie Ingraham	*East Corinth*
Zeitman, Minnie Sarah	*Portland*

General Summary

1934-1935

FACULTY

President	1
Deans and Directors	11
Professors	48
Associate Professors	22
Assistant Professors	39
Lecturers	2
Instructors	41
Critic Teachers	8
Graduate Fellows and Assistants	6
Miscellaneous Assistants	12
Agricultural Experiment Station Staff	30*
Agricultural Extension Service Staff	54
Total	274

By Divisions

College of Agriculture	43
College of Arts and Sciences	67
College of Technology	43
School of Education	13
Officers Common to All Colleges	23
Agricultural Experiment Station	31*
Agricultural Extension Service	54
Total	274

STUDENTS

	Total	Men	Women
Graduate Students	41	29	12
Seniors	317	239	78

* Does not include six names counted under the College of Agriculture.

Juniors	291	210	81
Sophomores	335	251	84
Freshmen	432	326	106
Specials	29	24	5
Upperclass students conditioned for admission	15	15	—
Two-Year Agriculture	9	9	—
Short Course	4	4	—
	1473	1107	366
Summer Session	350	151	199
Grand Total (omitting duplicates in Summer Session)	1765	1225	540

Classification by Colleges

Graduate Study	41	29	12
College of Agriculture	390	265	125
College of Arts and Sciences	559	347	212
College of Technology	442	442	—
School of Education	41	24	17
	1473	1107	366

Candidates for Degrees

Graduate Study	31	20	11
College of Agriculture	368	244	124
College of Arts and Sciences	545	336	209
College of Technology	439	439	—
School of Education	38	22	16
	1421	1061	360

Classification by Residence

Maine, by counties:		
Androscoggin	57	
Aroostook	118	
Cumberland	179	
Franklin	20	

	Hancock	89
	Kennebec	75
	Knox	53
	Lincoln	21
	Oxford	49
	Penobscot	425
	Piscataquis	33
	Sagadahoc	31
	Somerset	46
	Waldo	30
	Washington	53
	York	83
Maine		1362
Massachusetts		206
Connecticut		53
New York		58
Pennsylvania		17
New Jersey		17
Vermont		11
Rhode Island		7
New Hampshire		6
Michigan		4
Florida		4
Virginia		3
Louisiana		2
Ohio		2
Wisconsin		2
California		1
Canal Zone		1
Delaware		1
Illinois		1
Iowa		1
Maryland		1
West Virginia		1
Canada		4
		1765

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