UNIVERSITY OF MARYLAND

OFFICIAL PUBLICATION

GENERAL CATALOG

1944-1945

"The Foundation of Every State
is the Education of its Youth"

DIOGENES

AGRICULTURE

ARTS AND SCIENCES

BUSINESS AND PUBLIC ADMINISTRATION

EDUCATION

ENGINEERING

HOME ECONOMICS

MILITARY SCIENCE

GRADUATE STUDIES

DENTISTRY

LAW

MEDICINE

NURSING

PHARMACY

EXTENSION

RESEARCH

ORGANIZATION OF THIS CATALOG

This catalog has *six* major sections as follows:

Official Publication of the University of Maryland

Vol. 41, No. 3 June 15, 1944

CATALOG

1944 • 1945

The provisions of this publication are not to be regarded as an irrevocable contract between the student and the University. The University reserves the right to change any provision or requirement at any time within the student's term of residence. The University further reserves the right at any time, to ask a student to withdraw when it considers such action is for the best interests of the University.

University of Maryland official publication issued semi-monthly during May, June and July and bi-monthly the rest of the year at College Park, Maryland. Entered as second class matter, under Act of Congress of August 24, 1912.

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GENERAL CALENDAR

1944

JULY

S	M	T	W	T	F	S
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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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1945

JANUARY

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OCTOBER

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NOVEMBER

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DECEMBER

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1946

JANUARY

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FEBRUARY

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23	24	25	26	27	28	29
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UNIVERSITY CALENDAR

1944-1945

COLLEGE PARK

1944

Summer Quarter

July 7-8	Friday, Saturday	Registration for summer quarter
July 10	Monday	Instruction begins
August 18	Friday	Closing date, short summer session
September 4	Monday	Labor Day, holiday
Sept. 25, 26, 27, 28	Monday-Thursday	Examinations

Fall Quarter

October 6-7	Friday, Saturday	Registration for fall quarter
October 9	Monday	Instruction begins
November 23	Thursday	Thanksgiving, holiday
December 22	Friday	Closing date, fall quarter

1945

Winter Quarter

January 5-6	Friday, Saturday	Registration for winter quarter
January 8	Monday	Instruction begins
February 22	Thursday	Washington's Birthday, holiday
March 25	Sunday	Observance of Maryland Day
March 26, 27, 28, 29	Monday-Thursday	Examinations

Spring Quarter

April 6-7	Friday, Saturday	Registration for spring quarter
April 9	Monday	Instruction begins
May 30	Wednesday	Memorial Day, holiday
June 25, 26, 27, 28	Monday-Thursday	Examinations

Note: The academic calendars of the professional schools in Baltimore will be found in the separate catalogs published by these schools.

TABLE OF CONTENTS

BOARD OF REGENTS OF THE UNIVERSITY OF MARYLAND AND MARYLAND STATE BOARD OF AGRICULTURE

		Term Expires
ROWLAND K. ADAMS, *Chairman*	Baltimore	1948
MRS. JOHN L. WHITEHURST, *Secretary*	Baltimore	1947
J. MILTON PATTERSON, *Treasurer*	Baltimore	1944
E. PAUL KNOTTS	Denton	1945
WILLIAM P. COLE, JR.	Baltimore	1949
HARRY H. NUTTLE	Denton	1950
PHILLIP C. TURNER	Parkton	1950
W. CALVIN CHESNUT	Baltimore	1951
JOHN E. SEMMES	Baltimore	1951
THOMAS R. BROOKES	Bel Air	1952
STANFORD Z. ROTHSCHILD	Baltimore	1952

Members of the Board are appointed by the Governor of the State for terms of nine years each, beginning the first Monday in June.

The President of the University of Maryland is, by law, Executive Officer of the Board.

The State Law provides that the Board of Regents of the University of Maryland shall constitute the Maryland State Board of Agriculture.

A regular meeting of the Board is held the third Friday of each month, except during the months of July and August.

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*As of April, 1944.

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WILLIAM H. GRAVELY, JR., M.A., Instructor in English.
WILSON P. GREEN, M.S., Associate Professor of Mechanical Engineering.
ROMAIN G. GREENE, M.A., Instructor in English.
HARLAND C. GRISWOLD, Colonel, U.S.A., Professor of Military Science and Tactics.
ALLAN G. GRUCHY, Ph.D., Professor of Economics.
EUGENE GUERSTER, Ph.D., Instructor in Foreign Languages.
LOUISE HAGEL, B.S., Instructor in Foods and Nutrition.
DICK W. HALL, Ph.D., Assistant Professor of Mathematics.
HARRY R. HALL, B.S., Lecturer on Municipal Sanitation.
ARTHUR B. HAMILTON, M.S., Associate Professor of Agricultural Economics.
P. ARNE HANSEN, Ph.D., Associate Professor of Bacteriology.
MALCOLM M. HARING, Ph.D., Professor of Physical Chemistry.
SUSAN E. HARMAN, Ph.D., Professor of English.
IRVIN C. HAUT, Ph.D., Associate Professor of Pomology.
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RICHARD I. HOFSTADTER, Ph.D., Assistant Professor of History.
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RICHARD R. HUTCHESON, M.A., Assistant Professor of Speech.

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LAWRENCE H. JAMES, Ph.D., Professor of Bacteriology.
WALTER F. JEFFERS, Ph.D., Assistant Professor of Plant Pathology.
ROBERT A. JEHLE, Ph.D., Professor of Plant Pathology.
ARNOLD E. JOYAL, Ph.D., Professor of Educational Administration.
WILLIAM A. JUDGE, B.S., Instructor in Physics.
MORLEY A. JULL, Ph.D., Professor of Poultry Husbandry.
WILLIAM B. KEMP, Ph.D., Professor of Agronomy.
FRED I. KOBAYASHI, B.S., Instructor in Physical Education.
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CHARLES F. KRAMER, M.A., Associate Professor of Foreign Languages.
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LAURENCE L. LAYTON, Ph.D., Assistant Professor of Chemistry.
FREDERICK H. LEINBACH, Ph.D., Professor of Animal Husbandry.
PETER P. LEJINS, Ph.D., Assistant Professor of Sociology.
IRVING LINKOW, M.A., Instructor in Speech.
ROBERT A. LITTLEFORD, Ph.D., Instructor in Zoology.
ROBERTA MACK, B.S., Assistant Professor of Institution Management.
NORMAN W. MACLEOD, M.A., Assistant Professor of English.
GEORGE F. MADIGAN, Ph.D., Assistant Professor of Soils.
CHARLES H. MAHONEY, Ph.D., Professor of Olericulture.
MONROE H. MARTIN, Ph.D., Professor of Mathematics.
ROBERT H. MCBRIDE, 1st Lt., U.S.A., Assistant Professor of Military Science and Tactics.
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FRIEDA W. MCFARLAND, M.A., Professor of Textiles and Clothing.
EDNA B. MCNAUGHTON, M.A., Professor of Home Economics Education.
DEVOE MEADE, Ph.D., Professor of Animal Husbandry.
ELIZABETH Y. MEYERS, M.A., Instructor in Physical Education for Women.
FRANCES H. MILLER, M.A., Instructor in English.
J. ALBERT MILLER, M.A., Administrative Coordinator of Practice Teaching.
C. WRIGHT MILLS, Ph.D., Associate Professor of Sociology.
T. FAY MITCHELL, M.A., Assistant Professor of Textiles and Clothing.
RAYMOND MORGAN, Ph.D., Professor of Physics.
EARL W. MOUNCE, M.A., LL.B., Associate Professor of Law and Labor.
M. MARIE MOUNT, M.A., Professor of Home and Institution Management.
AGNES R. NEYLAN, M.A., Instructor in Foods and Nutrition.
PETER OESPER, Ph.D., Assistant Professor of Physical Chemistry.
EVELYN L. OGINSKY, M.S., Instructor in Bacteriology.
MARTHA A. OLSON, M.A., Instructor in Mathematics.
HAROLD C. O'NEAL, A.B., B.S.L.S., Instructor in Library Science.
ARTHUR C. PARSONS, M.A., Assistant Professor of Foreign Languages.

ARTHUR S. PATRICK, M.A., Assistant Professor of Secretarial Training.
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NORMAN E. PHILLIPS, Ph.D., Professor of Zoology.
ROBERT E. PHILLIPS, Ph.D., Associate Professor of Poultry Husbandry.
JAMES R. PINKERTON, Captain, U.S.A., Assistant Professor of Military Science and Tactics.
AUGUSTUS J. PRAHL, Ph.D., Associate Professor of Foreign Languages.
HENRY W. PRICE, B.S., Instructor in Electrical Engineering.
HESTER B. PROVENSEN, LL.B., Assistant Professor of Speech.
J. FREEMAN PYLE, Ph.D., Professor of Economics and Marketing.
GEORGE D. QUIGLEY, B.S., Associate Professor of Poultry Husbandry.
MARGUERITE C. RAND, M.A., Instructor in Foreign Languages.
B. HARLAN RANDALL, B.Mus., Assistant Professor of Music.
ENNES C. RAYSON, A.B., C.P.A., Professor of Accounting.
JAMES H. REID, M.A., Assistant Professor of Economics.
HARRY H. RICE, M.A., Assistant Professor of Physical Education.
FAUSTO RUBINI, B.S., Instructor in Physical Education.
ALVIN W. SCHINDLER, Ph.D., Associate Professor of Education.
ALBERT L. SCHRADER, Ph.D., Professor of Pomology.
MARK SCHWEIZER, Ph.D., Instructor in Foreign Languages.
A. WILEY SHERWOOD, M.E., Instructor in Mechanical Engineering.
H. BURTON SHIPLEY, B.S., Assistant Professor of Physical Education.
ROBERT V. SHIRLEY, M.B.A., Instructor in Business Law and Statistics.
MARK M. SHOEMAKER, M.S., M.L.D., Associate Professor of Landscape Gardening.
CHARLES A. SHREEVE, B.M.E., Associate Professor of Mechanical Engineering.
ARTHUR W. SILVER, M.A., Assistant Professor of History.
JOHN E. SMITH, Captain, U.S.A., Assistant Professor of Military Science and Tactics.
JOSEPH M. SMITH, Ph.D., Assistant Professor of Chemical Engineering.
W. CONLEY SMITH, M.S., Assistant Professor of Electrical Engineering.
ROBERT E. SNODGRASS, A.B., Lecturer on Entomology.
CLARENCE W. SPEARS, B.S., M.D., Professor of Physical Education
JESSE W. SPROWLS, Ph.D., Professor of Psychology.
KENNETH M. STAMPP, Ph.D., Assistant Professor of History.
S. SIDNEY STEINBERG, B.E., C.E., Professor of Civil Engineering.
REUBEN G. STEINMEYER, Ph.D., Professor of Political Science.
WILLIAM J. SVIRBELY, M.S., D.Sc., Associate Professor of Chemistry.
JEAN TENNEY, M.A., Assistant Professor of Physical Education for Women.
ROYLE P. THOMAS, Ph.D., Professor of Soils.
ALICE J. THURSTON, M.A., Instructor in Psychology.
ARTHUR S. THURSTON, M.S., Professor of Floriculture and Landscape Gardening.
THERON A. TOMPKINS, M.A., Assistant Professor of Physical Education.
EDWARD D. TREMBLY, M.B.A., Associate Professor of Accounting.

EMIL S. TROELSTON, Ph.D., Associate Professor of Agricultural Economics.
ANNA M. URBAN, A.B., A.B.L.S., Instructor in Library Science.
JOHN L. VANDERSLICE, Ph.D., Assistant Professor of Mathematics.
WILLIAM VANROYEN, Ph.D., Professor of Geography.
PAUL M. WADELL, 1st Lt., U.S.A., Assistant Professor of Military Science and Tactics.
T. C. GORDON WAGNER, Ph.D., Assistant in Mathematics.
ROBERT N. WALDEN, Captain, U.S.A., Assistant Professor of Military Science and Tactics.
STANTON WALKER, B.S., Lecturer on Engineering Materials.
W. PAUL WALKER, M.S., Associate Professor of Agricultural Economics.
EDGAR P. WALLS, Ph.D., Professor of Canning Crops.
DOROTHY M. WATSON, M.S., Assistant in Geography.
DONALD C. WEEKS, Ph.D., Instructor in English.
MARIE WHEATLEY, M.A., Instructor in Education.
CHARLES E. WHITE, Ph.D., Professor of Inorganic Chemistry.
HELEN B. WILCOX, M.A., Instructor in Foreign Languages.
RAYMOND C. WILEY, Ph.D., Associate Professor of Analytical Chemistry.
HAROLD C. YEAGER, 2nd Lt., U.S.A., Assistant Professor of Military Science and Tactics.
JAMES F. YEAGER, Ph.D., Lecturer on Entomology.
JOHN E. YOUNGER, Ph.D., Professor of Mechanical Engineering.
HAROLD YOURMAN, 2nd Lt., U.S.A., Assistant Professor of Military Science and Tactics.
W. GORDON ZEEVELD, Ph.D., Associate Professor of English.
ALICE R. ZERBOLA, M.A., Instructor in Education.
ADOLF E. ZUCKER, Ph.D., Professor of Foreign Languages.

GRADUATE ASSISTANTS AND FELLOWS

Graduate Assistants

Name	*Department*
LAURA M. BRILLIANTINE, M.S.	Bacteriology
CARL BLUMENSTEIN, B.S.	Chemistry
JEAN BOYER, B.A.	Mathematics
LAWRENCE E. FLESCH, B.S.	Agricultural Economics
WILLIAM H. FORM, M.A.	Sociology
LARRY Q. GREEN, B.S.	Chemistry
HELEN GYSIN, B.S.	Zoology
HILLMAN G. HARRIS, B.S.	Chemistry
ELIZABETH E. HAVILAND, M.S.	Entomology
ERICH HEFTMAN, B.S.	Chemistry
WILLIAM KELLER, B.S.	Zoology
DAVID N. KRAMER, B.S.	Chemistry
CECIL MARTIN, B.A.	English
J. PHILIP MATTINGLY, B.S.	Poultry Husbandry

EDWARD ORBAN, B.S.	Chemistry
LAWSON L. ROSENBERG, B.S.	Chemistry
JANE L. SHOWACRE, B.S.	Botany
WILLIAM M. SMITH, M.S.	Chemistry
ELIZABETH L. STEPHENSON, B.S.	Home Economics
ARTHUR H. THOMPSON, B.S.	Horticulture
LELIA M. TOOLE, B.S.	Botany
AMANDA A. ULM, B.S.	Botany
CHARLES M. WEISS, B.S.	Chemistry

Fellows

ROBERT L. BORENSTEIN, B.S.	Chemical Engineering
LOUISA G. DILLARD, M.A.	Business and Public Administration
BETTY E. HOFFMASTER, B.S.	Zoology
KATHRYN C. KENNY, B.A.	Psychology
VIVIENNE C. MACLEOD, M.A.	English
WALTER S. SANDERLIN, B.A.	History
JULIUS SEEMAN, B.S.	Education

SECTION I—General

PRELIMINARY INFORMATION

The University of Maryland, in addition to being a State University, is the "Land-Grant" institution of Maryland. The University is co-educational in all of its branches.

College Park

The undergraduate colleges and the Graduate School of the University of Maryland are located at College Park, Prince George's County, Maryland, on a beautiful tract of rolling, wooded land, less than eight miles from the heart of the Nation's capital, Washington, D. C. This nearness to Washington, naturally, is of immeasurable advantage to students because of the unusual library facilities afforded by the Library of Congress and the libraries of Government Departments; the privilege of observing at close range sessions of the United States Supreme Court, the United States Senate and the House of Representatives; the opportunity of obtaining almost without effort an abundance of factual data which is constantly being assembled by the numerous agencies of the Federal Government; and, especially in these days of war, the keen sense of interest which necessarily exists when one is in such close proximity to history in the making.

The University is served by excellent transportation facilities, including the main line of the Baltimore and Ohio Railroad, by the Washington street car system, and by several bus lines. The campus fronts on the Baltimore-Washington Boulevard, a section of Federal Route No. 1, which makes the University easily accessible by private automobile travel.

College Park, and the adjacent Calvert Hills and College Heights, constitute a group of fine residential communities close to the University campus, where are located the homes of many of the members of the faculty and staff, and where students who prefer to live off campus may find desirable living accommodations at reasonable rates.

Baltimore

The professional schools of the University—Dentistry, Law, Medicine, Nursing, and Pharmacy—the University Hospital, and the Baltimore Division of the College of Education, are located in a group of splendid buildings, most of them erected in recent years, at or near the adjacent corners of Lombard and Greene Streets and Lombard and Redwood Streets, Baltimore, Maryland.

Baltimore, a thriving, modern industrial city of more than a million inhabitants, has an old established culture represented by outstanding educational institutions, libraries, museums, parks, public buildings, and places of historical interest.

Baltimore is justly proud of its well earned reputation as a center of the highest type of professional education, and no finer location could be chosen by a young man or young woman desiring to prepare for a professional career.

BRIEF HISTORY OF THE UNIVERSITY

While its advancement in recent years, both in the matter of physical plant facilities and educational standards has been especially rapid, the University has behind it a long and honorable history.

The history of the present University is the history of two institutions; the old privately-owned and operated University of Maryland in Baltimore and the Maryland State College (formerly Maryland Agricultural College) at College Park. These institutions were merged in 1920.

In 1807 the College of Medicine of Maryland was organized, the fifth medical school in the United States. The first class was graduated in 1810. A permanent home was established in 1814-1815 by the erection of the building at Lombard and Greene Streets in Baltimore, the oldest structure in America devoted to medical teaching. Here was founded one of the first medical libraries (and the first medical school library) in the United States. In 1812 the General Assembly of Maryland authorized the College of Medicine of Maryland to "annex or constitute faculties of divinity, law, and arts and sciences," and by the same act declared that the "colleges or faculties thus united should be constituted an university by the name and under the title of the University of Maryland." By authority of this act, steps were taken in 1813 to establish "a faculty of law," and in 1823 a regular school of instruction in law was opened. Subsequently there were added: in 1882 a Department of Dentistry which was absorbed in 1923 by the Baltimore College of Dental Surgery (founded in 1840, the first dental school in the world); in 1889 a School of Nursing; and in 1904 the Maryland College of Pharmacy (founded in 1841, the third oldest pharmacy college in the United States).

The Maryland State College was chartered in 1856 under the name of the Maryland Agricultural College, the second agricultural college in the Western Hemisphere. For three years the College was under private management. In 1862 the Congress of the United States passed the Land Grant Act. This act granted each State and Territory that should claim its benefits a proportionate amount of unclaimed western lands, in place of scrip, the proceeds from the sale of which should apply under certain conditions to the "endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." This grant was accepted by the General Assembly of Maryland, and the Maryland Agricultural College was named as the beneficiary of the grant. Thus the College became, at least in part, a State institution. In the fall of 1914 control was taken over entirely by the State. In 1916 the General Assembly granted a new charter to the College, and made it the Maryland State College.

In 1920, by an act of the State Legislature, the University of Maryland was merged with the Maryland State College, and the resultant institution was given the name, University of Maryland.

THE UNIVERSITY YEAR — FOUR QUARTER PLAN

In order to meet the emergency the University of Maryland adopted in 1943 a four quarter system. A student may either accelerate his graduation or complete his work in the usual four years. By attending all quarters a student may, in most curricula, graduate in three years.

The pre-medical, pre-dental, and pre-veterinary curricula may be taken in five quarters, or, if the student is under eighteen years of age, in six quarters.

Under the present plan the academic year is divided into four quarters of approximately twelve weeks each. In addition there is a summer session of six weeks, organized largely for the convenience of elementary and secondary school teachers.

ADMINISTRATIVE ORGANIZATION OF THE UNIVERSITY

The government of the University is, by law, vested in a Board of Regents, consisting of eleven members appointed by the governor of the State, each for a term of nine years. The administration of the University is vested in the president. The deans, directors and other principal officers of the University form the Administrative Board. This group serves in an advisory capacity to the president.

Following is a list of the administrative divisions of the University:

At College Park

College of Agriculture
College of Arts and Sciences
College of Business and Public Administration
College of Education
College of Engineering
College of Home Economics
Graduate School
Summer Session
Department of Military Science and Tactics

At Baltimore

School of Dentistry
School of Law
School of Medicine
School of Nursing
School of Pharmacy
University Hospital
College of Education (Baltimore Division)
Maryland State Board of Agriculture

Agricultural Experiment Station
Agricultural and Home Economics Extension Service

State-Wide Activities

The Agricultural and Home Economics Extension Service maintains local representatives in every county of the State. These representatives, County Agents and Home Demonstration Agents provide expert assistance to farmers and farm families in their areas and, when necessary, call upon the large staff of specialists at the headquarters of the Extension Service at College Park.

The Live Stock Sanitary Service, which is charged with responsibility for the control and eradication of diseases of live stock and poultry, maintains local veterinary inspectors throughout the State, in addition to specialists and laboratory technicians at the main laboratory at College Park and the branch laboratories in Salisbury, Centreville and Baltimore.

PHYSICAL FACILITIES — GROUNDS, BUILDINGS AND EQUIPMENT

College Park

Grounds. The University grounds at College Park comprise 600 acres. A broad rolling campus is surmounted by a commanding hill which overlooks a wide area and insures excellent drainage. Most of the buildings are located on this eminence, and the adjacent grounds are laid out attractively in lawns and terraces ornamented with shrubbery and flower beds. Below the brow of the hill, on either side of the Washington-Baltimore Boulevard, lie the drill grounds and the athletic fields.

Approximately 300 acres are used for research and teaching in horticulture, agriculture, dairying, livestock, and poultry; and an additional 500 acres for plant research work are located on a farm five miles northwest of the campus.

Buildings. The buildings comprise about 30 individual structures, which provide facilities for the several activities and services carried on at College Park.

Administration and Instruction. This group consists of the following buildings: *Administration Building*, which accommodates the Office of the President, Dean of Men, Comptroller, Registrar, Director of Admissions, Director of Athletics, and Alumni Secretary; *Agriculture Building*, which houses the College of Agriculture, Agricultural and Home Economics Extension Service and Auditorium; *Arts and Sciences Building, Engineering Building, Morrill Hall*, which houses a portion of the work in the Sciences; *Poultry Building; Horticulture Building; Dairy Building; Dean of Women's Building*, in which are the offices of the Dean of Women and her staff; *Music Building*, which provides accommodations for the Department of Music, the student band, and glee club; *Home Economics Building; Chemistry Building*, in which are located laboratories and classrooms for instruction in chemistry, and laboratories for analysis of feeds, fertilizers, and lime; and *College of Education Building*. A new *Shop Building* has just been completed.

Experiment Station. The headquarters for the Agricultural Experiment Station are in the Agriculture Building. The laboratories and green houses for this work are located in various buildings on the campus.

Physical Education. This group consists of *the Ritchie Coliseum*, which provides quarters for all athletic teams, an athletic office, trophy room, and

visiting team rooms, together with a playing floor and permanent seating arrangements for 4,262 persons; *Byrd Stadium,* with a permanent seating capacity of 8,000, is furnished with rest rooms for patrons, dressing rooms, and equipment for receiving and transmitting information concerning contests in progress; *Gymnasium-Armory,* used in part by the Military Department, and for physical education work for men; and the *Girls' Field House,* for all girls' sports. Playing and practice fields and tennis courts are adjacent to the field houses.

Armory. A new Armory, considered one of the finest structures of its kind in the nation, is modern in every respect. It houses the Department of Military Science and Tactics.

Dormitories. The men's dormitory group, consisting of nine buildings, of brick, fireproof construction, provides accommodations for 860 men students. The women's residence group consists of two modern dormitories of Colonial architecture, accommodating 228 women students. These are designated as Margaret Brent Hall and Anne Arundel Hall.

Rossborough Inn. This historic Inn, built in 1798, is the oldest building on the campus and for many years housed the Agricultural Experiment Station. Entirely restored, this is now one of the most beautiful and interesting buildings on the campus.

Service Structures. This group includes the *Central Heating Plant; Plant Maintenance and Operations Building; Infirmary,* with accommodations for forty patients, physician's office, operating room, and nurses' quarters; and *Dining Hall.*

United States Bureau of Mines. The Eastern Experiment Station of the United States Bureau of Mines is located on the University grounds. The general laboratories are used for instruction purposes in Engineering as well as the United States Government for Experimental work. The building contains a geological museum, and a technical library.

United States Fish and Wildlife Service Laboratory. The technological research laboratory of the U. S. Fish and Wildlife Service is located on the University campus. It contains laboratories for conduct of research in the fisheries dealing with chemical, chemical engineering, bacteriological, nutritional, and biological subjects. Through a cooperative arrangement with the University it is possible for students, who have undergraduate degrees, to pursue studies toward graduate degrees in any of the subjects mentioned above.

Baltimore

The group of buildings, located in the vicinity of Lombard and Greene Streets, provides available housing for the Baltimore division of the University. The group comprises the original *Medical School Building,* erected in 1814; the *Old Hospital,* now used as a dispensary; the *New University Hospital* with approximately 450 beds; the *Frank C. Bressler Research Laboratory;* the *Dental and Pharmacy Building;* the *Nurses' Home;* the *Law School Building; Davidge Hall,* which houses the Medical library; and the *Administration Building.*

LIBRARY FACILITIES

Libraries are located at both the College Park and Baltimore divisions of the University.

The General Library at College Park, completed in 1931, is an attractive and well-equipped structure. The main reading room on the second floor seats 236, and has about 5,000 reference books and bound periodicals on open shelves. The five-tier stack room is equipped with carrels and desks for the use of advanced students. About 10,000 of the 108,000 volumes on the campus are shelved in the Chemistry and Entomology departments, the Graduate School, and other units. Over 900 periodicals are currently received.

Facilities in Baltimore consist of the Libraries of the School of Dentistry, containing some 10,500 volumes; the School of Law, 19,000 volumes; the School of Medicine, 23,000 volumes; and the School of Pharmacy, 9,500 volumes. The Medical Library is housed in Davidge Hall; the remaining three libraries have adequate quarters in the buildings of their respective schools, where they are readily available for use. Facilities for the courses in Arts and Sciences are offered jointly by the Libraries of the Schools of Dentistry and Pharmacy.

The libraries of the University total in the aggregate 170,000 bound volumes. The General Library is a depository for publications of the United States Government, and numbers some 15,000 documents in its collections.

The University Library System is able to supplement its reference service by borrowing material from other libraries through Inter-Library Loan or Bibliofilm Service, or by arranging for personal work in the Library of Congress, the United States Department of Agriculture Library, and other agencies in Washington.

ADMISSION PROCEDURE

Undergraduate Schools: Applicants for admission to the College of Agriculture, Arts and Sciences, Business and Public Administration, Education, Engineering, and Home Economics should communicate with the Director of Admissions, University of Maryland, College Park, Maryland.

Graduate School: Those seeking admission to the Graduate School should address the Dean of the Graduate School, University of Maryland, College Park.

Professional Schools: Information about admission to the professional schools in Baltimore may be had by writing to the dean of the college concerned or to the Director of Admissions of the University.

Applicants from Secondary Schools: Procure an application blank from the Director of Admissions. Fill in personal data requested and ask your principal or headmaster to enter your secondary school record and mail the blank to the Director of Admissions.

To avoid delay, it is suggested that applications be filed not later than May 1 for the summer quarter, August 1 for the fall quarter, December 1

for the winter quarter, and March 1 for the spring quarter. Applications from students completing their last semester of secondary work are encouraged. If acceptable supplementary records may be sent upon graduation.

Applicants from Other Colleges and Universities: Secure an application blank from the Director of Admissions. Fill in personal data requested and ask secondary school principal or headmaster to enter secondary school record and send the blank to the Director of Admissions. Request the Registrar of the College or University attended to send a transcript to the Director of Admissions, College Park, Maryland.

Time of Admission: New students should plan to enter the University at the beginning of the summer quarter, in July, if possible. Students, however, will be admitted at any quarter.

ADMISSION OF FRESHMEN

Admission by Certificate: Graduates of accredited secondary schools of Maryland or the District of Columbia will be admitted by certificate upon the recommendation of the principal. Graduates of out-of-state schools should have attained college certification marks, such marks to be not less than one letter or ten points higher than the passing mark.

Graduates who fail to obtain the principal's recommendation will be considered by the Committee on Admissions. Supplementary information, including aptitude tests, will determine whether they are eligible for admission.

TRANSFER STUDENTS

Only students in good standing as to scholarship and conduct are eligible to transfer. Advanced standing is assigned to transfer students from accredited institutions under the following conditions:

1. A minimum on one year of resident work of not less than 45 quarter hours is necessary for a degree.
2. The University reserves the right at any time to revoke advanced standing if the transfer student's progress is unsatisfactory.

SUBJECT REQUIREMENTS

English	4 units required for all divisions of the University.
Mathematics	3½ units, including Solid Geometry, required for Engineering, Mathematics, Physics and Chemistry. One unit each of Algebra and Plane Geometry is desirable for Arts and Sciences and Public and Business Administration. Deviation may be allowed for certain curricula and for other colleges of the University.
Social Science; Natural and Biological Science	1 unit from each group is required; two are suggested.

Foreign Languages	None is required. However, those who will follow the professions, enter journalism, foreign trade or service, study the humanities or do research, should have a good foundation in one or more.
Electives	Fine Arts, trade and vocational subjects are acceptable. In selecting students more emphasis will be placed upon good marks and other indications of probable success in college than upon a fixed pattern of subject matter.

Special Students: Applicants who are at least twenty-one years of age, and who have not completed the usual preparatory course, may be admitted to such courses as they seem fitted to take. Special students are ineligible to matriculate for a degree until entrance requirements have been satisfied.

Unclassified Students: Applicants who meet entrance requirements but who do not wish to pursue a program of study leading to a degree are ineligible for admission to pursue courses for which they have met prerequisites.

REQUIREMENTS IN PHYSICAL EDUCATION FOR MEN AND WOMEN

All women students whose bodily condition indicates that they are physically fit for exercise are required to take physical education for a period of four years, as a prerequisite to graduation.

Men are likewise required to take physical education for a four-year period. During the present emergency this, for men, consists of three two-hour periods a week.

REGULATION OF STUDIES

Course Numbers. Courses are designated by numbers as follows:

Group I—Numbered 1 to 49—courses primarily for freshmen, and sophomores.

Group II numbered 50 to 99—courses for juniors and seniors.

Group III numbered 100 to 199—courses for advanced undergraduates (well-qualified juniors and seniors) and graduates.

Group IV numbered 200 to 299—courses for graduates only.

Schedule of Courses. A quarter time schedule of courses, giving days, hours, and rooms, is issued as a separate pamphlet at the beginning of each quarter. Classes are scheduled beginning at 8.20 A. M.

Definition of Credit Unit. The quarter hour, which is the unit of credit in the University, is the equivalent of a subject pursued one period a week for one quarter. Two or three periods of laboratory or field work are equivalent to one lecture or recitation period. The student is expected to devote three hours a week in classroom or laboratory, including outside preparation for each credit hour in any course.

Normal Student Load. The normal student load is from 15 to 19 quarter hours, according to curriculum and year.

Examinations. Examinations are held at the close of each quarter. Students are required to use the prescribed type of examination book in these tests.

Marking System: The following symbols are used for marks: A, B, C, and D, passing; F, Failure; I, Incomplete.

Mark A denotes superior scholarship; mark B, good scholarship; mark C, fair scholarship; and mark D, passing scholarship.

In computing scholastic averages, numerical values are assigned as follows: A—4; B—3; C—2; D—1; F—0.

A scholastic average of C is required for graduation and for junior standing.

Academic Regulations. A separate pamphlet is published each year listing the regulations which govern the academic work and other activtities of students.

REPORTS

Written reports of grades are sent by the Registrar to parents or guardians at the close of each quarter.

DELINQUENT STUDENTS

A student must attain passing marks in fifty per cent of the quarter hours for which he is registered, or he is automatically dropped from the University. The Registrar notifies the student, his parent or guardian, and the student's dean of this action. A student who has been dropped for scholastic reasons may appeal in writing to the Committee on Admission, Guidance, and Adjustment for reinstatement. The Committee is empowered to grant relief for just cause. A student who has been dropped from the University for scholastic reasons, and whose petition for reinstatement is denied, may again petition after a lapse of at least one quarter.

The University reserves the right to request at any time the withdrawal of a student who cannot or does not maintain the required standard of scholarship, or whose continuance in the University would be detrimental to his or her health, or to the health of others, or whose conduct is not satisfactory to the authorities of the University. **Students of the last class may be asked to withdraw even though no specific charge be made against them.**

According to University regulations, excessive absence from any course is penalized by failure in that course. Students who are guilty of persistent absence from any course will be reported to the President or to his appointed representative for final disciplinary action.

JUNIOR STANDING

No student will be certified as a junior, or be permitted to select a major or minor, or to continue in a fixed curriculum until he or she shall have

passed with an average grade as high as C (2.0) the minimum number of quarter credits required for junior standing in any curriculum.

DEGREES AND CERTIFICATES

The University confers the following degrees: Bachelor of Arts, Bachelor of Science, Master of Education, Master of Arts, Master of Science, Master of Business Administration, Doctor of Philosophy, Civil Engineer, Mechanical Engineer, Electrical Engineer, Chemical Engineer, Bachelor of Laws, Doctor of Medicine, Doctor of Dental Surgery, and Bachelor of Science in Pharmacy.

Students in the two-year and three-year curricula are awarded certificates.

No baccalaureate degree will be awarded to a student who has had less than one year of resident work in this University. The last forty-five credits of any curriculum leading to a baccalaureate degree must be taken in residence at the University of Maryland. Candidates for the baccalaureate degree in combined curriculums at College Park and Baltimore must complete a minimum of forty-five quarter credits at College Park.

An average mark of C is required for graduation. In the case of a candidate for a combined degree or of a transfer student with advanced standing, a grade of D will not be recognized for credit towards a degree in more than one-fourth of the credits earned at this institution.

The requirements for graduation vary according to the character of work in the different colleges and schools. Full information regarding specific college requirements for graduation will be found in the college sections of the catalog.

Each candidate for a degree must file in the office of the Registrar three months prior to the date he expects to graduate, a formal application for a degree. Candidates for degrees must attend a convocation at which degrees are conferred and diplomas are awarded. Degrees are conferred in *absentia* only in exceptional cases.

DEFINITION OF RESIDENCE AND NON-RESIDENCE

Students who are minors are considered to be resident students, if at the time of their registration their parents* have been residents of this State† for at least one year.

Adult students are considered to be resident students, if at the time of their registration they have been residents of this State† for a least one year; provided such residence has not been acquired while attending any school or college in Maryland.

The status of the residence of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents* move to and become legal

*The term "parents" includes persons who, by reason of death or other unusual circumstances, have been legally constituted the guardians of and stand *in loco parentis* to such minor students.

residents of this State†, by maintaining such residence for at least one full calendar year. However, the right of the student (minor) to change from a non-resident to a resident status must be established by him prior to registration for a semester in any academic year.

FEES AND EXPENSES

General

All checks or money orders should be made payable to the University of Maryland for the exact amount of the charges.

In cases where students have been awarded Legislative Scholarships or University Grants, the amount of such scholarship or grant will be deducted from the bill.

All fees are due and payable at the time of registration, and students should come prepared to pay the full amount of the charges. No student will be admitted to classes until such payment has been made.

The University reserves the right to make such changes in fees and other charges as may be found necessary. For example, board and lodging may vary from quarter to quarter, although every effort will be made to keep the costs to the student as low as possible.

No degree will be conferred upon, nor any diploma or certificate awarded to, a student who has not made satisfactory settlement of his account.

War Ration Books

Each student who boards in the University Dining Hall is required to present all War Ration Books for food rations at one of the desks in the registration line **before he receives his dining hall card.** When he pays his bill he will not receive his dining hall card of admission unless the bill is stamped that his ration books have been filed with the dining hall representative. If any stamp in the book is designated for some article other than food the book will be returned to the student for such time as he may need it.

†Students in the College Park Colleges who are residents of the District of Columbia are charged two-fifths of the non-resident fee charged to other non-residents.

Fees for Undergraduate Students

	Summer Quarter	Fall Quarter	Winter Quarter	Spring Quarter
Maryland Residents				
Fixed Charges	$48.50	$48.50	$48.50	$48.50
Athletic Fees	5.00	15.00		
Special Fees	5.00	10.00		
Student Activities Fees	5.00	10.00		
Infirmary Fees	2.00	2.00	2.00	2.00
Post Office Fees	1.00	1.00	1.00	1.00
Advisory and Testing Fee	.50	.50	.50	.50
Total for Maryland Residents	$67.00	$87.00	*$52.00	†$52.00
District of Columbia Residents				
Non-Resident Fee for students from District of Columbia in addition to fees shown above	17.00	17.00	17.00	17.00
Total for District of Columbia Students	$84.00	$104.00	*$69.00	†$69.00
Residents of Other States and Countries				
Non-Resident Fee for students from other states and countries in addition to fees shown above	$42.00	$42.00	$42.00	$42.00
Total for Non-Resident Students	$109.00	$129.00	*$94.00	†$94.00
Board and Lodging				
Board	$110	$110	$110	$110
Dormitory Room	$28—$45	$28—$45	$28—$45	$28—$45
Total for Board and Room	$138—155	$138—155	$138—155	$138—155

The Special Fee is used for improving physical training facilities and for other University projects that have direct relationship to student welfare, especially athletics and recreation. This fee now is devoted to a fund for construction of a stadium, an addition to the coliseum, and a swimming pool, as soon as the fund is sufficient and materials are available.

The Students Activities Fee is included at the request of the Student Government Association. Its payment is not mandatory, but it is really a matter of economy to the student, since, in normal times, it covers subscription to the student newspaper, the magazine and the yearbook; class dues, including admission to class dances and to the performances of the musical and dramatic clubs. There will be some curtailment of this program until after the war.

*Students entering the University for the winter quarter will pay the following additional fees: Athletic, $10.00; Special, $5.00; Student Activities, $7.50.

†Students entering the University for the Spring quarter will pay the following additional fees: Athletic, $5.00; Special, $5.00; Student Activities, $5.00.

Other Fees and Charges

Matriculation Fee for undergraduates, payable at time of first registration in the University $5.00
Engineering College Fee 2.00
Home Economics College Fee 6.00
Special Fee for students enrolled in Pre-Medical or Pre-Dental course:
For Residents of Maryland 17.00
For Residents of the District of Columbia 17.00
For Residents of other states or countries 42.00
Fee for part-time students per credit hour 4.00
(The term "part-time students" is interpreted to mean undergraduate students taking 6 quarter credit hours or less. Students carrying more than 6 quarter hours pay the regular fees.)
Laboratory Fees—Fees are charged in Chemistry, Bacteriology, Botany, Physics, Home Economics and other Science subjects, per course ..... 1.00 to 8.00
Late Registration Fee ..... 3.00 to 5.00
(All students are expected to complete their registration, including the filing of class cards and payment of bills, on the regular registration days. Those who complete their registration one day late will be charged a fee of $3.00, and those who are more than one day late will be charged $5.00.)
Fee for change in registration after first week of instruction 1.00
Fee for failure to report for medical examination appointment 2.00
Special Examination Fee—to establish college credit—per quarter hour 3.50
Makeup Examination Fee—(for students who are absent during any class period when tests or examinations are given) 1.00
Transcript of Record Fee 1.00
Diploma Fee for Bachelor's degree, payable just prior to graduation 10.00
Property Damage Charge—Students will be charged for damage to property or equipment. Where responsibility for the damage can be fixed, the individual student will be billed for it; where responsibility can not be fixed, the cost of repairing the damage or replacing equipment will be pro-rated.
Library Charges:
Fine for failure to return book from general library before expiration of loan period ..... .05 per day
Fine for failure to return book from Reserve Shelf before expiration of loan period—

First hour overdue ..... .25
Each additional hour overdue ..... .05
In case of loss or mutilation of a book, satisfactory restitution must be made.
Text books and classroom supplies—These costs vary with the course pursued, but will average per quarter 18.00

Fees for Graduate Students

Tuition charge for students carrying more than 8 quarter credit hours 34.00
Tuition charge for students carrying 8 quarter credit hours or less 4.00
Post Office Fee, payable by all students 1.00
Matriculation Fee, payable only once, at time of first registration .. 10.00
Diploma Fee (For Master's Degree) 10.00
Graduation Fee (For Doctor's Degree) 20.00

Notes: Fees in the Graduate School are the same for all students, whether residents of the State of Maryland or not.
All fees, except Diploma Fee and Graduation Fee, are payable at the time of registration for each quarter.
Diploma Fee and Graduation Fee must be paid prior to graduation.

Fees for Evening Courses

Matriculation Fee (Payable once, at time of first registration by all students—full time and part time; candidates for degrees, and non-candidates).
For Undergraduates 5.00
For Graduates 10.00
Tuition Charge (same for all students)—Limit six hours, per credit hour 4.00
Laboratory Fees—A small laboratory fee, to cover cost of materials used, is charged in laboratory courses. These fees vary with the course and can be ascertained in any case by inquiry of the Director of Evening Courses, or the instructor in charge of the course.

WITHDRAWAL AND REFUND OF FEES

If a student desires or is compelled to withdraw from the University at any time during the academic year, he should file a formal application for withdrawal, bearing the proper signatures as indicated on the form, with the Registrar's Office. A copy of this withdrawal application form may be obtained from the office of the Dean of the College in which the student is registered, or from the Registrar.

In the case of a minor, withdrawal will be permitted only with the written consent of the student's parent or guardian.

A student who fails to withdraw in the required manner will not be entitled to an honorable dismissal and will forfeit his right to any refund to which he might otherwise be entitled.

Students withdrawing from the University within five days after the beginning of instruction for the quarter are granted a full refund of all charges except board and lodging, with a deduction of $5.00 to cover cost of registration. Board and lodging are refunded on a pro-rata basis.

Students withdrawing from the University after five days and before the end of three weeks from the beginning of instruction in any quarter will receive a pro-rata refund of all charges, less a deduction of $5.00 to cover cost of registration. After the expiration of the three-week period referred to, refunds will be made only for board. The refund for this item will be on a pro-rata basis.

TRANSCRIPTS OF RECORDS

Any student or alumnus may secure a transcript of his scholastic record from the Registrar. No charge is made for the first copy so furnished, but for each additional copy, there is a charge of $1.00.

Transcripts of records are of two kinds:

(a) Informal transcripts which may be obtained by the student or alumnus for such personal use as he may wish; and

(b) Official transcripts, bearing the University seal which are forwarded, on request, to educational institutions, Government agencies, etc., as attested evidence of the student's record at the University and his honorable dismissal therefrom.

Persons desiring transcripts of records should, if possible, make request of the Registrar for same at least one week in advance of the date when the records are actually needed.

No transcript of a student's record will be furnished in the case of any student or alumnus whose financial obligations to the University have not been satisfied.

REQUIREMENT IN MILITARY INSTRUCTION

All male students classified academically as freshmen or sophomores, who are citizens of the United States, and physically fit to perform military duty and not less than 14 or more than 26 years of age, are required to take basic military training for a period of two years as a prerequisite to graduation. Any student excused from taking basic military instruction because of a physical disability must take physical education. Physical disabilities must be substantiated by examination at the University Health Center.

Transfer students who do not have the required two years of military training will be required to take military until the completion of the required two years or until graduation.

STUDENT HEALTH AND WELFARE

The University recognizes its responsibility for safeguarding the health of its student body and takes every reasonable precaution towards this end. Each student should present his physical examination from his family physician at the time of his entrance at the University. In exceptional cases, if it is impossible to get this examination, it will be given by the University Health Service. In addition to health instruction which is given to all freshman and sophomore students, a modern, well equipped infirmary is available for the care of sick or injured students. A small fee is charged undergraduate students for this infirmary service.

Physical Examinations

Owing to the scarcity of medical service, each student is asked to bring with him his medical examination by his family physician. The University furnishes a uniform blank for these examinations. In case it is impossible for the entering student to receive a physical before entrance, a physical examination will be given at the University Health Service.

Infirmary Service and Regulations

1. All undergraduate students may receive dispensary service and medical advice at the Infirmary during regular office hours established by the physician in charge.

Nurses' office hours, 8 to 10 A. M.—1 to 2 P. M.—4 to 5 P. M. In the evening for emergency only.

Doctor's office hours, 11 A. M. to 1 P. M. daily except Sunday. Other times by appointment only.

2. A registered nurse is on duty at all hours in the Infirmary. Students are requested to report illnesses during office hours unless the case is an emergency.

3. Students not living in their own homes who need medical attention and who are unable to report to the Infirmary should call one of the University physicians. Such visits will be free of charge except in cases where additional visits are necessary. For such additional visits as may be necessary, the University physician will make his usual charge.

4. Students not residing in their own homes may, upon the order of the University physician, be cared for in the Infirmary to the extent of the facilities available. Students who live off the campus will be charged a fee of one dollar and a quarter a day.

5. The visiting hours are 10 to 11 A. M. and 7 to 7:30 P. M. daily. Each patient is allowed only three visitors at one time. No visitor may see any patient until permission is granted by the nurse in charge.

6. Hospitalization is not available at the Infirmary for graduate students and employees. Dispensary service, however, is available for graduate students and employees who are injured in University service or University activities.

7. Students living in the dormitories, who are ill and unable to attend classes, must report to the Infirmary, between 8:00 and 9:00 A. M. If they are too ill to go to the Infirmary, they must notify the house mother so that the physician can be called to the dormitory. When possible this should be done before 8:30 A. M. If a student is taken sick at any other time he must report to the Infirmary, before going to his room.

8. For employees of the University who handle food and milk, the University reserves the right to have its physician make physical examinations, and such inspections of sanitary conditions in homes as in the opinion of the University physician, may be desirable.

In case of illness requiring a special nurse or special medical attention, the expense must be borne by the student.

LIVING ARRANGEMENTS

Dormitories

Room Reservations. All new students desiring to room in the dormitories should request room application cards, being careful to check the admissions blank properly if housing accommodations are needed. The Director of Admissions will refer these to the offices of the Dean of Men and Dean of Women respectively. Application cards or blanks will be sent to applicants and should be returned promptly. A fee of $15.00 will be requested which will be deducted from the first quarter charges when the student registers. Room reservations not claimed by freshmen or upper-classmen on their respective registration days will be cancelled. A room will be held by special request until after classes begin providing the dormitory office is notified by the first day of registration. Room reservation fees will not be refunded if the request is received later than one month before the first day of registration for the quarter for which arrangements were made.

Reservations by students in attendance at the University should be made at least two weeks before the close of the preceding quarter. New students are urged to attend to their housing arrangements about three months in advance of registration.

All freshmen men except those who live at home, are required to room in the dormitories.

There are two dormitories on the campus for women, each under the supervision of a Director of Residence and the Office of Dean of Women.

Annexes

There are four dormitory annexes, formerly fraternity houses now operated as dormitory residences. Annex A was formerly Phi Delta Theta fraternity house; Annex B was formerly Kappa Alpha fraternity house; Annex C was formerly Alpha Gamma Rho fraternity house; and Annex D was formerly Sigma Chi fraternity house.

All housing arrangements for women students must be approved by the Office of the Dean of Women.

Applications for rooms are considered only when a student has been fully admitted academically to the University. A student for whom a reservation has been made should report at registration time to the dormitory to which he or she has been assigned.

Equipment

Students assigned to dormitories should provide themselves with sufficient single blankets, at least two pairs of sheets, a pillow, pillow cases, towels, a laundry bag, and a waste paper basket.

The individual student must assume responsibility for all dormitory property assigned to him. Any damage done to the property other than that which would result from ordinary wear and tear will be charged to the student concerned.

It is understood that all housing arrangements which are made for the fall quarter are binding for the winter and spring quarters also.

Each student will be furnished a key for his room for which a deposit of $1.00 will be made. This deposit will be returned in exchange for the key at the end of the year.

Laundry. The University does not provide laundry service and each student is responsible for his or her own laundry. There are several reliable laundry concerns in College Park; or if a student prefers, he may send his laundry home. Women students may, if they wish, do their own laundry in the laundry room in each dormitory, not including bed linen.

Personal baggage sent via the American Express and marked with a dormitory address will be delivered when the student concerned notifies the College Park express office of his arrival.

OFF-CAMPUS HOUSES

Men: Only upper classmen are allowed to live in houses not under the control of the University. Inquiries about these should be addressed to the Office of the Dean of Men.

Women: Undergraduate women students who cannot be accommodated in the women's dormitories are referred to private homes which are registered in the Office of the Dean of Women as "Off-Campus Houses for Undergraduate Women." The householders in these homes agree to maintain the same rules and regulations as in the dormitories but business arrangements are made entirely between the student and the householder. Students and their parents should plan to see these accommodations personally and talk with the householder before making final arrangements. No woman student should enter into an agreement with a householder without first ascertaining at the Office of the Dean of Women that the house is on the approved list.

Meals

All students who live in University dormitories must board at the University Dining Hall.

Students not living in the dormitories may make arrangements to board by the quarter at the Dining Hall, get their meals in the University Cafeteria or at eating establishments in College Park. A few "off-campus" houses provide board as well as room.

Estimated Expenses of "Off-Campus" Residence

Most of these houses have only double rooms with twin beds. The student provides her own linens as in the dormitory. Price per person for room is about $15.00 a month, all rooms being registered with the rent control board.

No rebate is made for meals not eaten at the University Dining Hall or in other places where board is paid in advance. Therefore, with care, students may save enough money on their meals to make up for the difference in rent between the off-campus houses and the dormitory. Some even find this less expensive.

Girls may find desirable rooms in good homes where they can earn their room and board by applying to the Office of the Dean of Women.

OFFICE OF THE DEAN OF WOMEN

The Office of the Dean of Women exists for the purpose of furnishing friendly counsel and helpful guidance to women students in connection with any of their personal problems, especially those relating to financial need, employment, housing, etc. In addition, it coordinates the interests of women students, handles matters of chaperonage at social functions, regulation of sorority rushing in cooperation with Panhellenic Association, and so forth. It has supervision over all housing accommodations for women students, whether on or off campus. A personal interview with one of the Deans of Women is required of every woman student on entering and on leaving the University. Any woman student is invited to avail herself of all of the services of this department.

OFFICE OF THE DEAN OF MEN

The Office of the Dean of Men exists for the purpose of furnishing friendly counsel and helpful guidance to male students in connection with any of their personal problems, especially those relating to financial need, employment, housing, etc. This office also handles for male students matters of discipline and infringement of University regulations.

ADDITIONAL PERSONNEL SERVICES

The above services are closely coordinated with the activities of the Psychological Testing Bureau which also provides academic and vocational counseling. Remedial work in reading and in speech are available through the College of Education and the Department of Speech respectively. All of the above services are available to the student without fee.

STUDENT AID

Legislative Scholarships

By Act of the Maryland Legislature in 1941, members of the Legislature were given the privilege of awarding scholarships to worthy students from their respective districts.

Students desiring these scholarships are requested to contact either a State Senator or a member of the House of Delegates in their respective districts.

University Scholarships

The University of Maryland offers a limited number of scholarships covering fixed charges to graduates of high schools or preparatory schools. Inquiries should be addressed to the Secretary of the Scholarship Committee.

Albright Scholarship

A scholarship, known as the Victor E. Albright Scholarship, is open to graduates of Garrett County High Schools who were born and reared in that county. Application should be made to the high school principals.

Sears Roebuck Agricultural Foundation Grants

A limited number of scholarships have been made available by the Sears Roebuck Agricultural Foundation for young men who have been reared on farms in the State of Maryland and who enroll as freshmen in the College of Agriculture. These grants apply only in the freshman year.

Applications may be obtained from H. F. Cotterman, Assistant Dean of the College of Agriculture.

Graduate Fellowships

For information concerning Graduate Fellowships, see Graduate School.

STUDENT LOAN FUNDS

The Kappa Kappa Gamma Sorority Loan. Annually a Sigma Delta loan of one hundred dollars, without interest, is made to a woman student registered in the University of Maryland. Application should be made to the Dean of the College in which the student is registered.

A. A. U. W. Loan. The College Park Branch of the American Association of University Women maintains a fund from which loans are made to women students of junior or senior standing who have been in attendance at the University of Maryland for at least one year. Application blanks may be obtained through the Office of the Dean of Women.

Catherine Moore Brinkley Loan Fund. Under the provisions of the will of Catherine Moore Brinkley a loan fund has been established, available for worthy students who are natives and residents of the State of Maryland, studying mechanical engineering or agriculture at the University of Maryland. Details concerning loans and application for loans should be made to the Secretary of the Scholarship Committee.

Home Economics Loan Fund. A small loan fund, established by the District of Columbia Home Economics Society, is available for students majoring in Home Economics.

From time to time other funds are made available by various women's organizations in the State of Maryland. Information regarding these may be secured upon request from the Office of the Dean of Women.

STUDENT EMPLOYMENT

A considerable number of students earn some money through employment while in attendance at the University. No student should expect, however, to earn enough to pay all of his expenses. The amounts vary, but some earn from one-fourth to three-fourths of all the required funds.

Generally the first year is the hardest for those desiring employment. After one has demonstrated that he is worthy and capable, there is much less difficulty in finding work.

The University assumes no responsibility in connection with employment. It does, however, make every effort to aid needy students. The nearby towns and the University are canvassed, and a list of available positions is placed at the disposal of students. Applications for employment should be made to the Dean of Men.

HONORS AND AWARDS

Scholarship Honors. Final honors for excellence in scholarship are awarded to one-fifth of the graduating class in each college. *First honors* are awarded to the upper half of this group; *second honors* to the lower half. To be eligible for honors, at least two years of resident work must be completed.

The Goddard Medal. The James Douglas Goddard Memorial Medal is awarded annually to the resident of Prince Georges County, born therein, who makes the highest average in his studies and who at the same time embodies the most manly attributes. The medal is given by Mrs. Anne K. Goddard James, of Washington, D. C.

Sigma Chi Medal. Sigma Chi Fraternity offers annually a gold medal to the man in the freshman class who makes the highest scholastic average during the first semester.

Alpha Zeta Medal. The Honorary Agricultural Fraternity of Alpha Zeta awards annually a medal to the agricultural student in the freshman class who attains the highest average record in academic work. The mere presentation of the medal does not elect the student to the fraternity, but simply indicates recognition of high scholarship.

Dinah Berman Memorial Medal. The Dinah Berman Memorial Medal is awarded annually to the sophomore who has attained the highest scholastic average of his class in the College of Engineering. The medal is given by Benjamin Berman.

Mortar Board Scholarship Cup. This is awarded to the senior girl who has been at the University for four years, and who has made the highest scholastic average for three and one-half years.

Delta Delta Delta Medal. This sorority awards a medal annually to the girl who attains the highest average in academic work during the sophomore year.

Class of '26 Honor Key. The Class of 1926 of the School of Business Administration of the University of Maryland at Baltimore offers each year a gold key to the senior graduating from the College of Commerce with the highest average for the entire four year course taken at the University of Maryland.

American Institute of Chemists Medal. The American Institute of Chemists awards annually a medal and a junior membership to the graduating student of good character and personality, majoring in chemistry, who has attained the highest average grade in this major subject for the entire undergraduate course, exclusive of credit received for the final semester.

Omicron Nu Sorority Medal. This sorority awards a medal annually to the freshman girl in the College of Home Economics who attains the highest scholastic average during the first semester.

Bernard L. Crozier Award. The Maryland Association of Engineers awards a cash prize of $25.00 annually to the senior in the College of Engineering who, in the opinion of the faculty, has made the greatest improvement in scholarship during his stay at the University.

Alpha Lambda Delta Award. The Alpha Lambda Delta Award is given to the senior member of the group who has maintained the highest average for the past three and one-half years. She must have been in attendance in the institution for the entire time.

American Society of Civil Engineers Award. The Maryland Section of the American Society of Civil Engineers awards annually a junior membership in the American Society of Civil Engineers to the senior in the Department of Civil Engineering who, in the opinion of the faculty of the Department, is the outstanding student in his class.

Tau Beta Pi Certificate of Merit. The Maryland Beta Chapter of Tau Beta Pi awards annually a certificate of merit to the initiate of the Chapter who, in the opinion of the members, has presented the best thesis during the year.

The Charles B. Hale Dramatic Awards. The Footlight Club recognizes annually the man and woman members of the senior class who have done most for the advancement of dramatics at the University.

Sigma Alpha Omicron Award. This is awarded to the senior student majoring in Bacteriology for high scholarship, character and leadership.

Hillegeist Memorial Award. This is offered annually by Mrs. W. M. Hillegeist in memory for her husband for excellence in English.

CITIZENSHIP AWARDS

Citizenship Prize for Men. An award is presented annually by President H. C. Byrd, a graduate of the Class of 1908, to the member of the senior class who, during his collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

Citizenship Prize for Women. The Citizenship Prize is offered by Mrs. Albert F. Woods, wife of a former president of the University of Maryland, to the woman member of the senior class who, during her collegiate career, has most nearly typified the model citizen, and has done most for the general advancement of the interests of the University.

MILITARY AWARDS

Mahlon N. Haines '94 Trophy. This is offered to the major of the winning battalion.

Military Department Award. Gold second lieutenant's insignia to the major of the winning battalion.

The Governor's Cup. This is offered each year by His Excellency, the Governor of Maryland, to the best drilled company.

Company Award. The Reserve Officers' Association, Montgomery County Chapter, awards annually to the captain of the best drilled company of the University, gold second lieutenant's insignia.

The Alumni Cup. The Alumni offer each year a cup to the commanding officer of the best drilled platoon.

Scabbard and Blade Cup. This cup is offered to the commander of the winning platoon.

Class of '99 Gold Medal. The class of 1899 offers each year a gold medal to the member of the battalion who proves himself the best drilled soldier.

A Gold Medal is awarded to the members of the varsity R. O. T. C. Rifle Team who fired the high score of each season.

A Gold Medal is awarded to the members of the Freshman Rifle Team who fired the high score of each season.

Pershing Rifle Medals are awarded to each member of the winning squad in the squad drill competition.

Pershing Rifle Medals are awarded to the three best drilled students in Pershing Rifles.

Mehring Trophy Rifle Competition. A Gold Medal is awarded to the student firing highest score in this competition. **A Silver Medal** is given to the student showing greatest improvement during the year in this competition.

ATHLETIC AWARDS

Silvester Watch for Excellence in Athletics. A gold watch is offered annually to "the man who typified the best in college athletics." The watch is given in honor of a former President of the University, R. W. Silvester.

Maryland Ring. The Maryland Ring is offered by Charles L. Linhardt to the Maryland man who is adjudged the best athlete of the year.

Edward Powell Trophy. This trophy is offered by the class of 1913 to the player who has rendered the greatest service to lacrosse during the year.

Louis W. Berger Trophy. This trophy is awarded to the outstanding senior baseball player.

PUBLICATIONS AWARDS

Medals are offered in *Diamondback*, *Terrapin* and *Old Line* work, for the students who have given most efficient and faithful service throughout the year.

RELIGIOUS INFLUENCES

The University recognizes its responsibility for the welfare of the students, not solely in their intellectual growth, but as human personalities whose development along all lines, including the moral and religious, is included in the educational process. Pastors representing the major denominational bodies assume responsibility for work with the students of their respective faiths. Each of the Student Pastors also serves a local church of his denomination, which the students are urged to attend.

Committee on Religious Affairs and Social Service. A faculty committee on Religious Affairs and Social Service has as its principal function the stimulation of religious thought and activity on the campus. It brings noted speakers on religious subjects to the campus from time to time. The committee cooperates with the Student Religious Activities Council and the student pastors and assists the student denominational clubs in every way that it can. Opportunities are provided for students to consult with pastors representing the denominations of their choice.

While there is no attempt to interfere with anyone's religious beliefs, the importance of religions is recognized officially and religious activities are encouraged.

Denominational Clubs. Several religious clubs, each representing a denominational group, have been organized among the students for their mutual benefit and to undertake certain types of service. This year the list includes the Baptist Student Union, the Episcopal Club, the Lutheran Club, the Newman Club, the Hillel Foundation, the Methodist Club, and the Presbyterian Club. These clubs meet regularly for worship and discussion, and occasionally for social purposes. A pastor or a member of the faculty serves as adviser. A local Y. W. C. A. also provides a variety of activities and services on a non-denominational basis.

EXTRA-CURRICULAR STUDENT ACTIVITIES

The following description of student activties covers those of the undergraduate divisions of College Park. The descriptions of those in the Baltimore divisions is included elsewhere.

STUDENT GOVERNMENT

Regulation of Student Activities. The association of students in organized bodies for the purpose of carrying on voluntary student activities in orderly and productive ways, is recognized and encouraged. All organized student activities are under the supervision of the Student Life and Registration Committee, subject to the approval of the President. Such organizations are formed only with the consent of the Student Life and Registration Committee and the approval of the President. Without such consent and approval no student organization which in any way represents the University before the public, or which purports to be a University organization or an organization of University students, may use the name of the University in connection with its own name, or in connection with its members as students.

The Student Board. The Student Board performs the executive duties incident to managing student affairs, and works in cooperation with the Student Life and Registration Committee. It consists of the Student Chairman, Woman Member at Large, and First and Second Vice-Chairmen. Heads of major student organizations serve as ex-officio members.

The Women's Committee in cooperation with the Office of the Dean of Women, handles matters pertaining to women students, such as making and enforcing social rules, planning the Annual May Day celebration and other all-women's activities.

The Men's Committee, in cooperation with the Office of the Dean of Men, handles matters pertaining to men students.

The Victory Council is that part of the Student Board which is conducting various campaigns concerned with the war effort. Bond drives, scrap and salvage campaigns, blood donations and publicity efforts for such campaigns have been prosecuted very successfully by this group.

The Red Cross Unit is a subdivision of the local county chapter and directs all the activities of the American Red Cross as they concern the students on this campus.

The Student Life and Registration Committee, a faculty committee appointed by the President, keeps in close touch with all activities and conditions, excepting classroom work, that affect the student, and, acting in an advisory capacity, endeavors to improve any unsatisfactory conditions that may exist.

A pamphlet entitled **Academic Regulations,** issued annually and distributed to the students in the fall, contains full information concerning student matters as well as a statement of the rules of the University.

Eligibility to Represent the University. Only students in good standing are eligible to represent the University in extra-curricular contests. In addition, various student organizations have established certain other requirements. To compete in varsity athletics a student must pass the required number of hours as determined by the Athletic Board.

Discipline. In the government of the University, the President and faculty rely chiefly upon the sense of responsibility of the students. The student who pursues his studies diligently, attends classes regularly, lives honorably and maintains good behavior meets this responsibility. In the interest of the general welfare of the University, those who fail to maintain these standards are asked to withdraw. Students are under the direct supervision of the University only when on the campus, but they are responsible to the University for their conduct wherever they may be.

FRATERNITIES, SORORITIES, SOCIETIES AND CLUBS

General Statement

Fraternities and sororities, as well as all other clubs and organizations recognized by the University, are expected to conduct their social and financial activities in accordance with the rules of good conduct and upon sound business principles. Where such rules and principles are observed, individual members will profit by the experience of the whole group, and thereby become better fitted for their life's work after graduation. Rules governing the different activities will be found in the list of Academic Regulations.

Honorary Fraternities. Honorary fraternities and societies in the University at College Park are organized to uphold scholastic and cultural standards. These are Phi Kappa Phi, a national honorary fraternity open to honor students, both men and women, in all branches of learning; Sigma Xi, an honorary scientific fraternity; Omicron Delta Kappa, men's national honor society, recognizing conspicuous attainment in non-curricular activities and general leadership; Mortar Board, the national senior honor society for women recognizing service, leadership and scholarship; Alpha Lambda Delta, a national freshmen women's scholastic society requiring a 3.5 average; Phi Eta Sigma, national freshmen honor society for men. A group of honorary fraternities encourage development in specialized endeavor. These are Alpha Zeta, a national honorary agriculture fraternity recognizing scholarship and student leadership; Tau Beta Pi, a national honorary engineering fraternity; Alpha Chi Sigma, a national professional chemical fraternity; Phi Delta Kappa, a professional educational fraternity; Scabbard and Blade, a national military society; Pershing Rifles, a national military society for basic course R. O. T. C. students; Pi Delta Epsilon, a national journalistic fraternity; Omicron Nu, a national home economics society; Alpha Psi Omega, a national dramatic society; Beta Alpha Psi, a national accounting honorary fraternity; Pi Sigma Alpha, an honorary political

science fraternity; and Beta Gamma Sigma, a national honorary commerce fraternity.

Fraternities and Sororities. There are seventeen national fraternities and ten national sororities at College Park. These in the order of their establishment at the University are: Kappa Alpha, Sigma Nu, Phi Sigma Kappa, Delta Sigma Phi, Alpha Gamma Rho, Theta Chi, Phi Alpha, Tau Epsilon Phi, Alpha Tau Omega, Phi Delta Theta, Lambda Chi Alpha, Alpha Lambda Tau, Sigma Alpha Mu, Alpha Epsilon Pi, Phi Kappa Sigma, Sigma Chi and Sigma Alpha Epsilon, national fraternities; Alpha Omicron Pi, Kappa Delta, Kappa Kappa Gamma, Delta Delta Delta, Alpha Xi Delta, Phi Sigma Sigma, Alpha Delta Pi, Sigma Kappa, Gamma Phi Beta and Alpha Epsilon Phi, national sororities; and Pi Phi Beta, a local sorority.

Clubs and Societies. Many clubs and societies, with literary, scientific, social and other special objectives, are maintained in the University. Some of these are purely student organizations; others are conducted jointly by students and members of the faculty. The list is as follows: Agricultural Council, Authorship Club, Bacteriology Society, Engineering Council, Horticulture Club, Block and Bridle Club, Calvert Debate Club, Women's Athletic Association, Footlight Club, Rossborough Club, American Society of Mechanical Engineers, American Society of Civil Engineers, American Institute of Electrical Engineers, Chess Club, Swimming Club, International Relations Club, Clef and Key, Radio Club, Camera Club, Terrapin Trail Club, Student Grange, Farm Economics Club, Future Farmers of America, Riding Club, Collegiate Chamber of Commerce, Der Deutsche Verein, Spanish Club, Le Cercle Francaise, Chemical Engineering Club, Freshmen Chemical Society, American Chemical Society, Daydodgers Club, Art Club and Psychology Club.

STUDENT PUBLICATIONS

Three student publications are conducted under the supervision of the Faculty Committee on Student Publications.

The Diamondback, a newspaper, is published by the students. This publication summarizes the University news, and provides a medium of expression for the discussion of matters of interest to the students and the factulty.

The Terrapin, the student annual, is published by the Senior Class. It is a reflection of student activities, serving to commemorate the principal events of the college year.

The "M" Book, a handbook issued by the Student Board for the benefit of incoming students, is designed to acquaint them with general University life.

UNIVERSITY POST OFFICE

The University operates an office for the reception, dispatch and delivery of United States mail, including Parcel Post packages, and for inter-office

communications. This office is located in the basement of the Administration Building. It is not a part of the United States Postal System and no facilities are available for sending or receiving postal money orders. Postage stamps, however, may be purchased. United States mail is received and dispatched several times daily.

Each student in the University is assigned a post office box at the time of registration, for which a small fee is charged. Also, boxes are provided for the various University offices.

One of the major reasons for the operaiton of the Post Office is to provide a convenient method by which Deans, teachers and University officials may communicate with students, and students are expected to call for their mail daily, if possible, in order that such communications may come to their attention promptly.

UNIVERSITY BOOKSTORE

For the convenience of students, the University maintains a Students' Supply Store, located in the basement of the Administration Building, where students may obtain at reasonable prices text books, stationery, classroom materials and equipment, confectionery, etc.

This store is operated on a basis of furnishing students needed books and supplies at as low a cost as practicable, and profits, if any, are turned into the general University treasury to be used for promoting general student welfare.

Students are advised not to purchase any text books until they have been informed by their instructors of the exact texts to be used in the various courses, as texts vary from year to year.

The bookstore is operated on a cash basis and credit is not extended to students.

ALUMNI

The Alumni Council, which is composed of representatives of each school and college in the University, coordinates all general Alumni interests, Alumni activities are further unified in two ways. There are organized alumni associations in the Schools of Medicine, Law, Pharmacy, Dentistry, and Nursing located in Baltimore. The alumni of the Colleges of Agriculture, Arts and Sciences, Commerce, Education, Engineering, and Home Economics, located at College Park, constitute a general association, each group having its own Board of Representatives. Each school and college Alumni organization exerts an active interest in the welfare of its respective graduates.

An Alumni Office is maintained at College Park, in the Administration Building, to direct the work of the association and to form a point of contact between the University and its graduates.

SECTION II
Resident Instruction—College Park

COLLEGE OF AGRICULTURE

THOMAS B. SYMONS, *Dean*
H. F. COTTERMAN, *Assistant Dean*
DORIS A. LAND, *Secretary*

The College of Agriculture offers both general and specialized training for students who wish to prepare for professional work in the broad field of agricultural endeavor. Student programs are arranged with a view to correlating technical work with related sciences and cultural subjects. Education in fundamentals receives special attention. Accordingly, young men and women are given a basic general education while they are being instructed in the various branches of agriculture. In addition to offering this opportunity for thorough grounding in the related basic natural and social sciences, it is an objective of the College to provide trained personnel for agricultural and allied industries. This personnel is recruited from rural and urban areas. Farm-reared students enter either general or specialized curricula; city-reared students tend to follow the specialized programs.

General

The College provides curricula for those who wish to engage in general farming, live stock production, dairying, poultry husbandry, fruit or vegetable growing, floriculture or ornamental horticulture, field crop production, or in the highly specialized scientific activities connected with these industries. It prepares men to serve as farm managers, for positions with commercial concerns related to agriculture, for responsible positions as teachers in agricultural colleges and in departments of vocational agriculture in high schools or as investigators in experiment stations, for extension work, for regulatory activities, and for service in the United States Department of Agriculture. Its curricula in Animal Science, Botany (including Plant Physiology and Plant Pathology), Dairy Science, Entomology, Horticultural Science, Poultry Science, and Soil Technology offer rich opportunities to students with a scientific bent of mind, and lead to positions with many ramifications in teaching, research, extension, and regulatory work.

Through research the frontiers of knowledge relating to agriculture and the fundamental sciences underlying it are constantly being extended and solutions for important problems are being found. Research projects in many fields are in progress. Students taking courses in agriculture from instructors who devote part time to research, or are closely associated with it, are kept in close touch with the latest discoveries and developments in the investigations under way. The findings of these research scientists

provide valuable information for use in classrooms, and make instruction virile and authentic. The results of the most recent scientific investigations are constantly before the student.

Close contact of workers in the College with the problems of farmers and their families in all parts of the State, through the county agents, home demonstration agents, and specialists brings additional life to resident instruction in the College of Agriculture. These contacts operate in two ways: problems confronting rural people are brought to the attention of research workers and the instructional staff, and results of research are taken to farmers and their families in their home communities through practical demonstrations. Hence the problems of the people of the State contribute to the strength of the College of Agriculture, and the College helps them in the improvement of agriculture and rural life.

Through their regulatory functions, certain trained workers in the College of Agriculture are continually dealing with the actual problems associated with the improvement and maintenance of the standards of farm products and animals. Regulatory and control work extends over a wide range of activities and is concerned with reducing the losses due to insect pests and diseases; preventing and controlling serious outbreaks of diseases and pests of animals and plants; analyzing fertilizers, feed, and limes for guaranteed quality; and analyzing and testing germination quality of seeds to insure better seeds for farm planting.

These fields contribute largely to agricultural education, as standardization and education go hand in hand in the development of an industry. Direct contact on the part of professors in their respective departments with the problems and methods involved makes for effective instruction.

Coordination of Agricultural Work

The strength of the College of Agriculture of the University of Maryland lies in the close coordination of the instructional, research, extension, and regulatory functions within the individual departments, between the several departments, and in the institution as a whole. Instructors in the several departments are closely associated with the research, extension and regulatory work being carried on in their respective fields, and, in many cases, devote a portion of their time to one or more of these types of activities. Close coordination of these four types of work enables the University to provide a stronger faculty in the College of Agriculture, and affords a higher degree of specialization than would otherwise be possible. It insures instructors an opportunity to keep informed on the latest results of research, and to be constantly in touch with current trends and problems which are revealed in extension and regulatory activities. Heads of departments hold staff conferences to this end, so that the student at all times is as close to the developments in the frontiers of the several fields of knowledge as it is possible for organization to put him.

In order that the work of the College shall be responsive to agricultural interests and shall adequately meet the needs of the several agricultural

industries in the State, and that the courses of instruction shall at all times be made most helpful for students who pursue them, Advisory Councils have been constituted in the major industries of agriculture. These Councils are composed of leaders in the respective lines of agriculture in Maryland, and the instructional staff of the College of Agriculture has the benefit of their counsel and advice. By this means the College, the industries, and the students are kept abreast of developments.

Facilities and Equipment

In addition to buildings, laboratories, libraries, and equipment for effective instruction in the related basic sciences and in the cultural subjects, the University of Maryland is provided with excellent facilities for research and instruction in agriculture. University farms, totaling more than 1200 acres, are operated for instructional and investigational purposes. One of the most complete and modern plants for dairy and animal husbandry work in the country, together with herds of the principal breeds of dairy and beef cattle, and other livestock, provides facilities and materials for instruction and research in these industries. Excellent laboratory and field facilities are available in the Agronomy Department for breeding and selection in farm crops, and for soils research. The Poultry Department has a building for laboratories and classrooms, a plant comprising thirty-four acres, and flocks of all the important breeds of poultry. The Horticulture Department is housed in a separate building, and has ample orchards and gardens for its various lines of work.

Departments

The College of Agriculture includes the following departments: Agricultural Chemistry; Agricultural Education and Rural Life; Agricultural Engineering; Agronomy (including Crops and Soils); Animal Husbandry; Botany (including Morphology, Plant Physiology and Plant Pathology); Dairy Husbandry (including Dairy Manufacturing); Entomology (including Bee Culture); Farm Management and Agricultural Economics; Horticulture (including Pomology, Olericulture, Floriculture, and Ornamental Horticulture); Poultry Husbandry; Veterinary Science.

Admission

The requirements for admission are given under Admission requirements to the University.

Junior Standing

To attain junior standing in the College of Agriculture, a student must have an average grade of C in not less than 90 quarter hours.

Requirements for Graduation

A minimum of 195 quarter hours is required for graduation. The detailed requirements for each department are included in the discussion of Curricula in Agriculture.

Farm and Laboratory Practice

The head of each department will help to make available opportunities for practical or technical experience along his major line of study for each student whose major is in that department and who is in need of such experience. For inexperienced students in many departments this need may be met by one or more summers spent on a farm.

Student Organizations

Students find opportunity for varied expression and growth in the several voluntary organizations sponsored by the College. These organizations are as follows: Student Grange, Livestock Club, Future Farmers of America, Alpha Zeta, Agricultural Economics Club, and the Agricultural Student Council.

Membership in these organizations is voluntary, and no college credits are given; yet much of the training obtained is fully as valuable as that acquired from regularly prescribed courses.

The Student Grange represents the Great National Farmers' fraternity of the Order of Patrons of Husbandry, and emphasizes training for rural leadership. It sponsors much deputation work in local granges throughout the State. The Livestock Club conducts the Students' Fitting and Showing Contest held on the campus in the Spring. The Future Farmers of America foster interest in vocational education, and the Collegiate Chapter serves as host Chapter in connection with high school judging contests held at the University. The Agricultural Economics group conducts special studies in the field of Agricultural Economics. All these organizations have regular meetings, arrange special programs, and contribute to the extra-curricular life of students.

Membership in Alpha Zeta, national agricultural honor fraternity, is chosen from students in the College of Agriculture who have displayed agricultural and executive ability.

The Agricultural Student Council is made up of representatives from the various student organizations in the College of Agriculture. Its purpose is to coordinate activities of these students and to promote work which is beneficial to the College.

CURRICULA IN AGRICULTURE

Curricula within the College of Agriculture divide into three general classes: Technical, Scientific, and Special.

(1) Technical curricula are designed to prepare students for farming as owners, tenants, managers, or specialists; for positions as county agricultural agents, or teachers of agriculture in high schools; as executives, salesmen, or other employees in commercial businesses with close agricultural contact and point of view.

(2) Scientific curricula are designed to prepare students for positions as technicians, teachers, or investigators. These positions are usually in the

various scientific and educational departments, or bureaus of the Federal, State, or Municipal governments; in the various schools or experiment stations; or in the laboratories of private corporations.

(3) Courses of study may be arranged for any who desire to return to the farm after one or more years of training in practical agricultural subjects.

Student Advisers

Each student in the College of Agriculture is assigned to a faculty adviser, either departmental or general. Departmental advisers consist of heads of departments or persons selected by them to advise students with curricula in their respective departments. General advisers are selected for students who have no definite choice of curriculum in mind, or who wish to pursue the general curriculum in agriculture.

Cases of students with poor records are referred to the Admission, Guidance, and Adjustment Committee, for review and advice.

Electives

The electives in the suggested curricula which follow afford opportunity for those who so desire to supplement major and minor fields of study or to add to their general training.

With the advice and consent of those in charge of his registration, a student may make such modifications in his curriculum as are deemed advisable to meet the requirements of his particular need.

Freshman Year

The program of the freshman year in the College of Agriculture is the same for all curricula of the College. Its purpose is to afford the student an opportunity to lay a broad foundation in subjects basic to agriculture and the related sciences, to articulate beginning work in college with that pursued in high or preparatory schools, to provide opportunity for wise choice of programs in succeeding years, and to make it possible for a student before the end of the year to change from one curriculum to another, or from the College of Agriculture to the curriculum in some other college of the University with little or no loss of credit.

Students entering the freshman year with a definite choice of curriculum in mind are sent to departmental advisers for counsel as to the wisest selection of freshman electives from the standpoint of their special interests and their probable future programs. Students entering the freshman year with no definite curriculum in mind, are assigned to general advisers, who assist with the choice of freshman electives and during the course of the year acquaint the students with the opportunities in the upper curricula in the College of Agriculture and in the other divisions of the University. If by the close of the freshman year a student makes no definite choice of a specialized curriculum, he continues under the guidance of his general adviser and at the beginning of the sophomore year enters Agriculture (General Curriculum).

AGRICULTURE CURRICULUM

	Quarter I	II	III
Freshman Year			
Eng. 1, 2, 3—Survey and Composition	3	3	3
*Bot. 1—General Botany	5	....	....
Zool. 1—General Zoology	....	5	....
Bact. 1—General Bacteriology	....	....	5
Speech 1, 2—Public Speaking	2	2	....
†M. I. 1, 2, 3—Basic R. O. T. C. (men)	3	3	3
Physical Activities	1	1	1
Freshman Lectures	0	0	0
Elect one of the following:			
Modern Language	3	3	3
*Math 10, 11, 12	3	3	3
Phys. 6, 7, 8—Introductory Physics	3	3	3
Introductory Agriculture:			
A. E. 2—Farm Organization	3	....	....
A. E. 1—Agr. Ind. and Resources	....	3	....
Agriculture Elective	....	....	5
	17	17	17

Agriculture—General

This curriculum is designed for persons wishing to return to the farm, enter work allied to farming, for those seeking a general rather than a specialized knowledge of the field of agriculture and for those preparing to be county agents, teachers, etc.

By proper use of the electives allowed in this curriculum, a student may choose a field of concentration in agriculture and at the same time elect courses that contribute to liberal education.

General Agriculture Curriculum

	Quarter I	II	III
Sophomore Year			
Chem. 1, 3—General Chemistry	5	5	....
P. H. 1—Poultry Production	5	....	....
Agron. 1—Crop Production	....	5	....
D. H. 1—Fundamentals of Dairying	....	....	4
Soils 1—General Soils	....	....	5
Physical or Biological Science or Modern Language Sequence	3	3	3
M. I. 4, 5, 6—Basic R. O. T. C. (men)	3	3	3
Physical Activities	1	1	1
	17	17	16

*Students who expect to pursue curricula in Agricultural Chemistry and Agricultural Engineering must be prepared to elect Chem. 1-2, general chemistry, instead of general botany and general zoology and Math. 15, 16, and 17, instead of Math. 10, 11, and 12.

†Women in the College of Agriculture will take the required courses in hygiene.

Junior Year	Quarter I	II	III
Econ. 37—Fundamentals of Economics	5	....	....
Hort. 1, 2—General Horticulture	3	3	....
A. H. 2—Fundamentals of Animal Husbandry	4	....	....
A. H. 52—Feeds and Feeding	....	4	....
Eng. 7, 8—Expository Writing	....	2	2
Physical Activities	1	1	1
Soils 2—Principles of Soil Fertility	3	....	....
Electives	....	6	12
	16	16	15
Senior Year			
A. E. 100—Farm Economics	3	....	....
Agr. Engr. 101—Farm Machinery	....	4	....
A. E. 107—Analysis of the Farm Business	....	3	....
R. Ed. 110—Rural Life and Education	....	4	....
A. E. 108—Farm Management	....	....	3
Agron. 151—Cropping Systems	....	....	3
Physical Activities	1	1	1
Electives	12	4	8
	16	16	15

AGRICULTURAL CHEMISTRY

This curriculum insures adequate instruction in the fundamentals of both the physical and biological sciences. It may be adjusted through the selection of electives to fit the student for work in agricultural experiment stations, soil bureaus, geological surveys, food laboratories, fertilizer industries and those handling food products.

The outline calls for five years of study. Completion of four years leads to the degree of Bachelor of Science, stressing chemistry particularly and related subjects as they apply to agriculture. By the proper use of electives in the fourth year, continuation of this course of study for the fifth year, and the presentation of a satisfactory thesis, the student may qualify for the Master's degree.

Agricultural Chemistry Curriculum

Sophomore Year	Quarter I	II	III
Math. 10, 11, 12	3	3	3
Chem. 17—Qualitative Analysis	3	....	....
Chem. 21, 23—Quantitative Analysis	....	5	5
Bot. 1—General Botany	5	....	....
Zool. 1—General Zoology	....	....	5
Geol. 1—Geology	....	4	....
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
	15	16	17

Junior Year	Quarter I	II	III
Chem. 35, 37—Elementary Org. Chem. Lectures	3	3	....
Chem. 36, 38—Elementary Org. Chem. Laboratory	2	2	....
Math. 20, 21, 22—Calculus	5	5	5
Modern Language (German or French)	3	3	3
English 7, 8—Expository Writing	....	3	3
Soils 2—Principles of Soil Fertility	3		
P. E.—Physical Activities	1	1	1
Electives in Biology or Chemistry	....		5
	17	17	17
Senior Year			
Modern Language (German or French)	3	3	3
Physics 3, 4, 5—General Physics	5	5	5
Econ. 31, 32, 33—Principles of Economics	3	3	3
P. E.—Physical Activities	1	1	1
Electives in Chemistry and Biology	3	3	3
	15	15	15
Post Graduate			
Chem. 141, 143—Adv. Organic Chemistry Lecture	3	3	3
Chem. 142, 144—Adv. Organic Chemistry Lab.	3	3	3
Chem. 187, 189—Physcial Chemistry Lecture	5	5	....
Chem. 188, 190—Physical Chemistry Laboratory	3	3	....
Electives in 200 courses	....	....	8
	14	14	14

AGRICULTURAL EDUCATION AND RURAL LIFE

The primary objective of this curriculum is to prepare for teaching secondary vocational agriculture, work as county agents and allied lines of the rural education services. Graduates from this curriculum are in demand in rural businesses, particularly of the cooperative type. A number have entered the Federal service. Others are engaged in teaching and research in agricultural colleges. Quite a few have returned to the farm as owner-managers.

In addition to the regular entrance requirements of the University, involving graduation from a standard four-year high school, students electing the agricultural education curriculum must present evidence of having acquired adequate farm experience after reaching the age of fourteen years.

Students with high average may upon petition be relieved of certain requirements in this curriculum, when evidence is presented that either through experience or previous training a prescribed course is non-essential. Or they may be allowed to carry an additional load.

Agricultural Education Curriculum

Sophomore Year	Quarter I	II	III
Chem. 1, 3—General Chemistry	5	5	....
Hort. 1, 2—General Horticulture	3	3	....
Econ. 37—Fundamentals of Economics	5	....	....
Agron. 1—Crop Production	....	5	....
Soils 1—General Soils	....	....	5
D. H. 1—Fundamentals of Dairying	....	....	4
A. H. 2—Fundamentals of Animal Husbandry	....	....	4
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
	17	17	17
Junior Year			
Soils 2—Principles of Soil Fertility	3	....	....
A. E. 100—Farm Economics	3	....	....
Agr. Engr. 54—Farm Mechanics	2	....	....
D. H. 101—Dairy Production	4	....	....
Ind. Ed. 85, 105—General Shop	1	1	....
Speech 5, 6—Advanced Public Speaking	2	2	....
Agr. Engr. 101—Farm Machinery	....	4	....
A. H. 52—Feeds and Feeding	....	4	....
Hort. 3—General Horticulture	....	3	....
Bot. 20—Diseases of Plants	....	....	5
*P. H. 2—Poultry Management	....	....	4
Ent. 1—Introductory Entomology	....	....	4
R. Ed. 51—Departmental Organization	....	....	3
P. E.—Physical Activities	1	1	1
	16	15	17
Senior Year			
R. Ed. 107—Observation and Analysis of Teaching for Agricultural Students	3	....	....
R. Ed. 109—Teaching Secondary Vocational Agriculture	4	....	....
R. Ed. 90—Practice Teaching	6	....	....
R. Ed. 111—Teaching Part-time and Adult Classes	2	....	....
Psych. 80—Educational Psychology	....	5	....
R. Ed. 110—Rural Life and Education	....	4	....
R. Ed. 112, 113—Departmental Management	....	1	1
Agr. Engr. 102—Gas Engines, Tractors and Automobiles	....	....	4
Agron. 151—Cropping Systems	....	....	3
A. E. 108—Farm Management	....	....	3
R. Ed. 114—Organization and Management of Farm Mechanics in Secondary Schools	....	....	2
P. E.—Physical Activities	1	1	1
Electives	....	4	....
	16	15	14

*Students who have had less than two years of vocational agriculture in high school must elect P. H. 1, Poultry Production.

AGRICULTURAL ENGINEERING

The department offers to students of agriculture training in those agricultural subjects which are based upon engineering principles. These subjects may be grouped under three heads: farm machinery and farm power, farm buildings, and farm drainage.

Five-Year Program in Agriculture—Engineering

For those students who wish to specialize in the application of engineering principles to the physical and biological problems of agriculture there is offered a combined program, extending over a five-year period, arranged jointly by the College of Agriculture and the College of Engineering, and leading to a degree from each of these colleges.

This program prepares graduates to enter state, federal or commercial fields of activity in such work as soil and water conservation, rural electrification, design and sale of farm machinery and structures, and in the development of new uses for farm products and the profitable utilization of farm wastes and by-products.

To be properly trained in these fields a student needs a broader knowledge of basic and applied engineering principles than could be provided in a four-year course in agriculture. He also needs a broader training in the fundamentals of agriculture than a standard four-year course in engineering could furnish.

Upon completion of the normal four year course of study the degree of Bachelor of Science in Agriculture is granted. For the fifth year the student registers in the College of Engineering, and at the end of that year, upon satisfactory completion of the required course of study, receives a degree in civil, electrical, mechanical or chemical engineering.

Curriculum in Agriculture-Engineering

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Speech 1—Public Speaking	....	....	2
Math. 15—College Algebra	5	....	....
Math. 16—Plane and Spherical Trigonometry	....	5	....
Math. 17—Analytic Geometry	....	....	5
Chem. 1, 3—General Chemistry	5	5	....
Dr. 1, 2—Engineering Drawing	2	2	....
Dr. 3—Descriptive Geometry	....	....	3
Shop 1—Forge Practice	....	....	1
Engr. 1—Introduction to Engineering	....	....	1
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Freshman Lectures (Agriculture)	0	0	0
	19	19	19

Sophomore Year (Civil Engineering Option)	Quarter I	II	III
Math. 20—Differential Calculus	5	....	....
Math. 21—Integral Calculus	....	5	....
Math. 22—Applied Calculus	....	....	5
Phys. 3, 4, 5—General Physics	5	5	5
Dr. 4—Advanced Engineering Drawing	3	....	....
Mech. 1—Statics and Dynamics	....	....	5
Surv. 2—Plane Surveying	3	2	2
Econ. 37—Fundamentals of Economics	....	5	....
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
	20	21	21

Junior Year (Civil Engineering Option)			
Speech 5—Oral Technical English	....	2	....
Geol. 2—Engineering Geology	....	....	3
Mech. 50, 51—Strength of Materials	4	4	....
C. E. 50—Hydraulics	....	6	....
Mech. 53—Materials of Engineering	....	....	3
E. E. 50—Principles of Electrical Engineering	....	....	4
C. E. 52—Curves and Earthwork	5	....	....
Bot. 1—General Botany	5	....	....
Agr. Engr. 107—Farm Drainage	3	....	....
Agr. Engr. 102—Gas Engines, Tractors and Automobiles	....	....	4
Agr. Engr. 54—Farm Mechanics	2	....	....
P. E.—Physical Activities	1	1	1
Electives in Agriculture	....	7	4
	20	20	19

Fourth Year (Civil Engineering Option)			
Speech 6, 7—Advanced Oral Technical English	2	2	....
C. E. 100—Theory of Structures	....	....	6
Surv. 100—Advanced Surveying	6	....	....
M. E. 50—Principles of Mechanical Engineering	....	4	....
Agr. Engr. 101—Farm Machinery	....	4	....
Agr. Engr. 105—Farm Buildings	....	3	....
Zool. 1—General Zoology	....	5	....
Soils 1—General Soils	....	....	5
A. E. 108—Farm Management	....	....	3
P. E.—Physical Activities	1	1	1
Approved Electives	9	....	4
	18	19	19

Fifth Year (Civil Engineering Option)

The curriculum for the fifth year is the senior year curriculum in civil engineering, without change, as shown under College of Engineering.

AGRONOMY

The curricula in this department are separated into two major divisions; namely Crops and Soils. The Crops division includes Crop Production and Crop Breeding. The Crop Production curriculum is designed to prepare students for general farming, specilized crop farming, the production of improved seeds, employment with commercial firms, state and federal experiment stations, or county agent work. The curriculum for Plant Breeding is designed to prepare students to work with commercial seed companies or federal and state experiment stations. The curriculum in Soils is designed both to equip future farmers with adequate knowledge of soils and to prepare students for teaching, research, and special soils work. Although the Soils curriculum is placed in the Department of Agronomy, its courses are designed for all students who have soil interests regardless of the line of their major specialization.

Agronomy Curriculum—Sophomore Year

Sophomore Year	Quarter I	II	III
Agron. 1—Crop Production	....	5	....
Chem. 1, 3—General Chemistry	5	5	....
Eng. 7, 8—Expository Writing	2	2	....
Soils 1—General Soils	....	....	5
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Selected Electives	5	....	7
	16	16	16

Crop Production Curriculum—Junior and Senior Years

Junior Year			
Agron. 51—Technology of Crop Quality	....	2	....
Agron. 54—Selected Crop Studies	2-4	2-4	2-4
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Laboratory	1	1	....
Pl. Phys. 101—Plant Physiology	5	....	....
Zool. 104—Genetics	....	3	....
Econ. 37—Fundamentals of Economics	....	....	5
P. E.—Physical Activities	1	1	1
Selected Electives	4-2	4-2	8-6
	16	16	16

Senior Year	Quarter I	II	III
Agron. 103—Crop Breeding	3	....	....
Agron. 151—Cropping Systems	....	....	3
A. E. 100—Farm Economics	3	....	....
A. E. 108—Farm Management	....	....	3
Agr. Eng. 101—Farm Machinery	....	4	....
Agr. Eng. 107—Farm Drainage	3	....	....
Soils 2—Principles of Soil Fertility	3	....	....
Soils 103—Soils Geography	....	....	4
P. E.—Physical Activities	1	1	1
Selected Electives	3	11	5
	16	16	16

Crop Breeding Curriculum—Junior and Senior Years

Junior Year			
Agron. 51—Technology of Crop Quality	....	2	....
Agron. 54—Selected Crop Studies	2-4	2-4	2-4
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Laboratory	1	1	....
Pl. Phys. 101—Plant Physiology	5	....	....
Zool. 104—Genetics	....	3	....
Econ. 37—Fundamentals of Economics	....	....	5
P. E.—Physical Activities	1	1	1
Selected Electives	4-2	4-2	8-6
	16	16	16
Senior Year			
Agron. 103—Crop Breeding	3	....	....
Agron. 151—Cropping Systems	....	....	3
Stat. 112—Biological Statistics	....	4	....
Stat. 150—Elements of Statistics	4	....	....
A. E. 108—Farm Management	....	....	3
Agr. Eng. 101—Farm Machinery	....	4	....
Agr. Eng. 107—Farm Drainage	3	....	....
Soils 2—Principles of Soil Fertility	3	....	....
Soils 103—Soils Geography	....	....	4
P. E.—Physical Activities	1	1	1
Selected Electives	2	7	5
	16	16	16

Soils Curriculum

Sophomore Year			
Chem. 1, 3—General Chemistry	5	5	....
Chem. 7—Quantitative Analysis	....	....	5
Eng. 7, 8—Expository Writing	2	2	....
Agron. 1—Crop Production	....	5	....
Soils 1—General Soils	....	....	5
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Selected Electives	5	....	2
	16	16	16

Junior Year	Quarter I	II	III
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Laboratory	1	1	....
Soils 2—Principles of Soil Fertility	3	....	....
Soils 51—Laboratory Problems in Soils	....	3	....
Soils 103—Soils Geography	....	....	4
Geol. 1—Geology	4	....	....
Econ. 37—Fundamentals of Economics	....	....	5
Agr. Eng. 107—Farm Drainage	3	....	....
P. E.—Physical Activities	1	1	1
Selected Electives	1	8	6
	16	16	16
Senior Year			
Soils 102—Soils Management	....	3	....
Soils 112—Soils Conservation	3	....	....
A. E. 108—Farm Management	....	....	3
Pl. Phys. 101—Plant Physiology	5	....	....
Agronomy 151—Cropping Systems	....	....	3
P. E.—Physical Activities	1	1	1
Selected Electives	7	12	9
	16	16	16

ANIMAL HUSBANDRY

The curriculum in Animal Husbandry is organized for the purpose of preparing students for various phases of work in the field of animal industry as: operators and managers of livestock farms, as investigators and research workers in federal, state, and private institutions, and as workers in specialized fields where a knowledge of the livestock industry is necessary.

By proper use of electives, the student may equip himself to become a county agricultural agent; to meet the requirements of positions with certain types of private and cooperative business concerns; or, with more technical and specialized training, to become qualified for instructional work in colleges, for investigational work in state and federal experiment stations or in commercial research laboratories. Students who desire to enter the field of teaching or highly specialized research should elect the more scientific courses offered by this and by other departments.

Animal Husbandry Curriculum

Sophomore Year	Quarter I	II	III
Chem. 1, 3—General Chemistry	5	5	....
Eng. 7, 8—Expository Writing	....	2	2
A. H. 2—Fundamentals of Animal Husbandry	4	....	....
D. H. 1—Fundamentals of Dairying	....	....	4
Bact. 1—General Bacteriology	....	5	....
Econ. 37—Fundamentals of Economics	5	....	....
Soils 1—General Soils	....	....	5
P. E.—Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
	18	16	15

Junior Year	Quarter I	II	III
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Laboratory	1	1	....
A. H. 52—Feeds and Feeding	....	4	....
A. H. 53—Principles of Breeding	....	....	4
A. H. 55—Livestock Management	2	....	....
A. H. 31—Livestock Judging	....	....	2
*A. H. 64—Sheep Production	....	3	....
*A. H. 67—Pork Production	....	3	....
*A. H. 69—Draft Horse Production	....	....	3
Zool. 104—Genetics	3	....	....
Soils 2—Principles of Soil Fertility	3	....	....
P. E.—Physical Activities	1	1	1
Electives	2	....	7
	15	15	17

Senior Year			
A. H. 112—Livestock Markets and Marketing	3	....	....
*A. H. 60—Beef Production	3	....	....
A. H. 114—Animal Nutrition	....	4	....
A. E. 108—Farm Management	....	....	3
Agron. 1—Crop Production	....	5	....
V. S. 101—Comparative Anatomy and Physiology	....	5	....
V. S. 102—Animal Hygiene	5	....	....
P. E.—Physical Activities	1	1	1
Electives	4	2	11
	16	17	15

BOTANY

The department offers three major fields of work: general botany and morphology; plant pathology, and plant physiology and ecology. The required courses for the freshman and sophomore years are the same for all students. In the junior and senior years, the student elects botanical courses to suit his particular interests in botanical science. Both the junior and senior years also allow considerable freedom in the election of non-botanical courses, in order to provide a fairly broad cultural education. Through cooperation with the College of Education, students who wish to meet the requirements for the state high school teacher's certificates may elect the necessary work in education.

The curriculum as outlined lays a good foundation for students who wish to pursue graduate work in botanical science in preparation for college teaching and for research in state experiment stations, in the United States Department of Agriculture, and in private research institutions and laboratories.

*Only two production courses are required for graduation. The student may choose any two of these four courses to fulfill this requirement.

The curriculum also affords students an opportunity for training for other vocations involving various botanical applications, such as extension work, and positions with seed companies, canning companies, companies making spray materials, and other commercial concerns.

Botany Curriculum	Quarter I	II	III
Sophomore Year			
Bot. 20—Diseases of Plants	5	....	....
Bot. 2—General Botany	....	5	....
Bot. 50—Plant Taxonomy	....	....	3
Chem. 1, 3—General Chemistry	5	5	....
Modern Language	3	3	3
Speech 3—Fundamentals of Speech	....	....	3
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Electives	....	....	3
	17	17	16
Junior Year			
Pl. Phys. 101—Plant Physiology	5	....	....
Bot. 51—Plant Microtechnique	....	3	....
Pl. Path. 108—Mycology	....	....	5
Phys. 1, 2—General Physics	5	5	....
P. E.—Physical Activities	1	1	1
Electives	5	7	10
	16	16	16
Senior Year			
Bot. 101—Plant Anatomy	3	....	....
Zool. 104—Genetics	....	3	....
Pl. Phys. 102—Plant Ecology	....	....	3
Bot. 52—Seminar	1	1	1
Bot. 106—History and Philosophy of Botany	....	1	....
P. E.—Physical Activities	1	1	1
Botany Electives	6	6	6
Electives	4	4	4
	15	16	15

DAIRY HUSBANDRY

The department offers instructions in two major lines of work; dairy production and dairy manufacturing. The curricula are designed to prepare students for practical work in dairy farming and dairy manufacturing industries, for scientific work in the dairy industry, and as technical workers with milk cooperatives, dairy breed associations, and private and public concerns.

Dairy Production Curriculum

Sophomore Year	Quarter I	Quarter II	Quarter III
Chem. 1, 3—General Chemistry	5	5	....
Chem. 5—General Chemistry	....	....	5
A. H. 2—Fundamentals of Animal Husbandry	4	....	....
D. H. 1—Fundamentals of Dairying	....	....	4
Soils 1—General Soils	....	....	5
Agron. 1—Crop Production	....	5	....
Econ. 37—Fundamentals of Economics	5	....	....
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
*Electives	....	2	....
	18	16	18
Junior Year			
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Laboratory	1	1	....
Eng. 7, 8—Expository Writing	....	2	2
Soils 2—Principles of Soil Fertility	3	....	....
Zool. 104—Genetics	....	3	....
A. H. 53—Principles of Breeding	....	....	4
A. H. 52—Feeds and Feeding	....	4	....
D. H. 50—Dairy Cattle Management	....	....	4
D. H. 30—Dairy Cattle Judging	....	....	4
V. S. 101—Comparative Anatomy and Physiology	5	....	....
V. S. 102—Animal Hygiene	....	5	....
P. E.—Physical Activities	1	1	1
	13	19	15
Senior Year			
D. H. 101—Dairy Production	4	....	....
D. H. 105—Dairy Breeds and Breeding	....	3	....
D. H. 113—Market Milk	5	....	....
A. E. 108—Farm Management	....	....	3
A. H. 114—Animal Nutrition	....	4	....
D. H. 119, 120, 121—Dairy Literature	1	1	1
P. E.—Physical Activities	1	1	1
*Electives	4	6	10
	15	15	15

*Electives from dairy manufacturing, animal husbandry, agronomy and veterinary science are recommended.

Dairy Manufacturing Curriculum

Sophomore Year	Quarter I	Quarter II	Quarter III
Chem. 1, 3—General Chemistry	5	5	....
D. H. 1—Fundamentals of Dairying	4	....	....
Chem. 5—General Chemistry	....	....	5
Phys. 6, 7, 8—Introductory Physics	3	3	3
Bact. 5—Bacteriological Technique	....	2	....
Eng. 7, 8—Expository Writing	....	2	2
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
*Electives	....	....	2
	16	16	16
Junior Year			
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Laboratory	1	1	....
Bact. 101—Milk Bacteriology	5	....	....
Bact. 102—Dairy Products Bacteriology	....	5	....
D. H. 40—Grading Dairy Products	....	....	2
D. H. 64—Dairy Mechanics	....	....	3
D. H. 109—Cheese Making	4	....	....
D. H. 110—Butter Making	....	2	....
D. H. 111—Concentrated Milk	....	....	3
D. H. 112—Ice Cream Making	....	....	4
P. E.—Physical Activities	1	1	1
*Electives	2	4	3
	16	16	16
Senior Year			
Chem. 19—Quantitative Analysis	5	....	....
Econ. 37—Fundamentals of Economics	....	5	....
D. H. 113—Market Milk	5	....	....
D. H. 114—Analysis of Dairy Products	....	5	....
D. H. 68—Dairy Accounting	1	....	....
D. H. 70—Dairy Plant Management	....	1	....
D. H. 72—Dairy Plant Experience	....	....	2
D. H. 119, 120, 121—Dairy Literature	1	1	1
P. E.—Physical Activities	1	1	1
*Electives	3	3	12
	16	16	16

ENTOMOLOGY

This curriculum trains students for work in state and federal entomological bureaus, in preparation for commercial pest control operations and for actual insect control on their own farms. In addition, entomology is taught as a cultural subject because of its wide field of application, its varied subject matter, and the general interest of the public in the small creatures about it.

*Electives from dairy production, chemistry and bacteriology are recommended.

This curriculum is based upon the option of elementary mathematics in the freshman year, and the substitution of Ent. 1 for Bact. 1 in the spring quarter of the same year; Bact. 1 to be taken in the spring quarter of the sophomore year.

Entomology Curriculum

Sophomore Year	Quarter I	II	III
Chem. 1, 3—General Chemistry	5	5	....
Ent. 1—Introductory Entomology	....	....	4
Ent. 2—Insect Morphology	2	....	....
Ent. 3, 4—Insect Taxonomy	....	3	3
Modern Language	3	3	3
Eng. 7, 8—Expository Writing	2	2	....
Eng. 9—Business English	....	....	2
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
	16	17	16
Junior Year			
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Chemistry Laboratory	1	1	....
Modern Language	3	3	3
Bot. 20—Diseases of Plants	....	....	5
Ent. 109—Insect Physiology	3	....	....
Ent. 101—Economic Entomology*	....	3	....
Ent. 105—Medical Entomology	....	....	3
P. E.—Physical Activities	1	1	1
Electives	5	4	4
	16	15	16
Senior Year			
Phys. 6, 7, 8—Introductory Physics	3	3	3
Ent. 103, 104—Insect Pests	....	4	4
Ent. 110, 111—Special Problems**	....	2	2
Ent. 112—Seminar	1	1	1
P. E.—Physical Activities	1	1	1
Electives	11	5	3
	16	16	16

*This course and Ent. 105 may be taken in the senior year and Ent. 103, 104 in the junior year.

**Students may satisfy this requirement in one quarter if their schedule permits and the department approves.

FARM MANAGEMENT*

The curriculum in farm management is designed to prepare students for the following types of positions: on the farms as farm operators and farm managers; with farm organizations, such as the Farm Bureau and farmers' co-operatives; with private and corporate business concerns; and positions with state and federal agencies, such as college teachers, agricultural extension workers, and research with federal and state agencies.

The courses in this department are designed to provide fundamental training in the basic economic principles underlying farming. The curriculum includes courses in farm management, general agricultural economics, marketing, finance, prices, and land economics to give the student the foundation needed to meet the production and distribution problems confronting the individual farmer in a progressive rural community.

Curriculum in Farm Management

Sophomore Year	Quarter I	II	III
Chem. 1, 3—General Chemistry	5	5	....
Math. 5, 6—General Mathematics	3	3	....
Econ. 37—Fundamentals of Economics	5	....	....
Soils 1—General Soils	....	....	5
A. H. 2—Fundamentals of Animal Husbandry	....	....	4
M. I. 4, 5, 6—Basic R. O. T. C.	3	3	3
P. H. 2—Poultry Management	....	....	4
P. E.—Physical Activities	1	1	1
Electives	....	3	....
	17	15	17
Junior Year			
Soils 2—Principles of Soil Fertility	3	....	....
Eng. 7, 8—Expository Writing	2	2	....
Eng. 9—Business English	....	....	2
Hort. 1—General Horticulture	3	....	....
Agron. 1—Crop Production	....	5	....
A. H. 52—Feeds and Feeding	....	4	....
A. E. 100—Farm Economics	3	..	....
A. E. 101—Marketing Farm Products	....	3	....
A. E. 104—Farm Finance	....	....	3
Agron. 151—Cropping Systems	....	....	3
B. A. 130—Statistics	4	..	....
B. A. 131—Statistics	....	4	....
P. E.—Physical Activities	1	1	1
Electives	....	....	6
	16	19	15

*Students electing the Farm Management curriculum must present evidence of having acquired at least one year of practical farm experience.

Senior Year	Quarter I	II	III
A. E. 90, 91—Seminar	1	1	....
A. E. 103—Cooperation in Agriculture	3	....	....
A. E. 106—Prices of Farm Products	....	3	....
A. E. 107—Analysis of Farm Business	....	3	....
A. E. 108—Farm Management	....	....	3
A. Engr. 101—Farm Machinery	....	4	....
R. Ed. 110—Rural Life and Education	....	4	....
P. E.—Physical Activities	1	1	1
Electives	10	....	10
	15	16	14

HORTICULTURE

This department offers instruction in pomology (fruits), olericulture (vegetables), floriculture (flowers), and ornamental gardening. These courses prepare students to enter commercial production and the horticultural industries. Students are likewise prepared to enter the allied industries as horticultural workers with fertilizer companies, seed companies, equipment manufacturers, and others. Students who wish to enter specialized fields of research and teaching may take advanced work in the department.

Pomology and Olericulture Curriculum

Sophomore Year	Quarter I	II	III
Chem. 1, 3—General Chemistry	5	5	....
Soils 1—Soils and Fertilizers	....	....	5
Econ. 37—Fundamentals of Economics	....	5	....
Bot. 20—Diseases of Plants	5	....	....
Ent. 1—Introduction to Entomology	....	....	4
Hort. 1, 2, 3—General Horticulture	3	3	3
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
	17	17	16
Junior Year			
Plt. Phys. 101—Plant Physiology	5	....	....
Hort. 8—Vegetable Production	....	....	4
Hort. 5, 6—Fruit Production	2	....	3
Bot. 105—Structure of Economic Plants	....	2	....
Bot. 101—Plant Anatomy	3	....	....
Hort. 14—Small Fruits	....	....	3-4
Eng. 7, 8—Expository Writing	2	2	....
Plt. Path. 101—Diseases of Special Crops	....	3	....
Soils 2—Principles of Soil Fertility	3	....	....
P. E.—Physical Activities	1	1	1
*Supervised Electives	....	8	4-5
	16	16	16

*Student must elect at least one of the following: Bot. 50, Hort. 114, or Hort. 116.

Senior Year	Quarter I	II	III
Zool. 104—Genetics	3	....	....
Hort. 118, 119—Seminar	1	....	1
Hort. 103, 104—Technology of Vegetables	....	3	3
Hort. 101, 102—Technology of Fruits	3	3	....
P. E.—Physical Activities	1	1	1
*Supervised Electives	8	8	10
	16	15	15

Floriculture and Ornamental Horticulture Curriculum

Sophomore Year			
Chem. 1, 3—General Chemistry	5	5	....
Soils 1—Soils and Fertilizers	....	....	5
Econ. 37—Fundamentals of Economics	....	5	....
Bot. 20—Diseases of Plants	5	....	....
Hort. 1, 2—General Horticulture	3	3	....
Ent. 1—Introduction to Entomology	....	....	4
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Electives	....	....	3
	17	17	16
Junior Year			
Plt. Phys. 101—Plant Physiology	5	....	....
Eng. 7, 8, 9—Expository Writing and Business English	2	2	2
Hort. 22—Landscape Gardening	3	....	....
Soils 2—Principles of Soil Fertility	3	....	....
Hort. 16—Garden Flowers	....	....	3
P. E.—Physical Activities	1	1	1
*Electives	2	14	10
	16	17	16

*Supervised Electives:

Hort. 10, 11, 12—Greenhouse Management	3	3	3
Hort. 23, 24—Landscape Design	....	3	3
Surv. 2, 3, 4—Plane Surveying	2	2	2
Dr. 1, 2—Engineering Drawing	2	2	....
Plt. Path. 101—Diseases of Special Crops	....	3	....
Bot. 101—Plant Anatomy	3	....	....
Bot. 105—Structure of Economic Plants	....	2	....

Senior Year			
Hort. 107, 108, 109—Plant Materials	2	2	2
Hort. 118, 119—Seminar	1	....	1
P. E.—Physical Activities	1	1	1
Electives	11	12	11
	15	15	15

Supervised Electives:	Quarter I	II	III
Hort. 18, 19, 20—Commercial Floriculture	3	3	3
Hort. 25—Advanced Landscape Design	3	....	....
Hort. 26—Civic Art	....	3	....
Zool. 104—Genetics	3	....	....
Hort. 8—Vegetable Production	....	....	3
Hort. 105—Technology of Ornamentals	....	3	....

POULTRY HUSBANDRY

The curriculum in poultry husbandry is designed to give the student a thorough knowledge of subject matter necessary for poultry raising; the marketing, distribution, and processing of poultry products; poultry improvement work; and as a basis for graduate training for teaching and research in poultry husbandry.

The suggested curriculum will be modified to meet the special needs of individual students. For example, most students will be expected to take the courses in Agricultural Industry and Resources and Farm Organization offered in the general curriculum for the freshman year. Superior students, definitely anticipating preparation for a professional career in poultry husbandry, will be expected to take language instead. However, all students majoring in poultry husbandry will be required to complete 24 semester hours in poultry husbandry.

Poultry Curriculum

Sophomore Year	Quarter I	II	III
Chem. 1, 3—General Chemistry	5	5	....
Soils 1—General Soils	....	....	5
Speech 5, 6—Advanced Public Speaking	....	2	2
Econ. 37—Fundamentals of Economics	....	....	5
P. H. 1—Poultry Production	5	....	....
P. H. 2—Poultry Management	....	4	....
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Elect from the following:			
Eng. 7, 8—Expository Writing	....	2	2
Math. 10, 11, 12—Elements of College Math.	3	3	3
A. E. 1—Agricultural Industries and Resources	....	3	....
A. E. 2—Farm Organization	3	....	....
Chem. 31, 32, 33, 34—Elements of Organic Chemistry	4	4	....
	17	18	17

Junior Year	Quarter I	II	III
Zool. 104—Genetics	3	....	....
P. H. 50—Poultry Biology	....	....	3
P. H. 51—Poultry Genetics	....	3	....
P. H. 52—Poultry Nutrition	3	....	....
P. H. 56—Poultry Physiology	....	....	3
B. A. 130—Elements of Statistics	4	....	....
Stat. 112—Biological Statistics	....	4	....
Bact. 2—Pathogenic Bacteriology	....	5	....
Ent. 1—Introductory Entomology	....	....	4
Soils 2—Principals of Soils Fertility	3	....	....
Eng. 7, 8—Expository Writing	....	2	2
P. E.—Physical Activities	1	1	1
Elect from the following:			
Math. 10, 11, 12—Elements of College Math.	3	3	3
A. E. 102—Marketing of Farm Products	....	....	3
B. A. 20, 21, 22—Principles of Accounting	4	4	4
Chem. 81—Biochemistry	3	....	3
Chem. 82—Biochemistry Laboratory	2	....	2
Phys. 6, 7, 8—Introductory Physics	3	3	3
Agriculture Elective	....	3	3
	15	16	15
Senior Year			
P. H. 105—Egg Marketing Problems	....	3	....
V. S. 107—Poultry Hygiene	....	4	....
V. S. 108—Avian Anatomy	4	....	....
P. H. 58—Commercial Poultry Management	....	....	3
P. H. 104—Poultry Marketing Problems	3	....	....
P. H. 107—Poultry Industrial and Economic Problems	3	....	....
P. H. 108—Special Poultry Problems	1-2	1-2	1-2
P. E.—Physical Activities	1	1	1
Elect from the following:			
R. Ed. 110—Rural Life and Education	....	4	....
French, German, Spanish 1, 2, 3—Elementery French, German, Spanish	3	3	3
Bact. 108—Preservation of Food Products	....	....	3
Bact. 111—Food Bacteriology	....	....	5
Group Electives	5	5	5
	15	15	16

Pre-Theological Students

The College of Agriculture is glad to cooperate with the officers of any theological seminary who desire to urge its prospective students to pursue courses in agriculture as a preparation for the rural ministry. Such pre-theological students may enroll for a semester or more or for the usual four year training of the College. In either case they should enroll as members of the general curriculum in the College of Agriculture.

The electives of this curriculum may be used for such pre-theological requirements as seem desirable. Elections may be made from any of the offerings of the University such as history, political science, philosophy, agricultural economics, rural sociology, modern language, English, economics, psychology, sociology, natural science, education and the like. Students desiring to pursue a pre-theological program in the College of Agriculture of the University of Maryland, should consult with the president or admissions officer of the theological seminary which they expect to attend.

Special Students in Agriculture

Mature students may, with consent of the Dean, register as special students and pursue a program of studies not included in any regular curriculum, but arranged to meet the needs of the individual. All university fees for these special students are the same as fees for regular students.

There are many young farmers who desire to take short intensive courses in their special lines of work during slack times on the farm. Arrangements have been made to permit such persons to register at the office of the Dean of the College of Agriculture and receive cards granting them permission to visit classes and work in the laboratories of the different departments. This opportunity is created to aid florists, poultrymen, fruit-growers, gardeners, or other especially interested persons who are able to get away from their work at some time during the year.

The regular charges are $5.00 for registration and $1.50 per credit hour per month for the time of attendance. One registration is good for any amount of regular or intermittent attendance during a period of four years.

COLLEGE OF ARTS AND SCIENCES

J. F. PYLE, *Acting Dean.*

REBA A. TURNER, *Secretary.*

The College of Arts and Sciences is meeting the war emergency needs in education by offering in the natural sciences essential war training courses in chemistry, physics, mathematics, bacteriology, and food technology. It is meeting other war training needs in the required pre-professional training for medicine, dentistry, veterinary medicine, and nursing.

For the civilian student the college provides liberal training in the biological sciences, economics, history, languages and literature, philosophy, the physical sciences, political science, psychology, and sociology. This training affords the student an opportunity to acquire a general education which will serve as a foundation for whatever profession or vocation he may choose.

The college offers to the students of the other colleges of the University training in fundamental subjects, both classical and scientific, which should enable them to acquire the background for liberal culture and professional service.

Divisions

The College of Arts and Sciences is divided into one Lower Division and four Upper Divisions. Under the latter are grouped the following departments:

A. The Divisions of Biological Sciences: Bacteriology, Botany, Entomology, Genetics, and Zoology.

B. The Division of Humanities: Art, Classical Languages and Literatures, Comparative Literature, English Literature and Philology, Foreign Languages and Literatures, Music, Philosophy, and Speech.

C. The Division of Physical Sciences: Astronomy, Chemistry, Geology, Mathematics, and Physics.

D. The Division of Social Sciences: Economics, History, Political Science, Psychology, and Sociology.

The work of the first and second years in the College of Arts and Sciences is taken in the Lower Division. It is designed to give the student a basic general education, and to prepare him for specialization in the junior and senior years.

The upper divisions direct the courses of study of students doing their major work in the College of Arts and Sciences during their junior and senior years.

Requirements for Admission

The requirements for admission to the College of Arts and Sciences are, in general, the same as those for admission to the other colleges and schools of the University.

For admission to the pre-medical curriculum, two years of any one foreign language are recommended. A detailed statement of the requirements for admission to the School of Medicine and the relation of these to the pre-medical curriculum may be obtained by writing the Director of Admissions.

Degrees

The degrees conferred upon students who have met the requirements prescribed in the College of Arts and Sciences are bachelor of arts and bachelor of science.

Students of this college who have completed the regular course in either the Division of Humanities or the Division of Social Sciences are awarded the degree of bachelor of arts. Any student who has met the requirements for the degree of bachelor of science is awarded that degree, provided the major portion of the work has been done in the field of science, and the application has the approval of the science department in which the major work has been carried.

Students who have elected the combined program of arts and sciences and medicine may be granted the degree of bachelor of science after the completion of at least 150 quarter credits in this college and the first year of the School of Medicine, so that the quantitative requirements of 195 credits are met, and he is recommended by the Dean of the School of Medicine.

Those electing the combined five-year academic nursing curriculum, for which the degree of bachelor of science in nursing may be awarded upon the completion of the full course, must first take the pre-nursing curriculum in the College of Arts and Sciences before the nursing course in Baltimore.

Those taking the combined course in arts and law may be awarded the bachelor of arts degree after the completion of three years of the work in this college and one year of the full-time law course, or its equivalent, in the School of Law. The total minimum number of credits required for graduation is 195.

Residence

The last forty-five credits of any curriculum leading to a baccalaureate degree in the College of Arts and Sciences must be taken in residence in this University.

Students working for one of the combined degrees must earn the last 45 credits of the first three years work in the College of Arts and Sciences, College Park.

Requirements for Degrees

The baccalaureate degree from the College of Arts and Sciences may be conferred upon a student who has satisfied the following requirements:

1. University requirements.
2. College of Arts and Sciences requirements:

A minimum of 195 quarter credits must be acquired, including the requirements in basic military science and physical activities for men or the requirements in hygiene and physical activities for women.

A student must acquire a minimum of 98 credits, with an average grade of at least C in the Lower Division, before being admitted to an upper division.

The following minimum requirements should be fulfilled, as far as possible, before the beginning of the junior year and must be completed before graduation:

I. English and speech—twenty-one credits. Of these, Survey and Composition I (Eng. 1, 2, 3.) and public speaking (Speech 1, 2) are required.

II. Foreign languages and literature—eighteen credits of one language, (including Latin or Greek). Students wishing to enroll in a language they have studied in high school will be given a placement test.

III. Social sciences—eighteen credits. This requirement is fulfilled by electing courses in economics, history, political science, psychology, and sociology.

IV. Natural science and mathematics—eighteen credits. Of these, one year must be in natural science.

V. For men, military science—eighteen credits, physical activities—six credits. For women, hygiene—four credits, physical activities—four credits, to be completed by the end of the sophomore year. Six additional credits in physical activities are required for both men and women, to be completed during the junior and senior years.

3. Major and minor requirements—When the requirements of the Lower Division have been completed each student must select a major in one of the fields of study of an upper division, and before graduation must complete a major and a minor. The courses constituting the major and the minor must conform to the requirements of the department in which the major work is done.

Before beginning a major or minor the student must have an average of not less than C in fundamental courses in the fields chosen.

A major shall consist, in addition to the underclass departmental requirements, of 30 to 54 hours, of which 15 must be in courses numbered 100 and above.

A minor shall consist, in addition to the underclass departmental requirements, of 18 to 30 hours, of which 12 must be in courses numbered 100 and above. Minor courses shall be chosen with the advice of the major in consultation with the minor department to supplement the student's major work.

The average grade of the work taken in the major and minor fields must be at least C. A general average of at least C is required for graduation.

Certification of High School Teachers

If courses are properly chosen in the field of education, a prospective high school teacher can prepare for high school positions, with major and minor in one of the upper divisions of this College.

Electives in Other Colleges and Schools

A limited number of courses may be counted for credit in the College of Arts and Sciences for work done in other colleges and schools of the University.

The number of credits which may be accepted from the various colleges and schools is as follows:

College of Agriculture—twenty-three.

College of Business and Public Administration—twenty-three.

College of Education—thirty.

College of Engineering—twenty-three.

College of Home Economics—twenty-three.

School of Law—In the combined program the first year of law must be completed.

School of Medicine—In the combined program the first year of medicine must be completed.

School of Nursing—In the combined program the three years of nursing must be completed.

Normal Load

The normal load for the freshman in this college is 18 credits per quarter, including physical activities and military training.

The normal load for the sophomore year is 17 credits per quarter including military science and physical education.

The normal load in the junior and senior years is 16 credits per quarter. With the permission of the Dean of the College of Arts and Sciences, this load may be increased to 17, a maximum except for honor students. The load of honor students shall lie within the discretion of the Dean and the Chairman of the Department, but in no case shall it exceed 19 credits per quarter.

Advisers

Freshmen and sophomores in this college shall consider the Dean of the College their general adviser.

Juniors and seniors will consider the chairman of their major department their adviser, and should consult him about the arrangements of their schedules of courses.

The Lower Division

The work of the first six quarters in the College of Arts and Sciences is designed to give the student a basic general education, and to prepare him for specialization in the latter part of his course.

It is the student's responsibility to develop in these earlier years such proficiency in basic subjects as may be necessary for his admission into one of the Upper Divisions of the College. Personal aptitude and a general scholastic ability must also be demonstrated, if permission to pursue a major study is to be obtained.

Suggested courses of study are given under certain of the upper divisions. The student should follow the curriculum for which he is believed to be best fitted. It will be noted that there is a great deal of similarity in these outlines for the first six quarters, and a student need not consider himself attached to any particular upper division until the beginning of his seventh quarter, at which time he is required to select a major.

The minimum requirements of the College of Arts and Sciences, as outlined on page 73, should be completed as far as possible by the end of the sophomore year.

ARTS AND SCIENCES GENERAL CURRICULUM

Freshman Year	Quarter *I*	*II*	*III*
**English 1, 2, 3—Survey and Composition	3	3	3
Speech 1, 2—Public Speaking	2	2	....
*Foreign Language (including Latin and Greek)	3	3	3
Science (Bot., Chem., Math., Physics, Zool.)	3 or 5	3 or 5	3 or 5
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
P. E. 42, 4—Hygiene I, II (Women)	2	2	....
Elect from the following so that the total credits each quarter is from 16 to 18.			
Econ. 1, 2, 3—Economic Resources	2	2	2
H. 1, 2, 3—Survey of Western Civilization	3	3	3
H. 4, 5, 6—History of England and Great Britain	3	3	3
Pol. Sci. 1—American National Government	3 or	3 or	3
Psych. A—Psychology of Adjustment	3 or	3 or	3
Psych. 1—Introduction to Psychology		3 or	3
L. Sci. 1—Library Methods	2 or	2 or	2

*A placement test is given during Registration Week for students wishing to pursue a language they have studied in high school.

**A placement test in English is given to assist in determining whether a student is adequately prepared for Eng. 1. After this the student is given five weeks trial in Eng. 1. If he has failed the original examination and is also unsuccessful in an examination at the end of the five weeks period, he is transferred to Eng. A. A preparatory course without credit. He may also be placed in Eng. A if he passes the original examination, but fails the second.

Sophomore Year	*Quarter* I	II	III
English 4, 5, 6—Survey and Composition	3	3	3
Foreign Language	3	3	3
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
General electives fulfilling as far as possible the specific requirements of the College of Arts and Sciences.			
	16-18	16-18	16-18

A—DIVISION OF BIOLOGICAL SCIENCES

The Division of Biological Sciences is organized to stimulate close coordination between all activities in the field of biology. The Division includes the Departments of Bacteriology and Zoology.

Each department within the Division has one or more established curricula. To meet the demands for technically trained workers in the biological sciences these curricula are designed to give specialized training, particularly during the last two years of college work. They provide, more specifically, the basic knowledge and experience required for (1) teaching in secondary schools; (2) research and regulatory work in federal, state, and municipal departments and bureaus; (3) admission to graduate study in the preparation for college teaching and advanced research; and (4) entrance to the professional schools of medicine, dentistry, and nursing.

Instruction

Alliance of the biological sciences presents an opportunity for the pursuit of a well coordinated program of study. Completion of a suggested undergraduate curriculum under any one of the departments fulfills the requirements for the degree of Bachelor of Science. Advanced work also is presented in each of the biological sciences for the degrees of Master of Science and Doctor of Philosophy.

Although the undergraduate training in any Department of the Division is both thorough and well-balanced, nevertheless, one or more years of post-graduate instruction and experience and the attainment of an advanced degree are desirable in preparation for the larger opportunities that arise in this rapidly expanding field. The need for workers in the fields of agriculture, home economics, industry, public health, etc., presents almost unlimited opportunities for specialization and has made it necessary to correlate closely the undergraduate courses in this Division with those offered in the Graduate School in order to equip the advanced student adequately in his own work and in related fields.

A special curriculum in general biological science is presented primarily for those interested in teaching biological science or general science in elementary and high schools. Students in the preprofessional schools who expect to complete their work for the degree of bachelor of science may, in following the preprofessional curriculum, complete a major in certain

departments of the Division of Biological Sciences by the proper selection of courses.

The particular professions and lines of work for which each department in this Division prepares its students are outlined in greater detail under the description of each department.

Requirements for Graduation

1. *University Requirements.* See Section I.
2. *College of Arts and Sciences Requirements.*
3. *Physical Sciences*—The student must complete basic courses in Chemistry, Mathematics and Physics.

Fields of Study

The curriculum outlined in each field of study represents the courses which in the judgment of the Department and Division, are necessary for an adequate training in the particular subject. In most curricula enough electives are included to give the student ample opportunity to study subjects outside his major or minor departments in which he may have become interested or in which further training is desired.

The courses in Bacteriology prepare students for such positions as dairy, sanitary, and food bacteriologists in federal, state, and municipal departments and for public health, research, and industrial positions.

Department of Bacteriology

The Department has been organized with two purposes in view. The first is to provide a high degree of training for positions as bacteriologists in federal, state and municipal laboratories; as well as trained technicians in hospital, clinic or private laboratories; and as control or research bacteriologists in sanitary, dairy, food or soil science.

The second is to make available to all students of the University a general knowledge of bacteriology and its applications. A variety of courses make it possible for every student to go as extensively into the many phases of public health, food and sanitary bacteriology as may be desired.

Bacteriology Curriculum

The curriculum in bacteriology is arranged to provide training in all the principle phases of the science, namely, (1) the cause and prevention of disease, including the identification of the causative bacteria, (2) the phenomena of immunity, including its application in disease, (3) the laboratory diagnostic procedures for medical technicians, (4) the microbiology of foods and milk, soil, sanitation and water purification and (5) bacterial metabolism and classification. College graduation is becoming a prerequisite for entrance into all branches of public health and bacteriological work.

The basic course in general bacteriology is designed to present the fundamental nature of microorganisms and their importance and function in the lives of man, plants and animals. For major students, it is required that they follow the course in general bacteriology with the course designated Bacteriological Technique. This course is a prerequisite to all other bacteriology laboratory courses. One then proceeds with other courses as outlined in the suggested curriculum.

All of the subjects listed are required for graduation and should be adhered to closely if one plans a four-year program. However, because of the unprecedented demand for bacteriologists in both the armed services and civilian life, a student may plan an accelerated or a three-year program. Such a student will find it necessary to deviate from the sequence presented in the curriculum and except for certain basic requirements he will be permitted considerable leeway.

In addition to the basic training represented in the curriculum the work of each student is correlated with his or her particular interests.

Post graduate study is especially encouraged, primarily for those men and women who prefer to go into research, industrial work or the teaching profession. Facilities are available for investigations in the fields of general, medical, dairy, food and sanitary bacteriology, as well as in various aspects of bacterial physiology.

University and Experiment Station Fellowships are available to graduate students of high standing. Students receiving fellowships will carry on research along specified lines, and usually assist with laboratory instruction in the beginning classes. Experience in teaching bacteriology is desirable for all graduate students, and opportunities will be made available in so far as the facilities of the Department permit. Fellowships sponsored by commercial concerns also are frequently available, and offer opportunities for research in problems important to industry, with frequent opportunities for business contacts.

All students planning to major in bacteriology should consult the Department before registration.

Medical Technology

The Department of Bacteriology offers under its direction two years of training for those students desiring to become medical technicians, but who are not in a position to complete the four year curriculum in bacteriology.

The modern practice of medicine requires the aid of the laboratory and trained personnel for this service. The clinical laboratory technician is a person who by education and training is capable of performing the various routine microscopic, chemical, and bacteriological tests used in the diagnosis and treatment of disease.

The curriculum in medical technology gives the student training in Biology, Bacteriology, Chemistry and Physics. These basic sciences are required before the student undertakes practical hospital training.

The curriculum is essentially that required in the first two years of a major student in Bacteriology. The Bacteriology Department offers under its direction only this basic training. Before qualifying as a Medical Technologist the student must spend at least twelve months in a hospital laboratory under proper supervision in order to obtain practical experience in the routine laboratory procedures.

Further information may be obtained from the Department of Bacteriology.

Food Technology

This curriculum offers combinations of courses that will equip the student with an unusually broad knowledge of the many aspects involved in food manufacture. In the curriculum are combined many of the fundamentals of biology, chemistry, and engineering which, when supported by the proper electives and by practical experience, will serve as an excellent background for supervisory work in food factory operation, research in the food industries, etc.

Zoology

The Zoology Department offers courses designed to train students for teaching and for service in the biological bureaus of the United States Government, in the biological departments of the various states, and in various branches of the military service. Emphasis is placed on morphology, physiology, and marine biology. Instruction and opportunities for original investigation in the latter are supplemented by the research facilities and courses of instruction offered at the Chesapeake Biological Laboratory.

Chesapeake Biological Laboratory

This laboratory, located in the center of the Chesapeake Bay country, is on Solomons Island, Maryland. It is sponsored by the University of Maryland in cooperation with the Maryland Conservation Department, Goucher College, Washington College, Johns Hopkins University, Western Maryland College, and the Carnegie Institution of Washington, in order to afford a center for wild life research and study where facts tending toward a fuller appreciation of nature may be gathered and disseminated.

The laboratory is open throughout the year. Ordinarily work is offered for advanced undergraduate and graduate students, during a summer session. Students pursuing a special research may establish residence for the summer, or for the entire year. All formal courses have been temporarily suspended.

Zoology Curriculum

Freshman Year	Quarter I	II	III
Zool. 2, 3—Fundamentals of Zoology	5	5	....
Zool. 20—Vertebrate Embryology	....	....	5
Chem. 1, 3, 5—Gen. Chemistry, Qual. Anal.	5	5	3
Eng. 1, 2, 3—Survey and Composition	3	3	3
Sp. 1—Public Speaking	....	....	2
P. E.—Physical Activities	1	1	1
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E. 42, 44—Hygiene I, II (Women)	2	2	....
Electives (Women)	....	....	3
	16–17	16–17	17
Sophomore Year			
Zool. 4—Comparative Vertebrate Morphology	5	....	....
Zool. 7—Field Zoology	....	....	3
Zool. 8—Invertebrate Morphology	....	3	....
Eng. 4, 5, 6—Survey and Composition	3	3	3
Math. 10, 11, 12—Algebra, Plane Trig., Anal. Geom.	3	3	3
Sp. 2—Public Speaking	....	2	....
Modern Language	3	3	3
P. E.—Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
Electives (Women)	2	2	2
	17–18	17–18	15–16
Junior Year			
Zool. 101—Mammalian Anatomy	3	....	....
Zool. 108—Animal Histology	....	....	3
Zool. 104—Genetics	....	3	....
Zool. 121—Animal Ecology	....	....	3
Modern Language	3	3	3
Physics 1, 2	5	5	....
Social Science (Electives)	3	3	3
Biological Sciences (Electives)	2	2	4
P. E.—Physical Activities	1	1	1
	17	17	17
Senior Year			
Zool. 102, 103—General Animal Physiology	....	4	4
Zool. 75, 76—Journal Club	1	1	1
Social Science (Electives)	3	3	3
Zoology (Electives)	6	4	4
Electives	6	4	4
P. E.—Physical Activities	1	1	1
	17	17	17

General Biological Sciences

A curriculum has been prepared for students who are interested in biology but whose interests are not centralized in any one of the biological sciences. The courses as outlined familiarize the student with the general principles and methods of each of the biological sciences.

By the proper selection of courses during the junior and senior years a student may concentrate his work sufficiently in any one of the fields of study to be able to continue in graduate work in that field. Also by a proper selection of electives, the educational requirements of the State Department of Education for certification can be met.

Requirements

A major and a minor, comprising together not fewer than 80 credits, shall be completed, with at least 25 of these credits in the courses for advanced undergraduates and graduates in the Division.

Curriculum for General Biological Science

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 3—General Chemistry	....	5	5
Language—(French or German)	3	3	3
Speech 1, 2	2	....	2
Zool. 1—General Zoology	5	....	....
Ento. 1—Introductory Entomology	....	4	....
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
P. E. 42, 44—Hygiene I, II (Women)	2	2	....
Elective (Women)	....	....	3
	16–17	18–19	17–19
Sophomore Year			
Eng. 4, 5, 6	3	3	3
Math. 10, 11	3	3	....
Language (French or German)	3	3	3
Bot. 1—Introductory Botany	....	5	....
Bact. 1—General Bacteriology	....	....	5
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Electives (Biological Science)	7	3	3
	17-20	18-21	15-18
Junior Year			
Phys. 1, 2—General Physics	5	5	....
Electives (Biological Science)	6	6	10
Electives (Social Science)	3	3	3
Electives	2	2	3
P. E.—Physical Activities	1	1	1
	17	17	17

Senior Year	Quarter *I*	*II*	*III*
Electives (Biological Science)	9	9	9
Electives (Social Science)	3	3	3
Electives	4	4	4
P. E.—Physical Activities	1	1	1
	17	17	17

B—DIVISION OF HUMANITIES

The Division of Humanities is composed of the Departments of Art, Classical Languages, Comparative Literature, English Language and Literature, Modern Languages and Literature, Music, Philosophy and Speech.

This Division has two main functions: (1) to provide for its own major students a thorough training in literature, philosophy, languages, and the fine arts; (2) to furnish for students in other Divisions, especially for those taking preprofessional work, background and elective studies in the departments of the Division.

At present, the Division offers major and minor work for the Master of Arts and the doctor of philosophy degrees in English language and literature and in modern languages and literatures; major work for the linguistics, and minor work in philosophy. Detailed requirements for these degrees are given under the departmental announcements and in the catalog of the Graduate School.

Training for the Master of Arts degree is directed especially toward acquainting the candidate with methods of research and the literature in his own fields. For the degree of doctor of philosophy, the candidate is required not only to be thoroughly acquainted with his major and minor fields and with the scholarly accomplishments therein, but also to devote himself intensively to a specific research problem in which he shall make an original contribution to human knowledge.

Division Requirements for the Bachelor's Degree

The following requirements in addition to those of the College of Arts and Sciences (including a general average of C, see page 73) should be completed, as far as possible, before the beginning of the junior year.

1. *Library Science*—two credits.
2. *English*—nine credits.
3. *Foreign Language*—To be accepted unconditionally in the Division of Humanities, a student must have attained a reading knowledge of at least one foreign language, either ancient or modern. In satisfaction of this requirement, he must pass one of the general language examinations, which are given during the first and last days of each quarter, with a grade as high as C. Maryland students should take the examination not later than the close of the sophomore year or the beginning of the junior year. Transfer students should take the examination upon entrance. The student must show in this examination that he has attained the reading ability to be expected after two years of a college language course. When the student has passed the general language examination he will have satisfied the language requirements; but in no case will a student in the Division be graduated who has not acquired at least 18 credits of one foreign language in college.
4. *Philosophy*—three credits.
5. *Psychology*—three credits.
6. *Major and Minor Requirements*—In selecting a major or a minor, a student must have acquired eighteen credits in fundamental courses in the field chosen or in a closely related field satisfactory to the department and the division, with an average grade of at least C, before credit will be allowed toward the completion of the major and minor requirements. In addition:

   A major shall consist of not fewer than 30 nor more than 54 credits, in addition to the eighteen credits required in the Lower Division in one of these fields of study. At least 23 of these credits must be taken in courses listed for advanced undergraduates and graduates.

   A minor shall consist of not fewer than 18 nor more than 30 credits in addition to the 18 credits required in the Lower Division, in one of the above fields of study not selected for the major, or in some other field of study authorized in the College of Arts and Sciences. At least 14 of these credits must be taken in courses listed for advanced undergraduates and graduates.

The student must acquire at least 45 credits in courses not included in the major or minor.

MAJOR AND MINOR

Fields of Study

Comparative Literature
English
French
**General Linguistics
German
*Greek
Latin
*Philosophy
Speech
Spanish

Additional Requirements in English

In addition to the 18 hours of basic freshman and sophomore English, a student taking his major work in this department must pass one quarter

* Not available at present for a major.
**Major only for Master of Arts Degree.

of advanced writing or magazine writing, one quarter of college grammar, and one quarter of either history of the English language or Old English. In addition, he must complete one of the schedules below:

A. Major work in general literature (recommended for those preparing to teach English in secondary schools): Introduction to American Literature, Shakespeare, and at least 9 hours from the following: Milton; Literature of the 18th Century; Prose and Poetry of the Romantic Age; Victorian Literature; Modern and Contemporary British Poets; Emerson, Thoreau, and Whitman; American Fiction; Comtemporary American Poetry and Prose; the English Novel; Elizabethan Drama; Major American Poets.

B. Major work in American Literature; Survey of American Literature, and 18 hours of upperclass courses in American Literature.

C. Major work in drama; Shakespeare, and 18 hours from the following: Medieval Drama, Elizabethan Drama, Modern Drama, Contemporary Drama, American Drama, Play Production, Introduction to Comparative Literature (first quarter), The Spanish Drama, The Faust Legend, Ibsen,

D. Major work in English Literature: Shakespeare, and at least 18 hours in the department in advanced courses other than American literature.

Minor work may also be elected in these fields, but no major and minor combination of A and B or of A and D will be permitted.

Additional Requirements in Modern Languages

All students whose major is in modern languages are required to take Introductory Survey of Comparative Literature (Comp. Lit. 101), and they are strongly advised to take the review course (French 99, German 99, Spanish 99). The following courses are recommended: Survey of Western Civilization (Hist. 1, 2, 3), Introduction to Philosophy (Phil. 1), The Old Testament as Literature (Comp. Lit. 104), Prose and Poetry of the Romantic Age (Eng. 113, 114), Romanticism in France and Germany (Comp. Lit. 105, 106). For a major in German, Old English and Beowulf (Eng. 102, 103).

Specific requirements in Modern Languages are 15 hours in the courses numbered 50 to 99 and 15 hours in courses numbered 100 and above.

Honors in English

Qualified major students who wish to read for honors in English should apply to the chairman of the department. The reading may be done in the last two years, but should, if possible, be begun earlier.

C—DIVISION OF PHYSICAL SCIENCES

The Division of Physical Sciences comprises the departments of Astronomy, Chemistry, Geology, Mathematics, and Physics. On the following pages the division outlines a number of curriculums, each requiring four years

for completion, leading to the degrees of bachelor of science or bachelor of arts together with five year programs in chemistry—chemical engineering and applied physics. The departments of study have developed courses to contribute to the liberal education of students not primarily interested in science; to provide the basic knowledge of the physical sciences necessary in so many professions such as agriculture, dentistry, engineering, home economics, medicine, pharmacy, and others; to equip teachers of the physical sciences for secondary schools and colleges; and to train students for professional service as chemists, chemical engineers, geologists, mathematicians, physicists, and statisticians; and to prepare for graduate study and research in the physical sciences.

The fields of knowledge represented by the physical sciences are so vast and their applications are so important that it is impossible to deal adequately with any one in a four-year undergraduate curriculum. Students who aspire to proficiency are therefore encouraged to continue their studies in the graduate years. In the work leading to a Master's degree, the student becomes acquainted with the general aspects of the field. In partial fulfillment of the requirements for the degree of Doctor of Philosophy, the student must demonstrate a command of his chosen field sufficiently great to permit him to make independent investigations and creative contributions.

No degree will be granted to a student in any department of the Division of Physical Sciences whose general average in all courses offered for the degree is below C. To enroll in the Division of Physical Sciences, at the beginning of the junior year a student must select a major in one of the departments and before graduation must complete a major and a cognate minor selected to conform to the requirements of the department in which the major work is done.

The candidate for a baccalaureate degree in the College of Arts and Sciences will be governed by the requirements for that degree established by the University and the College. A student will be considered a major in one of the departments of the Division of Physical Sciences only when he has completed a program approved by the department concerned. The following suggested curriculum outline the general requirements of these departments.

Chemistry

The science of chemistry is so vast in scope that completion of a well-planned course of undergraduate study is necessary before specialization. The curriculum outlined below describes such a course of study. The sequence of courses given should be followed as closely as possible; it is realized, however, that some deviation from this sequence may be necessary toward the end of the program. All of the courses in chemistry listed are required of students majoring in chemistry.

Chemistry Curriculum

	Quarter I	II	III
Freshman Year			
Chemistry 1, 3, 15	5	5	5
English 1, 2, 3	3	3	3
Mathematics 10, 11, 12	3	3	3
Modern language (German or French 1, 2, 3)	3	3	3
Physical Activities	1	1	1
Basic R. O. T. C. 1, 2, 3 (Men)	3	3	3
P. E. 42, 44—Hygiene I, II (Women)	2	2	....
Elective (for women)	....	....	3
	17 or 18	17 or 18	18
Sophomore Year			
Chemistry 17, 35, 36, 37, 38	3	5	5
English 7, 8	3	....	3
Mathematics 20, 21, 22	5	5	5
Modern language (German or French 4, 5, 6)	3	3	3
Physical Activities	1	1	1
Basic R. O. T. C. 4, 5, 6 (Men)	3	3	3
Electives (for women)	3	3	....
	18	17	17 or 20
Junior Year			
Chemistry 21, 23	5	5	....
Chemistry 141, 143	3	3	....
Chemistry 142	....	....	3
English Elective	3	....	....
Physics 3, 4, 5	5	5	5
Social Science Electives	....	....	6
Speech 1, 2	....	2	2
Physical Activities	1	1	1
	17	16	17
Senior Year			
Chemistry 187, 189	5	5	....
Chemistry 188, 190	3	3	....
Chemistry 144, 146, and 148 or 161	3	3	3
Chemistry 101	....	....	3
Economics 31, 32, 33	3	3	3
Social Science Elective	....	....	3
Physical Activities	1	1	1
	15	15	13

Mathematics

The Mathematics curriculum offers training in the fundamentals of Mathematics in preparation for teaching, industrial work, or graduate work in Mathematics.

For a major in Mathematics a student is required to enroll in Junior and Senior Tutorial.

Students majoring in mathematics who complete freshman and sophomore courses in mathematics with distinction are eligible to try for honors in mathematics. To receive the honors degree in mathematics, a student must: 1. complete the curriculum in mathematics with an average grade of B in all subjects; 2. pass an honors examination in mathematics at the end of the senior year; 3. write a satisfactory thesis on an assigned topic in mathemat ics in the senior year. Students who wish to try for honors in mathematics should consult the chairman of the department at the conclusion of their sophomore year.

Mathematics Curriculum

	Quarter I	II	III
Freshman Year			
Eng. 1, 2, 3—Survey and Composition	3	3	3
Lang. 1, 2, 3—French or German	3	3	3
Math 15, 16, 17—Alg., Trig., Anal. Geom.	5	5	5
Electives—Social Sciences	3	3	3
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E. 42, 44—Hygiene I, II (Women)	2	2	..
Elective (for Women Only)	....	....	3
Physical Activities	1	1	1
	18	18	18
Sophomore Year			
Lang. 4, 5, 6—French or German	3	3	3
Math. 20, 21, 22—Calculus	5	5	5
Phys. 3, 4, 5—Physics	5	5	5
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
Electives (for Women Only)	3	3	3
Physical Activities	1	1	1
	17	17	17
Junior Year			
Eng. 4, 5, 6—Survey and Composition	3	3	3
Math. 110, 111, 112—Advanced Calculus	3	3	3
Math 70, 71, 72—Junior Tutorial	1	1	1
*Electives—Mathematics (Upper Division)	3	3	3
Electives—Minor	3	3	3
Electives—Social Sciences	3	3	3
Physical Activities	1	1	1
	17	17	17
Senior Year			
Math 130, 131, 132—Analytic Mechanics	3	3	3
Math. 80, 81, 82—Senior Tutorial	1	1	1
*Electives—Mathematics (Upper Division)	6	6	6
Speech 1, 2—Public Speaking	2	2	....
Electives—Minor and Social Sciences	3	3	5
Physical Activities	1	1	1
	16	16	16

*Junior and Senior electives in mathematics combined must include at least six quarter hours in algebra and six quarter hours in geometry.

General Physical Sciences

This general curriculum is offered for students who desire a basic knowledge of the physical sciences without immediate specialization in any one of them. By proper selection of courses in the latter six quarters, a student may concentrate in the field of his choice.

Curriculum for General Physical Sciences

	Quarter I	Quarter II	Quarter III
Freshman Year			
English 1, 2, 3	3	3	3
Modern Language (German or French)	3	3	3
Mathematics 10, 11, 12	3	3	3
Chemistry 1, 3, 5	5	5	3
Physical Activities	1	1	1
Elective (for women only)	....	....	3
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E. 42, 44—Hygiene I, II (Women)	2	2	....
	17 or 18	17 or 18	16
Sophomore Year			
Speech 1, 2	2	2	....
Modern Language (German or French)	3	3	3
Mathematics 20, 21, 22	5	5	5
Physics 3, 4, 5	5	5	5
Elective (for women only)	3	3	3
Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
	19	19	17
Junior Year			
Electives (Chemistry)	5	5	....
Electives (Biological Sciences)	....	5	5
Electives (Social Sciences)	3	3	3
English 7, 8	3	....	3
Electives	3	....	3
Physical Activities	1	1	1
Elective (English)	....	3	....
	15	17	15
Senior Year			
Electives (Social Sciences)	3	3	3
Electives (Physics)	3	3	3
Electives (Physical Sciences)	5	5	5
Electives	3	3	3
Physical Activities	1	1	1
	15	15	15

Physics Curriculum

The physics curriculum is designed for students who desire training in the fundamentals of physics in preparation for teaching, graduate work, and for positions in governmental, industrial and biophysical laboratories. In connection with the curriculum suggested below a minor may be chosen to suit the field of study selected. A minor may be taken in biology, chemistry, civil engineering, electrical engineering, mathematics, mechanical engineering or any allied field.

	Quarter I	Quarter II	Quarter III
Freshman Year			
English 1, 2, 3	3	3	3
Chemistry 1, 2, 5	5	5	3
Math. 15, 16, 17	5	5	5
Basic R. O. T. C. 1, 2, 3	3	3	3
Physical Activities	1	1	1
Hygiene I, II	2	2	....
Speech	....	....	2
Electives (Women)	....	....	3
	16–17	16–17	17
Sophomore Year			
English 4, 5, 6	3	3	3
Mathematics 20, 21, 22	5	5	5
Physics 3A, 4A, 5A	5	5	5
Physical Activities	1	1	1
Basic R. O. T. C. 4, 5, 6	3	3	3
Speech	2	....	....
Electives (Women)	....	3	3
	16–19	17	17
Junior Year			
Language 1, 2, 3	3	3	3
Social Sciences	3	3	3
Physics 105, 106, 107	3	3	3
Electives (Major or Minor)	6	6	6
Physical Activities	1	1	1
	16	16	16
Senior Year			
Language 4, 5, 6	3	3	3
Social Sciences	3	3	3
Physics	10	10	5
Electives (Major or Minor)	....	....	5
Physical Activities	1	1	1
	17	17	17

D—DIVISION OF SOCIAL SCIENCES

The Division of Social Sciences includes the departments of Economics, History, Political Science, Psychology, and Sociology.

In addition to supplying such courses as are required by other divisions and other colleges of the University, the departments in the Division of Social Sciences offer opportunities for advanced training in the several fields represented. A major in economics is available for students in the College of Arts and Sciences, although the work is given in the College of Business and Public Administration. During the freshman and sophomore years, in addition to the College of Arts and Sciences requirements, Principles of Economics, Econ. 31, 32, 33, should be completed and as many other lower division social science courses taken as practicable. The Departments of Political Science and Economics offer the first three years of a combined Arts-Law course. The Department of Psychology is identified with the development of applied psychology and is in position to supply training in the industrial and clinical phases of the subject. The Department of Sociology provides a course of study preparatory to professional training in social work and offers the courses demanded by civil service examinations for certain positions. All five departments present courses aligned with the teacher-training program represented in the Arts-Education curriculum.

All of the departments offer graduate instruction leading to the degrees of master of arts and doctor of philosophy. These advanced degrees are increasingly required for secondary school teaching and for professional positions in the several fields represented.

ADDITIONAL REQUIREMENTS IN HISTORY

In addition to the general requirements of the University and of the College of Arts and Sciences, the History Department requires that all credits for a major and at least 18 credits for a minor be acquired in courses offered for advanced undergraduates and graduates. No work below a grade of C will be accepted towards a major. History majors must also take 18 credits of the three fundamental courses.

The Curriculum in Economics is on page 102.

COMBINED PROGRAM IN ARTS AND LAW

The School of Law of the University requires two years of academic credit for admission to the school.

The University offers also a combined program in arts and law leading to the degrees of bachelor of arts and bachelor of laws. Students pursuing this combined program will spend the first three years in the College of Arts and Sciences at College Park. During this period they will complete the prescribed curriculum in prelegal studies as outlined below, or a total of 150 credits, and they must complete the requirements for graduation, as indicated below. If students enter the combined program with advanced

standing, at least the third full year's work, i.e. forty-five credits—must be completed in residence at College Park. Upon the successful completion of one year of full-time law courses in the School of Law in Baltimore, the degree of bachelor of arts may be awarded on the recommendation of the Dean of the School of Law, and provided the student has earned at least a total of 195 credits with a C average. The degree of bachelor of laws may be awarded upon the completion of the combined program.

Arts-Law Curriculum

	Quarter I	Quarter II	Quarter III
Freshman Year			
Eng. 1, 2, 3—Survey and Composition	3	3	3
Science or Mathematics	3	3	3
H. 4, 5, 6—History of England and Great Britain	3	3	3
Pol. Sci. 1—American National Government	....	....	3
Foreign Language	3	3	3
Speech 1, 2—Public Speaking	2	2	....
M. I. 1, 2, 3—Basic R. O. T. C.	3	3	3
Physical Activities	1	1	1
P. E. 42, 44—Hygiene I, II, (Women)	2	2	....
	17–18	17–18	16–19
Sophomore Year			
English 4, 5, 6 or 7 and 8	3	3	3
Econ. 31, 32, 33—Principles of Economics	3	3	3
H. 7, 8, 9—American History	3	3	3
Foreign Language	3	3	3
M. I. 4, 5, 6—Basic R. O. T. C.	3	3	3
Physical Activities	1	1	1
	17	17	17
Junior Year			
Pol. Sci. 7, 8, 9—Comparative Government	2	2	2
H. 135, 136, 137—Constitutional History of the United States	3	3	3
Soc. 1—Contemporary Social Problems	3	....	....
Psych. 1—Introduction to Psychology	....	3	....
Psych. 14—Applied Psychology	....	....	3
Soc. 135—Sociology of Law	....	....	3
Econ. 140—Money and Banking	4	....	....
Econ. 160—Labor Economics	....	4	....
P. A. 180—Government and Business	....	....	4
*Electives	4	4	....
Physical Activities	1	1	1
	17	17	17

Senior Year—Taken in Law School.

*Pre-law students who expect to engage in income tax practice should take a year of accounting.

PREPROFESSIONAL CURRICULA

Five-Year Combined Arts and Nursing

The first two years of this curriculum comprising a minimum of 98 credits is taken in the College of Arts and Sciences at College Park and the professional training is taken in the School of Nursing of the University in Baltimore or in the Training School of Mercy Hospital, Baltimore.

A student may enter this combined curriculum with advanced standing, but the second year, consisting of a minimum of 45 credits, exclusive of physical training, must be completed in College Park and the professional training must be completed in the schools indicated above.

In addition to the Diploma in Nursing, the degree of bachelor of science in nursing may, upon the recommendation of the Director of the School of Nursing, be granted at the end of the professional training. Full details regarding this curriculum may be found in the section of the catalog dealing with the School of Nursing.

Arts—Nursing Curriculum

	Quarter		
Freshman Year	*I*	*II*	*III*
Eng. 1, 2, 3—Survey and Composition	3	3	3
Foreign Language	3	3	3
Chem. 1, 3—General Chemistry	5	5	....
Zool. 1—General Zoology	....	....	5
Hist. 1, 2, 3—Survey of Western Civilization	3	3	3
L. S. 1—Library Methods	....	....	2
Physical Activities	1	1	1
P. E. 42, 44—Hygiene I, II, (Women)	2	2	....
	17	17	17
Sophomore Year			
Eng. 7, 8—Expository Writing	3	3	....
Foreign Language	3	3	3
Bact. 1—General Bacteriology	5	....	....
Soc. 1—Contemporary Social Problems	....	3	....
Psych. 1—Introduction to Psychology	....	3	....
Econ. 37—Fundamentals of Economics	....	....	5
Sp. 1, 2—Public Speaking	2	2	....
Pol. Sci. 1—American National Government	....	....	3
Physical Activities	1	1	1
Electives	3	2	5
	17	17	17

Premedical

The curriculum recommended for admission to the School of Medicine of the University of Maryland consists of nine quarters of academic training in the College of Arts and Sciences. Curriculum I meets these requirements and also fulfills those requirements prescribed by the Council on Medical Education of the American Medical Association.

Curriculum II meets the requirements of the Council on Medical Education of the American Medical Association for entrance to Class A Medical Schools.

Curriculum I offers to students a combined program leading to the degrees of Bachelor of Science and Doctor of Medicine. The pre-professional training is taken in residence in the College of Arts and Sciences at College Park, and the professional training in the School of Medicine in Baltimore. (See Special Bulletin of School of Medicine for details of quantitative and qualitative premedical course requirements.)

Students who have elected the combined program of Arts and Sciences and Medicine may be granted the degree of bachelor of science after the completion of at least 150 quarter credits in this college and the first year of the School of Medicine, so that the quantitative requirements of 195 credits are met, and provided that he is recommended by the Dean of the School of Medicine.

A student may enter this combined curriculum with advanced standing, but the last year, consisting of a minimum of 45 credits, exclusive of physical training and military instruction, must be completed in College Park and the professional training must be completed in the School of Medicine in Baltimore.

For requirements for admission see Section I of this catalog, page 24.

Premedical Three Year Curriculum I

For students expecting to enter the University of Maryland School of Medicine

	Quarter		
Freshman Year	*I*	*II*	*III*
Eng. 1, 2, 3—Survey and Composition	3	3	3
Math. 10, 11, 12—Algebra, Plane Trig., Anal. Geom.	3	3	3
Zool. 2, 3—Fundamentals of Zoology	5	5	....
Zool. 5—Comparative Vertebrate Morphology	....	....	5
Chem. 1, 3, 5—General Chem., Qual. Anal.	5	5	3
P. E. 42, 44—Hygiene I, II	2	2	....
Physical Activities	1	1	1
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
	20	20	18
Sophomore Year			
Eng. 4, 5, 6—Survey and Composition	3	3	3
Chem. 35, 36, 37, 38—Organic Chemistry	5	5	....
Zool. 20—Vertebrate Embryology	....	....	5
Speech 1, 2—Public Speaking	2	2	....
Social Sciences (Philosophy, Psychology, Elective)	3	3	3
Modern Language (German or French)	3	3	3
Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C.	3	3	3
	20	20	18

Junior Year	Quarter I	II	III
Modern Language (German or French)	3	3	3
Physics 1, 2—General Physics	5	5	....
Chem. 181, 182—Elements of Physical Chemistry	....	3	3
Social Sciences Electives	4	1	6
Biological Science Electives	3	3	3
Physical Activities	1	1	1
	16	16	16

Senior Year

The curriculum of the first year of the School of Medicine is accepted. The student must, however, present a total of at least 195 credits for graduation for the Bachelor of Science degree.

The student also may elect advanced courses offered in the College of Arts and Sciences, and complete at College Park the requirements for the Bachelor of Science degree, as outlined on page 72.

Premedical Curriculum II

For students desiring to meet the minimum requirements for admission to a Class A Medical School, but not for the combined degree.

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Math. 10, 11, 12—Algebra, Plane Trig., Anal. Geom.	3	3	3
Zool. 2, 3—Fundamentals of Zoology	5	5	....
Zool. 5—Comparative Vertebrate Morphology	....	....	5
Chem. 1, 3, 5—General Chem., Qual. Anal.	5	5	3
Speech 1—Public Speaking	....	....	2
P. E. 42, 44—Hygiene I, II	2	2	....
Physical Activities	1	1	1
M. I. 1, 2, 3—Basic R. O. T. C.	3	3	3
	19–20	19–20	20

Sophomore Year			
Eng. 4, 5, 6—Survey and Composition	3	3	3
Chem. 35, 36, 37, 38—Organic Chemistry	5	5	....
Physics 1, 2—General Physics	....	5	5
Speech 2—Public Speaking	2	....	....
Social Sciences (Electives)	3	....	3
Modern Language (German or French)	3	3	3
Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C.	3	3	3
	20	20	20

Predental

Students entering the College of Arts and Sciences who desire to prepare themselves for the study of dentistry are offered the following curriculum, which meets the predental requirements of the American Association of Dental Colleges. This curriculum may also be followed by the student if he desires to continue his college training and complete work for the Bachelor of Science degree.

Predental Curriculum

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Speech 1, 2—Public Speaking	2	2	....
Math. 10, 11, 12—Algebra, Plane Trig., Anal. Geom.	3	3	3
Chem. 1, 3, 5—General Chem., Qual. Anal.	5	5	3
Zool. 2—Fundamentals of Zoology	....	....	5
Dr.—Mechanical Drawing	1	1	1
Physical Activities	1	1	1
M. I. 1, 2, 3—Basic R. O. T. C.	3	3	3
	18	18	19

Sophomore Year			
Chem. 35, 36, 37, 38—Organic Chemistry	....	5	5
Zool. 3—Fundamentals of Zoology	5	....	....
Physics 1, 2	....	5	5
Modern Language (German or French)	3	3	3
Social Sciences (Electives)	6	3	3
Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C.	3	3	3
	18	20	20

Preveterinary Curriculum

Students who desire to prepare themselves for the study of veterinary science are offered, by the College of Arts and Sciences, a curriculum which meets the entrance requirements of colleges of veterinary science. The course is identical with that required of pre-medical students as outlined in Curriculum II on page 94.

COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

JOHN FREEMAN PYLE, *Dean.*

The University of Maryland is in an unusually favorable location for students of Business and Public Administration and Economics. Downtown Washington is only twenty-five minutes away in one direction, while the Baltimore business district is less than an hour in the other. There is frequent transportation service from the University gates to each city. Special arrangements are made to study commercial, manufacturing, exporting, and importing agencies and methods in Baltimore, assistance is given qualified students who wish to obtain a first hand glimpse of the far-flung economic activities of the national government or to utilize the libraries, government departments, and other facilities available in Washington.

Aims

The College of Business and Public Administration offers training designed to prepare young men and women for service in business firms and governmental agencies, and for the teaching of commercial subjects and economics in high schools and colleges. It supplies scientific business training to students and prospective executives on a professional basis comparable to university training in the other professional fields. Administration is regarded as a profession, and the College of Business and Public Administration prepares its students for this profession by offering courses of instruction which present general principles and techniques of management and administration and bring together in systematic form the experiences of business firms and governmental units. This plan of education does not displace practical experience, but supplements and strengthens it by shortening the period of apprenticeship otherwise necessary, and by giving a broad and practical knowledge of the major principles, policies, and methods of administration.

During the first half of the college study programs the student secures a broad foundation upon which to base the professional and the more technical courses offered in the last half of the course. The managerial and operating points of view are stressed in the advanced courses in production, marketing, labor, finance, real estate, insurance, accounting, secretarial training and public administration. The purpose of the training offered is to aid the student as a prospective executive in developing his ability to identify and to solve administrative and managerial problems; and to adjust himself and his organization, policies, and practices to changing social, political and economic situations.

The aim of the college is to present and illustrate such sound principles of management as are applicable to both big business and small business. Large-scale business, because of its possible economies will be expanded

in some industries under certain well-known conditions. There are, on the other hand, industries and many situations which still call for the small business. If these small-scale businesses are to be operated with profit to the owner and with satisfactory and economical service to the public, it is imperative that authentic principles of administration be applied to them. Sound principles of ethical conduct are emphasized at all times throughout the various courses.

The primary aim of collegiate education for government and business service is to train for effective management. The College of Business and Public Administration, University of Maryland, was established to supply scientific training in administration to the young men and women whose task will be the guiding of the more complex business enterprises and governmental units resulting from industrial, social and political development and expansion. This statement does not mean that the graduate may expect to secure a major executive position upon graduation. He will, on the contrary, usually be required to start near the well publicized "bottom" of the ladder and work his way up through a number of minor positions. He will, however, be able to move up at a faster rate if he has taken full advantage of the opportunities offered by the College in developing his talents and in acquiring technical and professional information, point of view, skills, and techniques.

Graduation Requirement

A minimum of 195 quarter hours of credit in courses suggested by the College is required for graduation. The student is required to have a "C" average for all courses used in meeting the quantitative graduation requirements. A student who receives the mark of D in more than one-fourth of his credits must take additional courses or repeat courses until he has met these requirements. The time required to complete the requirements for the bachelors degree for the average student is twelve quarters. Under the accelerated program this work may be covered in three calendar years. A superior student, by carrying more than the average load, may complete the work in ten quarters or two and one half calendar years.

Degrees

The University confers the following degrees on students of Business and Public Administration: Bachelor of Science, Master of Business Administration, and Doctor of Philosophy. (See bulletin of Graduate School for graduate rules and regulations.)

Each candidate for a degree must file in the office of the Registrar on a date announced for each quarter a formal application for a degree. Candidates for degrees must attend a convocation at which degrees are conferred and diplomas are awarded. Degrees are conferred in absentia only in exceptional cases.

Junior Requirement

To be classified as a junior a student must have earned 96 quarter hours in his freshman and sophomore years with an average grade of at least "C". If a student has better than a "C" average and lacks a few credits of having the total of 96, he may be permitted to take certain courses numbered 100 and above providing he has the prerequisites for these courses and the consent of the Dean.

Senior Residence Requirement

After a student has earned acceptable credit to the extent of 150 quarter hours either at the University of Maryland or elsewhere he must earn a subsequent total of at least 45 quarter hours with an average grade of "C" or better at the University of Maryland. No part of these 45 credits may be transferred from another institution.

Programs of Study

The College offers programs of study in economics, business administration, secretarial training, public administration, and a number of combination curricula, e. g., business administration and—law, commercial teaching, industrial education, chemistry, agriculture, or basic engineering courses. Research is emphasized throughout the various programs.

The executive manager or administrator in modern business enterprises and governmental units and agencies should have a clear understanding of:

(a) the business organizations and institutions which comprise the business world;

(b) the political, social, and economic forces which tend to limit or to promote the free exercise of his activities; and

(c) the basic principles which underlie the efficient organization and administration of a business or governmental enterprise.

In addition, the executive or the prospective executive should:

(a) be able to express his thoughts and ideas in correct and concise English;

(b) have a knowledge of the fundamental principles of mathematics and the basic sciences, such as, physics, chemistry, biology, and geography;

(c) have a knowledge of the development of modern civilization through a study of history, government, and other social science subjects.

(d) have a sympathetic understanding of people gained through a study of psychology, sociology, and philosophy.

If the executive is to be successful in solving current business and governmental problems, he should be skilled in the scientific method of collecting, analyzing, and classifying pertinent facts in the most significant manner, and then, on the basis of these facts, be able to draw sound conclusions and to formulate general principles which may be used to guide his present and future conduct. In other words, probably the most important qualities in a successful executive are:

(a) the ability to arrive at sound judgments;

(b) the capacity to formulate effective plans and policies, and the imagination and ability to devise organizations, methods, and procedures for executing them.

The teaching staff and the curricula of the College of Business and Public Administration have been selected and organized for the purpose of providing a type of professional and technical training that will aid the capable and ambitious student in developing his potential talents to their full capacity.

The college study programs on both the undergraduate and graduate levels presuppose effective training in English, history, government, language, science, and mathematics.* The program of study for any individual student may be so arranged as to meet the needs of those preparing for specific lines of work, such as accounting, advertising, banking, foreign trade, industrial administration, marketing administration, personnel administration, real estate practice, insurance, government employment, secretarial work, teaching, and research.

Advisory Councils

In order to facilitate the prompt and continuous adjustment of courses, curricula, and instructional methods to provide the training most in demand by industry and commerce; and in order constantly to maintain instruction abreast of the best current practice, the advice and suggestions of business men and public officials are constantly sought from outstanding leaders in each major field of business activity. Each council has its own particular interest to serve, such as advertising, marketing, or finance; and the viewpoint and suggestions of these business men are proving to be invaluable in developing the instructional and research program of the College.

FRESHMAN AND SOPHOMORE REQUIREMENTS

During the first half of the program of study each student is expected to complete the following basic and core subjects, except as indicated in a particular curriculum:

*The major portion of this training is usually secured in the four years of high school and the first two years of college.

Required Courses:	*Quarter Hours*
English and speech	13
Mathematics, science or foreign language*	9
Economic Resources	6
Economic Developments	6
Military training and physical activities for men	24
Hygiene and physical activities for women	10
Accounting	12
Principles of Economics	9
Organization and Control	6
Total requirements	69-85
Required Electives: social science	9
Free Electives: The remaining electives, of 4 to 18 credits may be profitably selected with the help of a faculty advisor	18–4
	98

A student who has met all entrance requirements may be granted the degree of Bachelor of Science upon the satisfactory completion of not fewer than 195 credits including military training and physical activities required of all able-bodied men students, or required courses in hygiene and physical activities for women. Students who are unable to take the physical training program will be required to secure equivalent credit in regular academic work. Of these 195 credits, forty per cent of the total number of credits required for graduation must be in subjects with designations other than Business Administration.

Freshmen who expect to make a concentration in foreign trade, or who plan to enter public service abroad, should elect an appropriate foreign language. Certain courses in history and government may prove beneficial in later work.

Freshmen wishing to make a concentration in the Secretarial Training course or to prepare for commercial teaching should elect Secretarial Training 1 and 12. There are no prerequisites for these courses. Such students should elect English 4, 5 and 6 in the sophomore year. No credit is allowed when only typing is taken. The laboratory fee for typewriting is $5.00 for each quarter.

Students expecting to concentrate in the field of public administration should take Political Science 1 and 4. All students are required to take 9 quarter hours in Mathematics, a Natural Science or a foreign language, and 9 quarter hours in the Social Sciences, exclusive of Economics.

*If a student elects a foreign language he must complete two years of the work in order to secure university credit, unless he takes an advanced course.

JUNIOR AND SENIOR REQUIREMENTS

During the junior and senior years each student is required to complete in a satisfactory manner the following specified courses:

Econ. 140—Money and Banking	4
B. A. 140—Financial Management	4
Econ. 150—Marketing Principles and Organization	4
B. A. 150—Marketing Management	4
Econ. 160—Labor Economics	4
B. A. 160—Personnel Management	4
B. A. 130—Elements of Statistics	4
B. A. 180, 181, 182—Business Law I, II, III	9
Physical Activities	6
Total	43

The remaining credits for the juniors and seniors may be used to meet the requirements for one of the special concentration programs, for example, in Economics, Natural and Human Resources, Public Administration, Secretarial Training, Commercial Teaching, and in the fields of Business Administration, such as: Accounting and Statistics, Production Administration, Marketing, Advertising, Retailing, Purchasing, Foreign Trade, Labor Relations, Real Estate, Insurance, Investment, and general Finance. Juniors and seniors may elect appropriate Secretarial Training courses.

Combined Administration and Law Program

When a student elects the combination Administration-Law curriculum, he must complete in a satisfactory manner the specific requirements listed for the first three years in the College of Business and Public Administration plus enough electives to equal a minimum of 153 credits with an average grade of at least "C". The last three years of the six years of required work for the combined degree is taken in the Law School. The Bachelor of Science degree from the College of Business and Public Administration is conferred upon the satisfactory completion of the first year in the Law School and the recommendation of the Dean of the Law School; provided the quantitative requirement of 195 credits is earned. Business Law cannot be used as credit in this combined curriculum.

STUDY PROGRAMS IN THE COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

The College of Business and Public Administration comprises five major divisions: Business Administration, Economics, Public Administration, Natural and Human Resources and Secretarial Training. A student can so arrange his grouping and sequence of courses as to form a fair degree of concentration in one of these divisions. When, however, he wishes to become a specialist in any one of the major departments, he should plan to continue his studies on to the graduate level, working toward either the Master's or the Doctor of Philosophy degree.

I. ECONOMICS

The program of studies in the field of Economics is designated to meet the needs of students in the University who wish to concentrate either on a major or minor scale in this division of the Social Sciences. Students who expect to enroll in the professional schools and those who are planning to enter the fields of Business or Public Administration will find courses in economics of considerable value to them in their later work. A student of economics should choose his courses to meet the requirements for the Bachelor, Master, and Doctor of Philosophy degrees. (See the bulletin of the Graduate School for the general requirements for the advanced degrees.)

Requirements for an Economics Major

A student majoring in Economics is required to complete satisfactorily 195 quarter hours of work. A general average of at least "C" is required for graduation. A student must maintain at least an average grade of "C" in his major or minor in order to continue in his chosen field.

The specific requirements for the Economics Major are:

I. Econ. 1, 2, 3, 4, 5, 6, 31, 32 and 33—a total of 22 quarter hours of specifically required courses in Economics. B. A. 20, 21, and 22 (Principles of Accounting I, II and III) and B. A. 130 and 131 (Statistics) are recommended. Other courses in Economics to meet the requirements of a major or minor are to be selected with the aid of a faculty advisor.

II. Social Science, in addition to Economics, 9 quarter hours.

III. English and Speech 22 quarter hours, comprising Eng. 1, 2, 3, 4, 5, 6 and Speech 1 and 2.

IV. Foreign Language and Literature, 18 quarter hours in one language, unless a second year course is taken. Candidates for the Ph. D. degree are required to have a reading knowledge of French and German.

V. Natural Science and Mathematics, 18 quarter hours. At least one year must be in a Natural Science.

VI. Military Science and Physical Activities. The present University requirement is 24 quarter hours for all able-bodied male students. Women students are required to take 16 quarter hours credit in hygiene and physical activities.

A student who elects economics as a major must have earned 21 quarter hours in the prerequisite courses in economics prior to his beginning the advanced work of the Junior and Senior years. These are normally taken during the freshman and sophomore years and must be completed with an average grade of not less than "C". The major sequences are not completed until at least 30 and not more than 54 credits, in addition to the required prerequisite courses, are satisfactorialy earned, that is, with an average grade of at least "C". At least 21 of these credits must be earned in courses listed for advanced undergraduates and graduates.

A minor in economics consists of the 21 prerequisite credits mentioned above plus at least 20 additional credits in economics. At least 15 of these must be in courses listed for advanced undergraduates and graduates.

As many as 24 additional credits may be elected by the economics major or minor from Business Administration and Public Administration courses.

The specific courses comprising the student's program of studies should be selected with the aid of a faculty advisor in terms of the student's objective and major interest.

Study Program for Economics Majors	Quarter I	Quarter II	Quarter III
Freshman Year			
Econ. 1, 2, 3—Economic Resources of the World I, II, III	3	2	2
Econ. 4, 5, 6—Economic Developments I, II, III	2	2	2
Eng. 1, 2, 3—Survey and Composition	3	3	3
Mathematics and Natural Science	3-5	3-5	3-5
Foreign Language	3	3	3
M. I. 1, 2, 3—Basic R. O. T. C. and Physical Activities (Men)	4	4	4
Physical Activities and Hygiene I, II	3	3	1
	17	17	17
Sophomore Year			
Econ. 31, 32, 33—Principles of Economics I, II, III	3	3	3
Eng. 4, 5, 6—Survey and Composition	3	3	3
Foreign Language	3	....	....
Psych. 1—Introduction to Psychology	2	2	2
B. A. 10, 11, 12—Organization and Control	....	2	2
Speech 1, 2—Public Speaking	....	....	....
Electives (for women students)	4	4	4
M. I. 4, 5, 6—Basic R. O. T. C. and Physical Activities (Men)	1	1	1
Physical Activities (Women)			
	18	17	17
Junior Year			
Econ. 140—Money and Banking	4	....	....
Econ. 150—Marketing Principles	4	..	....
B. A. 130—Elements of Statistics	....	4	....
B. A. 140—Financial Management	....	4	.. .
Econ. 160—Labor Economics	....	..	4
B. A. 160—Personnel Management	....	4	....
B. A. 131—Business Statistics	....	....	4
Econ. 131—Comparative Economic Systems	.. .	....	3
Econ. 130—Economics of Consumption	3	3	4
Electives	1	1	1
Physical Activities			
	16	16	16

Senior Year	Quarter *I*	*II*	*III*
Econ. 132—Advanced Economic Principles	4	....	....
Econ. 134—Contemporary Economic Thought	....	4	....
Econ. 141—Theory of Money, Credit and Prices	....	4	....
Econ. 170—Industrial Combinations and Competition	....	....	4
Econ. 171—Economics of American Industries	.....	4	....
P. A. 140—Public Finance and Taxation	4	....	....
P. A. 180—Government and Business	....	....	4
P. A. 170—Transportation I, Regulation of Transportation Services	4	....	....
P. A. 137—Economic Planning and Postwar Problems	....	....	4
Electives	3	3	3
Physical Activities	1	1	1
	16	16	16

II. BUSINESS ADMINISTRATION

Modern business administration requires a knowledge of and skill in the use of effective tools for the control of business organizations, institutions, and operations. The curriculums of the Division of Business Administration emphasize the principles and problems of the development and the use of policies and organizations, and the methods, techniques and procedures of execution, in other words, the essence of Management and Administration.

The programs of study in the College of Business and Public Administration are so arranged as to facilitate concentrations according to the major function of business organization. This plan is not, however, based on the assumption that these major divisions are independent units, but rather that each is closely related and dependent on the others. Every student in the college, therefore, is required to complete satisfactorily a minimum number of required basic and core subjects in economics and in each of the major functional fields. Each graduate upon completion of the requirements for the bachelor's degree finds himself well grounded in the theory and practice of administration. There are five commonly recognized major business functions, viz; production, marketing, finance, labor relations, and control.

The function of control may be thought of as comprising two divisions, viz, internal and external. Internal control has to do with men, materials, and operations. External control is secured through the force of law, court, board and commission decisions, custom, and public opinion. Management endeavors to make adequate adjustments to these forces. Courses in law and public administration, for example, aid in giving the student an understanding of the problems, devices, and methods of external or "social" control.

Study programs of the Division of Business Administration furnish an opportunity for a small amount of concentration in one of the major sections during the undergraduate period. The basis of these curriculums is the general study program.

The following suggested study programs will aid the thoughtful student in planning his concentration according to his natural aptitudes and the line of his major interest:

The General Curriculum in Administration

This curriculum is set up on a twelve quarter basis which corresponds to the traditional four-year course that leads to a bachelors degree. A student may complete the full course in three calendar years by attending four quarters a year. A superior student may, however, complete the course in a shorter period of time by carrying a heavier load each quarter.

	Quarter *I*	*II*	*III*
Freshman Year			
Econ. 1, 2, 3—Economic Resources of the World	3	2	2
Econ. 4, 5, 6—Economic Developments	2	2	2
Eng. 1, 2, 3—Survey and Composition	3	3	3
Math.—Natural Science, or a Foreign Language	3-5	3-5	3-5
Speech 1, 2—Public Speaking	....	2	2
M. I. 1, 2, 3—Basic R. O. T. C. and Physical Activities (Men)	4	4	4
Physical Activities and Hygiene I, II (Women)	3	3	1
	17	17	17
Sophomore Year			
B. A. 10, 11, 12—Organization and Control	2	2	2
Econ. 31, 32, 33—Principles of Economics	3	3	3
B. A. 20, 21, 22—Principles of Accounting	4	4	4
Electives	....	....	....
M. I. 4, 5, 6—Basic R. O. T. C. and Physical Activities (Men)	4	4	4
Physical Activities (Women)	1	1	1
	16	16	16
Junior Year			
Econ. 140—Money and Banking	4	....	....
B. A. 140—Financial Management	....	4	....
B. A. 130—Elements of Statistics	4	....	....
Econ. 150—Marketing Principles	....	4	....
B. A. 150—Marketing Management	....	....	4
Econ. 160—Labor Economics	....	4	....
B. A. 160—Personnel Management	....	....	4
Electives	7	3	7
Physical Activities	1	1	1
	16	16	16

Senior Year	Quarter I	II	III
B. A. 180, 181, 182—Business Law I, II, III	3	3	3
Econ. 131—Comparative Economic Systems	4	....	....
Econ. 170—Industrial Combinations and Competition	....	....	4
Econ. 171—Economics of American Industry	....	4	....
P. A. 140—Public Finance and Taxation	4	....	....
P. A. 170—Regulation of Transportation	....	4	....
P. A. 180—Government and Business	....	....	4
Electives	4	4	4
Physical Activities	1	1	1
	16	16	16

Electives may be chosen under the direction of a faculty advisor from courses in Accounting, Statistics, Geography, Public Administration, Secretarial Training, Education, Home Economics, Natural Science, or other courses that will aid the student in preparing for his major objective. The electives indicated in the General Course are provided so that students can arrange their schedules, under the guidance of a faculty adviser, in such a way as to secure a concentration or major when desired in:

A. Production Administration
B. Marketing Administration
C. Financial Administration
D. Personal Administration
E. Natural and Human Resources
F. Accounting and Statistical Control
G. Secretarial Training

There are prescribed curriculums for Accounting and for Secretarial Training majors.

A. Production Administration

This curriculum is designed to acquaint the student with the problems of organization and control in the field of industrial production. Theory and practice with reference to organization, policies, methods, processes, and techniques are surveyed, analyzed, and criticized. The student is required to go on inspection trips and when feasable is expected to secure first-hand information through both observation and participation. He should be familiar with the factors that determine plant location and layout, types of buildings, and the major kinds of machines and processes utilized; he should understand effective methods and devices for the selection and utilization of men, materials and machines.

The courses, in addition to those required of all students in the college, which will aid the undergraduate student in preparing himself for a useful place in this field of effort are:

B. A. 10—Business Organization and Control (2)
B. A. 11—Industrial Organization and Control (2)
B. A. 121—Cost Accounting (5)
B. A. 122—Auditing (4)
B. A. 130—Elements of Statistics (4)
B. A. 153—Purchasing Management (3)
Econ. 160—Labor Economics (4)
B. A. 160—Personnel Management (4)

B. A. 163—Industrial Relations (4)
B. A. 165—Office Management (3)
B. A. 170—Industrial Management (4)
P. A. 170—Transportation I—Regulation of Transportation Services (4)
B. A. 171 — Transportation II — Services, Rules, and Practices (4)
B. A. 172—Transportation III—Traffic Rates, Tariffs, Classifications and Interpretations (4)

Industrial Management students may so arrange their study programs as to take a series of related courses in one of the following:

1. Physics
2. Chemistry
3. Some basic engineering courses
4. Agriculture

B. Marketing Administration

Modern business administration is concerned largely with marketing activities. Buying and selling of products and services comprise the major portion of the time and energies of a large group of our population. The ideals of our system of private property, individual initiative and free enterprise are closely related to present-day marketing organization and practice. Effective solutions of the problems of marketing are necessary to the success of the individual business enterprise and for the welfare of the consumer. If the costs of distribution are to be reduced or kept from rising unduly, it is necessary that careful study of the organization, policies, methods, and practices of advertising, selling, purchasing, merchandising, transportation, financing, storing, and other related activities be made, and corresponding appropriate action taken by qualified marketing technicians and executives.

The purpose of the marketing administration program of study is to give the alert and serious student an opportunity to analyze, evaluate and otherwise study the problems connected with marketing institutions, organizations, policies, methods, and practices. He may, for example, develop his aptitudes, on the technical level, for research, selling, buying, and preparing advertising copy; and on the administrative level he may develop his abilities for organizing and directing.

Thoughtful selection of courses from the following lists in addition to those required of all students in the college, will aid the student in preparing himself for an effective position in the field of marketing.

Econ. 150—Marketing Principles and Organization (4)
B. A. 150—Marketing Management (4)
B. A. 151—Advertising Programs and Campaigns (3)
B. A. 152—Copy Writing and Layout (3)
B. A. 153—Purchasing Management (3)
B. A. 154—Retail Store Management (4)
B. A. 143—Credit Management (3)
B. A. 165—Office Management (3)
B. A. 146—Real Estate Financing and Appraisals (3)
B. A. 156—Real Estate Principles and Practices (3)
B. A. 186—Real Estate Law and Conveyancing (3)
P. A. 170—Transportation I—Regulation of Transportation Services (4)
B. A. 171 — Transportation II — Services, Rules, and Practices (4)
B. A. 172—Transportation III—Traffic Rates, Tariffs, Classifications and Interpretations (4)
B. A. 250—Problems in Sales Management (3)
B. A. 251—Problems in Advertising (3)
B. A. 252—Problems in Retail Store Management (3)

B. A. 257—Seminar in Marketing Management (arranged)
B. A. 258—Research in Marketing (arranged)
B. A. 259—Studies of Special Problems in the fields of Marketing Policies, Management and Administration (arranged)
B. A. 299—Thesis (3-6 hours) (arranged)

For those especially interested in foreign trade; selections may be made from the following courses:

P. A. 130—International Economic Policies and Relations (4)
P. A. 137—Economic Planning and Postwar Problems (4)
P. A. 141—International Finance and Exchange (4)
Econ. 140—Money and Banking (4)
Econ. 150—Marketing Principles (4)
B. A. 150—Marketing Management (4)
B. A. 151—Advertising Programs and Campaigns (3)
B. A. 157—Foreign Trade Procedure (4)
P. A. 170—Transportation I, Regulation of Transportation Services (4)
B. A. 173—Transportation IV (4) Overseas Shipping.
P. A. 180—Government and Business (4)
N. H. R. 4—Regional Geography of the Canada (3)
N. H. R. 101—Land Utilization & Agricultural Geography, United States and Continents (3)
N. H. R. 100—Physical Resources of the United States and Canada (3)
N. H. R. 102—The Geography of Manufacturing in the United States and Canada (3)
N. H. R. 110—The Geography of Middle America (3)
N. H. R. 111—The Geography of South America (3)
N. H. R. 112—Recent Economic Trends in Latin America (3)
N. H. R. 120, 121 —Economic Geography of Europe (6)
N. H. R. 122 — Economic Geography of Africa (3)
N. H. R. 203—Advanced Physiography (3)
N. H. R. 204—Advanced Climatology (3)
N. H. R. 221—Seminar in Regional Geography (3, 3, 3)
N. H. R. 222—Research Work

C. Financial Administration

A nation with a highly developed industrial system requires an effective financial organization. Production and marketing activities of business enterprises must be financed; a large volume of consumer purchases depend on credit; and the activities of local, state, and federal governments depend, in large part, on taxation and borrowing. To meet these needs a complicated structure of financial institutions, both private and public, has evolved together with a wide variety of financial instruments. The methods used are equally varied and complicated. Since the financing service is so pervasive throughout our economic life and because it is an expense which must be born by the ultimate purchaser, the management of the finance function is endowed with a high degree of public interest.

This study program is designed to give the student fundamental information concerning financing methods, institutions, and instruments; and to aid him in developing his ability to secure and evaluate pertinent facts, and to form sound judgments with reference to financial matters. Through a wise selection of subjects the student may prepare himself for positions in the commercial, savings, and investment banking fields; trust company work; credit management; investment management; corporate financial management; real estate financing; and insurance. A student may qualify himself

to enter government service, e.g., in departments regulating banking operations, international finance, the issuance and sales of securities, and a number of financial corporations owned and operated or controlled by the government.

A student who wishes to form a study concentration in the field of financial administration may select, with the aid of his advisor, from the courses listed below, those that will prepare him to achieve his major objective. These subjects are in addition to those required of all students in the College of Business and Public Administration.

Econ. 140—Money and Banking (4)
B. A. 140—Financial Management (4)
B. A. 141—Investment Management (4)
B. A. 142—Banking Policy and Practice (4)
B. A. 143—Credit Management (3)
B. A. 147—Business Cycle Theory (3)
B. A. 165—Office Management (3)
P. A. 140—Public Finance and Taxation (4)
Econ. 141—Theory of Money, Credit and Prices (3)
B. A. 144—Life, Group and Social Insurance (3)
B. A. 145—Property, Casualty and Liability Insurance (3)
B. A. 146—Real Estate Financing and Appraisals (3)
P. A. 141—International Finance and Exchange (4)
P. A. 137—Economic Planning and Postwar Problems (4)
Econ. 241—Seminar in Money, Credit and Prices (arranged)
B. A. 240—Seminar in Financial Organization and Management (3)
B. A. 249—Studies of Special Problems in the Field of Financial Administration (arranged)

D. Personnel Administration

The recent development of large scale operation on the part of both private enterprise and government has emphasized the growing vital importance of personal relationships. Successful operation depends on harmonious cooperation between employer and employee. The interests of the public, the owners, and the management, as well as those of the employees, may be greatly affected by the solutions evolved in any given case of personnel relationship. The growth of large-scale, centrally controlled labor organizations and the increased participation of governmental agencies in labor disputes have created problems for which business management, union officials, and government representatives have been, on the whole, ill-prepared to solve satisfactorily. The government, the unions, and business need men and women qualified to deal effectively with these problems. They should have broad training and technical information in the fields of business and public administration, economics, and psychology, together with suitable personalities. They must be able to approach these problems with an open mind, unbiased by personal and class prejudices.

Personal administration has to do with the direction of human effort, it is concerned with securing, maintaining, and utilizing an effective working force. People adequately trained in personnel administration find employment in business enterprises, governmental departments, governmental corporations, educational institutions, charitable institutions, and with the armed forces.

A student may select from the following courses those which will, in addition to those required of all students in the college, best prepare him for the kind of personnel work he wishes to enter.

Econ. 160—Labor Economics (4)
B. A. 160—Personnel Management (4)
B. A. 162—Contemporary Trends in Labor Relations (4)
B. A. 163—Industrial Relations (4)
P. A. 161—Recent Labor Legislation and Court Decisions (3)
Econ. 130—Economics of Consumption (3)
B. A. 170—Industrial Management (4)
P. A. 111—Public Personnel Administration (3)
Psych. 4—Psychology for Students of Business and Public Administration (3)
Psych. 121—Social Psychology (3)
Psych. 160—Psychology of Personnel (3)
Psych. 161—Advanced Phychology of Personnel (3)
P. A. 211—Problems in Public Personnel Administration (arranged)
B. A. 262—Seminar in Contemporary Trends in Labor Relations (3)
B. A. 266—Research in Personnel Management (arranged)
B. A. 269—Studies of Special Problems in Employer-Employee Relationships (arranged)
B. A. 299—Thesis, 3-6 hours (arranged)

E. Accounting and Statistical Control Study Program

Internal control in modern business and governmental organizations is a major over-all administrative function. The rapid growth in size and complexity of current governmental units and business enterprises has emphasized the importance of the problems of control in management. In order to control intelligently and effectively the manifold activities of these units, it is necessary to establish an organization, formulate policies, and develop methods of procedures. In order to perform satisfactorily these managerial activities, it is necessary to have pertinent facts concerning the operations of the various units, divisions, and departments. It is the function of the accounting and statistical department to secure, analyze, classify, and, to a limited extent, interpret these facts.

The accounting and statistical study program is designed to give the student a broad training in administrative control supplemented by specific technical training in the problems, procedures, methods and techniques of accounting and statistics. If the program is followed diligently, the student may prepare himself for a career as a public accountant, tax specialist, cost accountant, auditor, budget officer, comptroller, credit manager, or treasurer.

The following study program provides courses for those wishing to concentrate in this important field:

Students majoring in accounting and statistics follow the general study program in the freshman and sophomore years.

	Quarter I	Quarter II	Quarter III
Junior Year			
B. A. 120—Intermediate Accounting	5	....	....
B. A. 121—Cost Accounting	....	5	....
B. A. 122—Auditing Theory and Practice	....	....	5
B. A. 130—Elements of Statistics	....	4	....
B. A. 131—Business Statistics	....	....	4
Econ. 140—Money and Banking	4	....	....
B. A. 140—Financial Management	....	4	....
Econ. 150—Marketing Principles and Organization	4	....	....
B. A. 150—Marketing Management	....	4	....
Econ. 160—Labor Problems	....	....	4
Electives	3	....	3
Physical Activities	1	1	1
	17	18	17
Senior Year			
B. A. 123—Income Tax Accounting	5	....	....
B. A. 124—Advanced Accounting Theory and Practice	....	5	....
B. A. 125—C. P. A. Problems	....	....	5
B. A. 180, 181, 182—Business Law	3	3	3
B. A. 183—Business Law for Accountants	....	....	3
P. A. 124—Governmental Accounting	....	4	....
B. A. 160—Personnel Management	4	....	....
Electives	3	3	4
Physical Activities	1	1	1
	16	16	16

The student interested in this field may select electives with the aid of his advisor, from the following list of subjects such courses as will best meet his needs.

P. A. 114—Public Budgeting (3)
B. A. 129—Apprenticeship in Accounting (0)
B. A. 132, 133—Advanced Business Statistics I and II (4 and 4)
B. A. 165—Office Management (3)
B. A. 143—Credit Management (3)
B. A. 220—Managerial Accounting (3)
B. A. 299—Thesis, 3-6 hours (arranged)
B. A. 221, 222 — Seminar in Accounting (arranged)
B. A. 228—Research in Accounting (arranged)
B. A. 229—Studies of special problems in the fields of Statistical Control (arranged)

III. SECRETARIAL TRAINING

The development of the program of studies in Secretarial Training in the College of Business and Public Administration has been in response to the rapidly growing need for college trained secretarial and office personnel. Both men and women students are provided with the opportunity to prepare themselves for effective service in the fields of business and public activities. The major objectives of the college will be maintained and emphasized throughout the presentation of the program of studies outlined for secretarial and office training. The purpose of this curriculum is not to furnish

merely technical or vocational training, to turn out mechanical perfection in typing, filing, machine operation and stenography—but rather to aid the student in developing his or her natural aptitudes in such a way as to become an efficient secretary, or office manager. The development of the student's capacity to plan, organize, direct, and execute is the guiding principle followed in this curriculum. This program of study will appeal to the young man and woman who is ambitious, naturally capable, and willing to work, and to those who realize that the positions of office management and secretarial service require much more than merely skill in typing and stenography. These are essential tools, but knowledge and skill in other subjects are of greater importance for the more responsible positions.

The following program of study is designed to give the capable student an opportunity to develop his potential aptitudes to an effective end.

Freshman Year	Quarter I	II	III
Econ. 1, 2, 3—Economic Resources of the World I, II, III	3	2	2
Econ. 4, 5, 6—Economic Developments I, II, III	2	2	2
Eng. 1, 2, 3—Survey and Composition	3	3	3
Speech 1, 2—Public Speaking	....	2	2
S. T. 10—Advanced Typewriting I	....	....	1
S. T. 12, 13, 14—Shorthand Principles I, II, III	3	3	3
Electives	2-3	1-2	2
Military Training and Physical Activities (Men)	4	4	4
Physical Activities and Hygiene (Women)	3	3	1
	17	17	17

Students not having had previous training in typewriting will register for S. T. 1 and 2, concurrently with S. T. 12 and 13.

Sophomore Year			
B. A. 10, 11, 12—Organization and Control I, II, III	2	2	2
B. A. 20, 21, 22—Principles of Accounting I, II, III	4	4	4
Econ. 31, 32, 33—Principles of Economics I, II, III	3	3	3
S. T. 11—Advanced Typewriting II	1	....	....
S. T. 16, 17, 18—Advanced Shorthand I, II, III	3	3	3
Electives	3	1-4	1-4
Military Training and Physical Activities (Men)	4	4	4
Physical Activities (Women)	1	1	1
	17	17	17

Junior Year	Quarter I	II	III
B. A. 130—Elements of Statistics	4	....	....
Econ. 140—Money and Banking	4	....	....
B. A. 140—Financial Management	....	4	....
Econ. 150—Marketing Principles	4	....	....
B. A. 150—Marketing Management	....	4	....
Econ. 160—Labor Economics	....	4	....
B. A. 160—Personnel Management	....	....	4
S. T. 118—Business Communications	....	....	4
B. A. 154—Retail Store Management and Merchandising	....	....	4
Electives	3	3	3
Physical Activities	1	1	1
	16	16	16

Senior Year			
B. A. 180, 181, 182—Business Law I, II, III	3	3	3
S. T. 111—Office Training	....	3	....
B. A. 165—Office Management	....	3	....
S. T. 119—Conference and Court Reporting	....	....	5
Electives to meet the requirements of concentration	12	6	7
Physical Activities	1	1	1
	16	16	16

Combined Secretarial Training and Commercial Teaching Curriculum

Capable students may elect courses offered by the College of Education in such a manner as to qualify themselves for commercial teaching in high schools and colleges.

Typing may be taken by any student but no university credit will be allowed unless accompanied by the corresponding course in shorthand. The special fee for typewriting is $5.00 for each quarter. Credit for shorthand is not granted unless accompanied by satisfactory proficiency in typing.

IV. PUBLIC ADMINISTRATION

The world-wide trend on the part of governments, especially strong centralized governments toward the assumption of greater responsibility for guiding, controlling, and regulating the activities of the citizenry has created a strong demand and a real need for better trained governmental personnel. This trend toward increased governmental participation in the fields of our economic, political, and social life has been developing for a number of years but more rapidly in some countries than others. The growth was pronounced in the European countries during the twenties, it grew rapidly in the United States during the thirties. Thousands of men and women are now employed in developing organizations, evaluating policies, and devising methods and procedures for administering and supervising the manifold governmental activities required in the far-flung scheme of economic and social control. Our government, for example,

has now become the largest "business" enterprise in the country. The gigantic task of organization, management and control was undertaken before an adequately qualified personnel could be selected and properly trained. Federal, State, and Local Governments have called upon the universities to aid in training young men and women for effective public service. Graduates who are mentally alert, can think clearly, form critical judgments, express their thoughts and conclusions succinctly, have a well balanced mind, and who possess a professional point of view with reference to their work, are needed in a number of government divisions.

The curriculum in Public Administration is designed primarily to aid in the preparation of young men and women for technical, supervisory, and managerial positions in the various state and federal services. The particular selections of subjects in any individual case will depend on the specific position for which the student wishes to prepare. The full course resources of the University are available for this training. Courses, for example, in foreign languages, geography, history, philosophy, and government, as well as studies in social, legal, political, and economic institutions may be advisable in addition to the required courses in Business and Public Administration.

Properly qualified graduates can usually find employment in the field of their major interest. Large numbers of people trained in such technical fields as statistics, accounting, finance, personnel, marketing and transportation are employed by governmental agencies. There is a need for people trained for and interested in the various aspects of research in the social science and business administration fields. Graduates fitted by nature and equipped through proper training and experience for the broader fields of administration and management can find interesting work in governmental units and at the same time satisfy their normal desire to render a special service to society.

Some of the governmental agencies which employ college trained people are given as an illustration of the opportunities available. Many of these are within the "Civil Service" System, such federal agencies as the Social Security Board; Central Statistical Board; Federal Trade Commission; National Resources Committee; Federal Housing Administration; Federal Reserve Board; Reconstruction Finance Corporation; Tennessee Valley Corporation; Bureau of Agricultural Economics; Bureau of Labor Statistics; Bureau of the Census; Bureau of Foreign and Domestic Commerce; and the Division of Research and Statistics in the Treasury Department demand the services of many professionally and technically trained people. The Departments of Agriculture, Commerce, State, Labor, and Treasury use many college trained men and women.

The undergraduate student who expects to make his concentration in the field of Public Administration will find the following curriculum serviceable:

	Quarter I	Quarter II	Quarter III
Freshman Year			
English 1, 2, 3—Survey and Composition	3	3	3
Pol. Sci. 1—American National Government	3	....	....
Foreign Language	3	3	3
Econ. 1, 2, 3—Economic Resources I, II, III	3	2	2
Econ. 4, 5, 6—Economic Developments	2	2	2
Psych. 1—Introduction to Psychology	....	3	....
Soc. 1, 3 or 5—Sociology	....	....	3
Military Training and Physical Activities (Men)	4	4	4
Hygiene and Physical Activities (Women)	3	3	1
	16-17	16-17	16-17
Sophomore Year			
Eng. 7, 8—Expository Writing (or Eng. 4, 5, 6)	2	2	....
Speech 1, 2—Public Speaking	....	2	2
Econ. 31, 32, 33—Principles of Economics	3	3	3
Foreign Language	3	3	3
Pol. Sci. 4—State and Local Government	3	....	....
Pol. Sci.—Selection from Pol. Sci. 7, 8, 9, 10, 51 and 54	....	3	3
B. A. 10, 11, 12—Organization and Control	2	2	2
Electives	2	....	....
Military Training and Physical Activities (Men)	4	4	4
Physical Activities (Women)	1	1	1
	17	17	17
Junior Year			
P. A. 110—Principles of Public Administration	3	....	....
P. A. 111—Public Personnel Administration	....	....	3
Econ. 160—Labor Economics	....	4	....
Econ. 140—Money and Banking	4	....	....
B. A. 140—Financial Management	....	4	....
Econ. 130—Elements of Statistics	4	....	....
Econ. 150—Marketing Principles	4	....	....
P. A. 184—Public Utilities	....	....	4
B. A. 131—Business Statistics	....	4	....
P. A. 137—Economic Planning and Postwar Problems	....	....	4
Electives	....	3	5
Physical Activities	1	1	1
	16	16	16
Senior Year			
P. A. 180—Government and Business	4	....	....
P. A. 126—The Government and Social Security	....	4	....
P. A. 141—International Finance and Exchange	....	....	4
P. A. 140—Public Finance and Taxation	4	....	....
Econ. 132—Advanced Economic Principles	4	....	....
Econ. 134—Contemporary Economic Thought	....	4	....
Econ. 131—Comparative Economic Systems	....	....	4
Electives (to be selected in terms of the student's primary objective with the aid of his advisor)	3	7	7
Physical Activities	1	1	1
	16	16	16

Selection of electives may be made from the following courses:

P. A. 124—Governmental Accounting (4)
P. A. 161—Recent Labor Legislation and Court Decisions (4)
P. A. 170—Transportation I, Regulation of Transportation Services (4)
P. A. 114—Public Budgeting (3)
P. A. 126—Government and Social Security (4)
H. 135—Constitutional History of the United States (3-3)
P. A. 201—Seminar in International Organization (3)
P. A. 213—Problems of Public Administration (3)
P. A. 214—Problems of Public Personnel Administration (3)
P. A. 235—Seminar in International Economic Relations (3) (arranged)
P. A. 240—Research in Governmental Fiscal Policies and Practices (arranged)
P. A. 280 — Seminar in Business and Government Relationships (arranged)
P. A. 284—Seminar in Public Utilities (arranged)
P. A. 299—Thesis (3-6 hours) (arranged)

If the student expects to enter the foreign service he should be well grounded in the language, geography, history, and politics of the region of his anticipated location as well as in the general principles and practices of business operations. It should be recognized that only a limited training can be secured during the undergraduate period. When more specialized or more extensive preparation is required, graduate work should be planned. The individual program, in either instance, however, should be worked out under the guidance of a faculty advisor.

V. NATURAL AND HUMAN RESOURCES

Agriculture, industry, trade, social customs and politics of a given geographical region are influenced to a great extent by the natural resources of that area. Climatic conditions, topography, mineral deposits, water power, soils and other physical factors largely determine the economic possibilities of a country. The characteristics of the philosophy, political ideals and degrees of technological maturity of the people within a given geographical unit, in turn, determine in large measure the degree of effectiveness with which the natural resources are utilized. The standard of living, the purchasing power, and the political outlook of the inhabitants of a country are, in the main, the result or the expression of the interrelationship existing between the people and their physical environment.

The curriculum of the Department of Natural and Human Resources is designed to aid the student in securing the facts concerning the major geographical areas of the world and in studying and analyzing causes and results as they affect economic, political, and social activities. The student interested in international trade, international political relations, diplomacy, overseas governments and national aspirations will find the courses in this department of great practical value. Work is offered on both the undergraduate and the graduate levels. Considerable emphasis is placed on research activity on the part of faculty members and graduate students.

The student interested in this field of human endeavor should select his courses from those listed below with the aid of a faculty member who is

conversant with his objective and the requirements for success in this field. The selection of such essential courses as foreign language, history, geography, government, and social customs should be made in terms of the geographical area in which the student expects to operate.

N. H. R. 4—Regional Geography of the Continents (3)
N. H. R. 61, 62, 63—Economic Geography (9)
N. H. R. 100—Physical Resources of the United States and Canada (3)
N. H. R. 101—Land Utilization and Agricultural Geography, United States and Canada (3)
N. H. R. 102—The Geography of Manufacturing in the United States and Canada (3)
N. H. R. 110—Middle America (3)
N. H. R. 111—South America (3)
N. H. R. 112—Recent Economic Trends in Latin America (3)
N. H. R. 120, 121—Economic Geography of Europe (6)
N. H. R.122—Economic Geography of Africa (3)
N. H. R. 203—Advanced Physiography (3)
N. H. R. 204—Advanced Climatology (3)
N. H. R. 221—Seminar in Regional Geography (3, 3, 3)
N. H. R. 222—Research Work

COLLEGE OF EDUCATION

ARNOLD E. JOYAL, *Acting Dean*
ALMA FROTHINGHAM, *Secretary*

Along with all other institutions, public education feels acutely the impact of war's demands. There is great present need for teachers. The College of Education of the University of Maryland, with the hearty cooperation of the Maryland State Department of Education, is doing its utmost to maintain the supply of trained teachers for the schools.

Types of Persons Served

The College of Education meets the needs of the following classes of students: (1) undergraduates preparing to teach in high schools, preparatory schools, and vocational schools; (2) present or prospective elementary teachers who wish to supplement their training; (3) students preparing for educational work in the trades and industries; (4) students preparing to become home demonstrators, club or community recreation leaders, and (in cooperation with the Department of Sociology) social workers; (5) graduate students preparing for teaching, supervisory, or administrative positions requiring an advanced degree; (6) students whose major interests are in other fields, but who desire courses in education.

Special Facilities

Because of the location of the University in the suburbs of the nation's capital, unusual facilities for the study of education are available to its students and faculty. The Library of Congress, the library of the Office of Education, and special libraries of other government agencies are accessible, as well as the information services of the National Education Association, American Council on Education, U. S. Office of Education, and other institutions, public and private. The school systems of the District of Columbia and suburban counties of Maryland offer generous cooperation.

Requirements for Admission

The requirements for admission to the College of Education are in general the same as for the other colleges of the University. Candidates for admission whose high school records are consistently low are strongly advised not to seek admission to the College of Education.

Guidance in Registration

At the time of matriculation each student is tentatively assigned to a member of the faculty who acts as the student's personal adviser. The choice of subject areas within which the student will prepare to teach and the selection of his professional courses will be made under faculty guidance during the first year in the Introduction to Education course, required of all freshmen. While in particularly fortunate cases it may be possible to make satisfactory adjustments as late as the junior year, for students from other colleges who have not already entered upon the sequence of professional courses, it is highly desirable that this work in the College of Education be begun in the freshman year. Students who propose to teach (except Vocational Agriculture) should register in the College of Education, in order that they may have continuously the counsel and guidance of the faculty which is directly responsible for their professional preparation.

Junior Status

The first two years of college work are preparatory to the professional work of the junior and senior years. To be eligible to enter the professional courses, a student must have attained junior status, that is, he must have completed 96 quarter-hours of freshman-sophomore courses with an average grade of C or better.

Education Courses in Baltimore

The majority of the professional courses and some of the arts and sciences courses required for undergraduate preparation in Education are offered in Baltimore in late afternoon and evening courses primarily for employed people. On a part time basis, a student may complete some or all of his work for a Bachelor of Arts or Bachelor of Science degree in Education in the Baltimore Division of the College of Education. Through special arrangement with the Graduate School, graduate courses are also available for students working on masters' and doctors' degrees in education.

A separate announcement of these courses is issued in the spring of each year. This announcement may be obtained from the Baltimore Division, College of Education, University of Maryland, Lombard and Greene Streets, Baltimore 1, Maryland.

Certification of Secondary School Teachers

The State Department of Education certifies to teach in the approved high schools of the State only graduates of approved colleges who have satisfactorily fulfilled subject-matter and professional requirements. Specifically it limits certification to graduates who "rank academically in the upper four-fifths of the class and who make a grade of C or better in practice teaching." (See *Maryland School Bulletin*, Vol. 23, No. 3.)

From the offerings in Education, the District of Columbia requirement of 36 quarter hours of professional courses may be fully met.

Degrees

The degrees conferred upon students who have met the conditions prescribed for a degree in the College of Education are Bachelor of Arts and Bachelor of Science. Upon completion of a minimum of 195 quarter hours of credit in conformity with the requirements specified under "Curricula" and in conformity with general requirements of the University, the appropriate degree will be conferred.

CURRICULA AND REQUIRED COURSES

There are seven curricula in the College of Education, as follows: (1) *Academic,* which is selected by students who wish to become teachers of English, social studies, sciences, mathematics, or languages; (2) *Business Education;* (3) *Elementary Education;* (4) *Home Economics Education;* (5) *Nursery School Education;* (6) *Industrial Education;* and (7) *Physical Education.*

The following minimum requirements are common to all curricula: English—9 quarter hours; social studies—18 quarter hours; science or mathematics—9 quarter hours; education—30 quarter hours; Speech 2—Voice and Diction—3 quarter hours; physical education and military science as required by the University.

In order to be admitted to a course in student teaching (Ed. 139 or 140) a student must have a grade point average of 2.275. Marks in all required courses in education and in the major and minor must be C or higher.

Exceptions to curricular requirements and rules of the College of Education must have the approval of the student's adviser and the Dean.

Academic Curriculum—General and Specific Requirements

Students enrolled in this curriculum will meet the following *general* requirements which are normally fulfilled by the end of the sophomore year:

(1) English, 18 quarter hours.

(2) Foreign language for candidates for the bachelor of arts degree: 18 quarter hours provided the student enters with less than three years of foreign language credits; 9 quarter hours, if he enters with three years of such credits. (No foreign language is required of any student who enters with four years of language credits nor of candidates for the bachelor of science degree.)

(3) Social sciences (history, geography, sociology, economics, and political science), 18 quarter hours.

(4) Science or mathematics, 18 quarter hours.

(5) Education, 30 quarter hours.

All students who elect the academic education curriculum will fulfill the preceding *general* requirements and also prepare to teach at least two high school subjects which will involve meeting *specific* requirements in *particular* subject matter fields called majors or minors. Usually the student completes one major and one minor. The quarter-hour requirements for each major and minor are detailed under "Specific Requirements" below.

The *specific* requirements by subject fields, are as follows:

English. A major in English requires 54 quarter hours as follows:

Survey and Composition	18 quarter hours
Survey of American Literature	9 quarter hours
Electives	27 quarter hours

A minor in English requires 39 quarter hours. It includes the 27 hours prescribed for the major and 12 hours of electives.

Electives must be chosen with the approval of the adviser who will guide the student in terms of College of Education records and recommendations of the English Department.

Social Sciences. For a major in this group, 54 quarter hours are required, of which at least 27 hours must be in history including 9 hours in American history and 9 hours in European history. Nine of the 27 hours must be in advanced courses. For a minor in the group, 36 hours are required, of which 27 are the same as specified above, and 9 of which must be in advanced courses.

History (including Survey of Western Civilization and American History)	27 quarter hours
Economics or sociology	9 quarter hours
Electives	18 quarter hours

For a minor, the requirements are the same less the electives.

Modern Languages. All students whose major is in modern languages are required to take Comp. Lit. 101—Introductory Survey of Comparative Literature, and they are strongly advised to take the review course (Fr. 99, Ger. 99, Span. 99). The following courses are recommended: H. 1, 2—Survey of Western Civilization; Phil. 1—Fundamentals of Philosophy; Comp. Lit. 104—Old Testament as Literature; Eng. 113, 114—Prose and Poetry of the Romantic Age; Comp. Lit. 105, 106—Romanticism in France and Germany. For a major in German, Eng. 106—Old English and Eng. 103—Beowulf.

Specific requirements for the major in the different languages are as follows: French—Fr. 61, 62, 63, 71, 72, 73, 75, 76, 77, and three additional year courses in literature in the 100 group; German—Ger. 61, 71, 72, 73, 75, 76, 77, and three additional year courses in the 100 group; Spanish—Span. 61, 71, 72, 73, 75, 76, 77, and at least twenty-four hours in the 100 group.

Classical Languages. Both a major and minor are offered in Latin consisting of 45 and 30 quarter hours respectively. The courses are chosen with the advice of the Department of Foreign Languages and Literatures.

Mathematics. A major in Mathematics requires 54 quarter hours as follows:

Math. 7—Solid Geometry	3 quarter hours
Math. 15, 16, 17—Algebra, Trigonometry, Analytical Geometry	15 quarter hours
Math. 20, 21, 22—Calculus	15 quarter hours
Electives (Mathematics or physical sciences)	21 quarter hours

For a minor the requirements are the same less the electives.

Electives will be chosen by the student after consultation with the College of Education and the department of mathematics.

Nine of the 54 hours required for a major should be in courses numbered 100 or above.

Students who pass an examination in solid geometry may be excused from Math. 7.

Science. In general science a major of 60 quarter hours and a minor of 45 quarter hours are offered, each including elementary courses in chemistry, physics, and biology (zoology and botany). The major should include one of the following programs.

Program I, emphasizing chemistry: Math. 15, 16, 17; Chem. 1, 3, 5, 19, 31, 32, 33, 34, 101, 181, 182, 183, 184, 185, 186; Phys. 1, 2; Zool. 1; Bot. 1; Bact. 1.

Program II, emphasizing physics: Math. 15, 16, 17; Chem. 1, 3, 5; Phys. 3, 4, 5, and 9 quarter hours of physics chosen from Phys. 104 to Phys. 111; Zool. 1; Bot. 1; Bact. 1.

Program III, emphasizing botany: Chem. 1, 3, 5; Phys. 1 and 2 or Phys. 6, 7, 8; Zool. 1; Bot. 1, 2, 50, 101; Plt. Phys. 102; Bact. 1.

Program IV, emphasizing zoology. Chem. 1, 3, 5; Phys. 1 and 2 or Phys. 6, 7, 8; Zool. 2, 3, 14, 15, 7, 121 or 104, 75, 76; Bot. 1; Bact. 1.

Minors of thirty quarter hours are offered in chemistry, in physics, and in biological sciences. A minor in biology must be supported by a course in chemistry (Chem. 1 and 2 or 7 and 9). A minor in physics must be supported by a basic course in chemistry (Chem. 1 and 2). A minor in chemistry must be supported by a basic course in physics (Phys. 1 and 2).

If a major in general science is accompanied by a minor in chemistry, physics, or biology, the same credits may be applied to both provided that they number not less than 78 quarter hours in natural sciences.

Academic Education Curriculum

Freshman Year	Quarter I	Quarter II	Quarter III
Ed. 2—Introduction to Education	3	or 3	....
Eng. 1, 2, 3—Survey and Composition	3	3	3
Speech 3—Voice and Diction	....	....	3
M. I. 1, 2, 3—Basic R. O. T. C. I (Men)	3	3	3
P. E.—Physical Activities	1	1	1
P. E. 42, 44—Hygiene I, II (Women)	2	2	....
General requirements	....	....	....
Major and minor requirements	....	....	....
Electives	....	....	....
Total	17	17–18	17–18

Sophomore Year	Quarter I	Quarter II	Quarter III
Ed. 3—Educational Forum	....	1	or 1
Eng. 4, 5, 6—Survey and Composition	3	3	3
M. I. 4, 5, 6—Basic R. O. T. C. II (Men)	3	3	3
P. E.—Physical Activities	1	1	1
General requirements	....	....	....
Major and minor requirements	....	....	....
Electives	....	....	....
Total	17–18	17–18	17–18

Junior Year			
Psych. 80—Educational Psychology	5	....	....
Ed. 112—Educational Sociology	....	....	3
Ed. 103—Theory of the Senior High School or	3	....	....
Ed. 110—Theory of the Junior High School	....	3	....
Ed. 120, 122, 124, 126, or 128—Curriculum, Instruction, and Observation	....	....	5
P. E.—Physical Activities	1	1	1
General requirements	....	....	....
Major and minor requirements	....	....	....
Electives	....	....	....
Total	16–18	16–18	16–18

Senior Year			
Ed. 105—Educational Measurement	....	3	....
Ed. 139—Methods and Practice of Teaching or	5	or 5	or 5
Ed. 140—Methods and Practice of Teaching	9	or 9	or 9
P. E.—Physical Activities	1	1	1
Major and minor requirements	....	....	....
Total	12–18	12–18	12–18

Business Education Curriculum

Freshman Year			
Ed. 2—Introduction to Education	3	....	....
Eng. 1, 2, 3—Survey and Composition	3	3	3
S. T. 1, 2—Principles of Typewriting I, II	0	0	....
S. T. 10—Advanced Typewriting I	....	....	1
Econ. 1, 2, 3—Economic Resources of the World I, II, III	2	2	2
Econ. 4, 5, 6—Economic Developments I, II, III	2	2	2
H. 1, 2, 3—Survey of Western Civilization	3	3	3
M. I. 1, 2, 3—Basic R. O. T. C. I (Men)	3	3	3
P. E.—Physical Activities	1	1	1
P. E. 42, 44—Hygiene I, II (Women)	....	2	2
Electives	....	....	....
Total	17	17–18	17–18

	Quarter		
Sophomore Year	*I*	*II*	*III*
Ed. 3—Educational Forum	1	....	....
Eng. 7, 8, 9—Expository Writing	2	2	2
S. T. 12, 13, 14—Shorthand Principles I, II, III	3	3	3
S. T. 11—Advanced Typewriting II	1	....	....
Econ. 31, 32, 33—Principles of Economics I, II, III	3	3	3
B. A. 20, 21, 22—Principles of Accounting I, II, III	4	4	4
Speech 3—Voice and Diction	....	....	3
M. I. 1, 2, 3—Basic R. O. T. C. II (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Total	18	18	19
Junior Year			
Psych. 80—Educational Psychology	5	....	....
Ed. 112—Educational Sociology	....	....	3
Ed. 103—Theory of the Senior High School **or**	3	....	....
Ed. 110—Theory of the Junior High School	....	3	....
Ed. 150—Curriculum, Instruction, and Observation—Business Subjects	....	....	5
B. A. 10, 11, 12—Organization and Control I, II, III	2	2	2
S. T. 16, 17, 18—Advanced Shorthand I, II, III	3	3	3
Econ. 140—Money and Banking	4	....	....
S. T. 111—Office Training	....	....	3
P. E.—Physical Activities	1	1	1
Total	17–18	17–18	17–18
Senior Year			
Ed. 105—Educational Measurements	....	3	....
Ed. 140—Methods and Practice of Teaching **or**	9	or 9	or 9
Ed. 139—Methods and Practice of Teaching	5	or 5	or 5
B. A. 180, 181, 182—Business Law I, II, III	3	3	3
B. A. 165—Office Management	....	3	....
P. E.—Physical Activities	1	1	1
Total	12–18	12–18	12–18

Business Education majors not pursuing the Secretarial Training Course may take:

Econ. 150—Marketing Principles and Organization (4)

B. A. 150—Marketing Management (4) and

B. A. 154—Retail Store Management and Merchandising (4)

instead of S. T. 12, 13, 14, 16, 17, 18.

Elementary Education Curriculum

This curriculum is open only to persons who have completed two or three year curricula in Maryland State Teachers Colleges or other accredited teacher education institutions whose records give evidence of ability and character essential to elementary teaching. Such persons will be admitted to advanced standing and classified provisionally in appropriate classes.

Credit for extension courses given by other institutions may be accepted in an amount not exceeding 45 quarter hours. The last 45 quarter hours of work preceding the conferring of the degree must be done in the University of Maryland.

Additional curriculum requirements for students who are admitted with approximately 96 quarter hours (64 semester hours) of advanced standing (two year normal school graduates) are as follows:

Education—6 quarter hours; English—15 quarter hours; science (chemistry, physics, zoology, botany, bacteriology, entomology)—15 quarter hours; social science (history, sociology, economics, political science, geography)—18 quarter hours. Electives to be chosen according to individual need and approved by adviser.

Additional curriculum requirements for students who enter with approximately 144 quarter hours (96 semester hours) of advanced standing (three-year normal school graduates) are as follows:

Education—3 quarter hours; English—9 quarter hours; science (as above)—9 quarter hours; social science (as above)—12 quarter hours. Electives—as above.

Home Economics Education

The Home Economics Education curriculum is designed for students who are preparing to teach vocational or general home economics or to engage in any phase of home economics work which requires a knowledge of teaching methods. It includes studies of all phases of home economics and the allied sciences, with professional training for teaching these subjects. Electives may be chosen from other colleges.

Opportunity for additional training and practice is given through directed teaching and through experience in the home management house.

Students electing this curriculum may register in the College of Education or the College of Home Economics. Students will be certified for graduation only upon fulfillment of all the requirements of this curriculum.

Home Economics Education Curriculum	Quarter		
	I	*II*	*III*
Freshman Year			
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 2—General Chemistry	....	5	5
H. E. 10—Textiles	5	....	....
H. E. 70—Design	....	3	....
H. E. 71—Costume Design	....	....	3
H. E. 1—Home Economics Lectures	1	....	....
P. E. 42, 44—Hygiene I, II	2	2	....
P. E.—Physical Activities	1	1	1
Math 0—Basic Mathematics	0–1	....	....
Speech 3—Voice and Diction	....	....	3
Ed. 2—Introduction to Education	3	....	....
Electives	....	3	3
Total	15	17	18

	Quarter		
Sophomore Year	*I*	*II*	*III*
Phys. 6, 7, 8—Introductory Physics	3	3	3
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
H. E. 20A or B—Clothing	3	....	....
H. E. 31, 32, 33—Foods	3	3	3
P. E.—Physical Activities	1	1	1
Econ. 37—Fundamentals of Economics	....	....	5
Soc. 3—Contemporary Social Problems	....	....	3
Bot. 1—Introductory Botany	....	5	....
Electives	4	3	3
Total	17	18	18
Junior Year			
H. E.—150, 151—Home Management	....	3	3
H. E. 135—Nutrition	5	....	....
H. E. 122—Draping	....	....	5
H. E. 130—Food Economics	....	3	....
H. E. 131—Meal Service	....	3	....
H. E. Ed. 101—Curriculum, Instruction, and Observation—Home Economics	5	....	....
Psych. 80—Educational Psychology	5	....	....
Bact. 50—Household Bacteriology	....	....	5
P. E.—Physical Activities	1	1	1
H. E. 74—Survey of Art History	....	....	3
Electives	....	5	....
Total	16	15	17
Senior Year			
H. E. 152—Home Management	3	....	....
H. E. 153—Practice in Management of the Home	....	3	....
H. E. 170, 171—Interior Design	3	3	....
H. E. 132—Demonstrations	....	....	3
H. E. Ed. 103—Teaching Secondary Vocational Home Economics	5 or 9	....	....
H. E. Ed. 106, 107—Problems in Teaching Home Economics	....	2	2
H. E. Ed. 102—Child Study	....	....	5
Ed. 105—Educational Measurements	....	3	....
Ed. 112—Educational Sociology	....	....	3
Ed. 110—Theory of the Junior High School or	....	3	....
Ed. 103—Theory of the Senior High School	3	....	....
P. E.—Physical Activities	1	1	1
Total	15–19	15	14

Nursery School Curriculum

The nursery school curriculum has as its goal the preparation of nursery school teachers. It is also planned to further the personal development of the student and to give training in homemaking.

	Quarter		
	I	*II*	*III*
Freshman			
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 2—General Chemistry	....	5	5
H. E. 10—Textiles	5	....	....
H. E. 70—Design	....	3	....
H. E. 71—Costume Design	....	....	3
Ed. 2—Introduction to Education	3	....	....
Speech 4—Voice and Diction	....	....	3
Soc. 1—Contemporary Social Problems	3	....	....
P. E. 42, 44—Hygiene I, II	2	2	....
P. E.—Physical Activities	1	1	1
Electives	0	3	2
Total	17	17	17
Sophomore			
H. E. 31, 32, 33—Foods	3	3	3
*H. E. 34—Elements of Nutrition	5	....	....
Soc. 5—Comparative Sociology	....	3	....
Soc. 61—Marriage and the Family	....	3	....
Psych. 1—Introduction to Psychology	3	....	....
Psych. 18—Child Psychology	....	3	....
Psych. 80—Educational Psychology	....	....	5
Econ. 37—Fundamentals of Economics	....	....	5
P. E.—Physical Activities	1	1	1
Electives	5	4	3
Total	17	17	17
Junior			
H. E. 150, 151, 152—Home Management	3	3	3
H. E. 130—Food Economics	....	2	....
H. E. 131—Meal Service	....	....	3
H. E. Ed. 104—Nursery School Techniques	....	5	....
H. E. Ed. 102—Child Study	5	....	....
H. E. Ed. 111—Play and Play Materials	....	....	3
Zool. 16—Human Physiology	....	5	....
P. E.—Physical Activities	1	1	1
Electives	8	0	7
Total	17	16	17

*Students wishing to major in Child Nutrition or to do research work should take Elements of Organic Chemistry (Chem. 33) and Nutrition (H. E. 135) in place of H. E. 34—Elements of Nutrition.

Senior	Quarter I	II	III
H. E. 153—Practice in Management of the Home	3	....	....
H. E. Ed. 103—Teaching Nursery School	....	5–9	....
H. E. 121—Children's Clothing	3	....	....
H. E. 138—Child Nutrition	....	....	4
H. E. Ed. 112, 113, 114—Creative Expression-Literature, Art, Music, Science	3	3	3
H. E. 132—Demonstrations	....	3	....
P. E.—Physical Activities	1	1	1
Electives	7	4–0	9
Total	17	16	17

Suggested Electives:
Freshman—History, Clothing, Development of the Human Body.
Sophomore—Rural or Urban Sociology, Individual Differences, Household Bacteriology.
Junior—Juvenile Delinquency, Mental Hygiene.
Senior—Psychology of the Adolescent, Political Science.

Industrial Education

The program of studies in Industrial Education provides: (a) a four-year curriculum leading to the degree of bachelor of science in industrial arts and vocational education; (b) a program of professional courses to prepare teachers to meet the certification requirements in vocational and occupational schools; (c) a program of courses for the improvement of teachers in service.

The entrance requirements are the same as for the other curricula offered in the University. Experience in some trade or industrial activity will benefit students preparing to teach industrial subjects. The curriculum is designed to prepare teachers of trade and industrial shop and related subjects, and teachers of industrial arts. There is sufficient latitude of electives so that a student may also meet certification requirements in some other high school subject. Students entering an industrial education curriculum must register in the College of Education.

Industrial Education Curriculum

Freshman Year	Quarter I	II	III
Ind. Ed. 1—Mechanical Drawing	3	....	....
Ind. Ed. 21—Mechanical Drawing	....	3	....
Ind. Ed. 2—Elementary Woodworking	3	....	....
Ind. Ed. 22—Machine Woodworking	....	3	....
Ind. Ed. 42—Machine Woodworking	....	....	3
Ed. 2—Introduction to Education	....	3	....
Speech 3—Voice and Diction	....	....	3
Eng. 1, 2, 3—Survey and Composition	3	3	3
Math. 10—Algebra	3	....	....
Math. 11—Trigonometry (Plane)	....	....	3
History or Social Science	3	3	3
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
P. E.—Physical Activities	1	1	1
Total	19	19	19

Sophomore Year	Quarter I	II	III
Ind. Ed. 24—Sheet Metal Work	3	....	....
Ind. Ed. 26—Art Metal Work	....	....	3
Ind. Ed. 41—Architectural Drawing	....	3	....
Ind. Ed. 28—Electricity	....	3	....
Ind. Ed. 48—Advanced Electricity	....	....	3
Ind. Ed. 23—Forge Practice	2	....	....
Ed. 3—Education Forum	....	....	1
Eng. 4, 5, 6—Survey and Composition	3	3	3
Math. 12—Analytical Geometry	....	3	....
Math. 7—Solid Geometry	3	....	....
Chem. 5, 6—Introductory Chemistry	3	3	3
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	....	....	3
Math. Elective	1	1	1
P. E.—Physical Activities	....	....	....
Total	18	19	17

Junior Year			
Ind. Ed. 67—Cold Metal Work	....	....	3
Ind. Ed. 69—Elementary Machine Shop Practice	....	....	3
Ind. Ed. 110—Foundry	1	....	....
Ind. Ed. 121—Essentials of Design	3	....	....
Ind. Ed. 162—Curriculum, Instruction, and Observation—Industrial Education	....	5	....
Psych. 80—Educational Psychology	5	....	....
Ed. 112—Educational Sociology—Introductory	....	....	3
Ed. 103—Theory of the Senior High School **or** Ed. 110—Theory of the Junior High School	3	or 3	....
Phys. 6, 7, 8—Introductory Physics	3	3	3
History or social science	3	3	3
P. E.—Physical Activities	1	1	1
Electives	....	....	....
Total	19	18	16

Senior Year			
Ind. Ed. 89—Advanced Machine Shop	....	....	3
Ind. Ed. 164—Shop Organization and Management	3	....	....
Ed. 105—Educational Measurement	....	3	....
Ed. 114—Guidance in Secondary Schools	3	....	....
Ed. 139 or 140—Methods and Practice of Teaching	....	5–9	5–9
Econ. 37—Fundamentals of Economics	....	3	....
P. E.—Physical Activities	1	1	1
Electives	....	....	....
Total	16	16	16

Physical Education Curriculum for Women*

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Zool. 1—General Zoology	5	....	....
Bact. 1—Bacteriology	....	5	....
Zool. 14—Human Anatomy and Physiology	....	....	5
Ed. 2—Introduction to Education	....	3	....
Speech 4—Voice and Diction	....	....	3
P. E. 30—History and Principles of P. E.	5	....	....
P. E. 52—Dance Techniques	1	....	....
P. E. 62—Technique of Sport Skills	2	....	....
P. E. 54—Dance Techniques	....	1	....
P. E. 64—Technique of Sport Skills	....	2	....
P. E. 56—Dance Techniques	....	....	1
P. E. 66—Technique of Sport Skills	....	....	2
P. E. 40—Personal Hygiene	....	3	....
P. E. 50—Community Hygiene	....	....	3
Total	16	17	17

Sophomore Year			
Zool. 15—Human Anatomy and Physiology	5	....	....
Zool. 53—Physiology of Exercise	....	2	....
Psych. 1—Introduction to Psychology	3	....	....
Ed. 3—Educational Forum	....	1	....
Soc. 3—Introduction to Sociology	....	3	....
Psych. 18—Child Psychology	....	3	....
Social Sciences	....	....	3
P. E. 60—Theory and Practice of Gymnastics	3	....	....
P. E. 72—Dance Techniques	1	....	....
P. E. 82—Technique of Sport Skills	2	....	....
P. E. 74—Dance Technique	....	1	....
P. E. 84—Technique of Sport Skills	....	2	....
P. E. 80—Kinesiology	....	....	5
P. E. 32—History of Dance	....	....	5
P. E. 76—Dance Techniques	....	....	1
P. E. 86—Technique of Sport Skills	....	....	2
Electives	....	....	....
Total	17	17	16

* Physical Education Courses which have even numbers are open to women students only. Courses which have odd numbers are open to men students only. Courses whose numbers end in zero are open to both men and women. Courses with numbers above 100 are for Juniors and Seniors.

Junior Year	Quarter I	II	III
Psych. 80—Educational Psychology	5	....	....
Ed. 110—Theory of Junior High School	....	3	....
Ed. 112—Educational Sociology	....	....	3
Ed. 142—Curriculum, Instruction, and Observation—Physical Education	....	....	5
P. E. 120—Mental Hygiene in Physical Education	3	....	....
Zool. 55—Development of the Human Body	2	....	....
Social Sciences	3	....	....
P. E. 132—Dance Composition	1	....	....
P. E. 102—Technique of Sport Skill	1	....	....
P. E. 122—Tumbling and Apparatus	....	2	....
P. E. 110—First Aid and Accident Prevention	....	5	....
P. E. 134—Dance Composition	....	1	....
P. E. 104—Technique of Sport Skills	....	1	....
P. E. 160—Community and Industrial Recreation	....	....	3
P. E. 136—Dance Composition	....	....	2
P. E. 106—Technique of Sport Skills	....	....	1
Electives	....	....	....
Total	17	17	16

Senior Year			
Ed. 139—Methods and Practice of Teaching or	5	....	....
Ed. 140—Methods and Practice of Teaching	9	....	....
Ed. 105—Educational Measurements	....	3	....
P. E. 116—Organization and Administration of P. E.	3	....	....
P. E. 108—Recreational Activities	1	....	....
P. E. 142—Methods in Dance and/or	1	....	....
P. E. 124—Coaching and Officiating	2	....	....
P. E. 140—Therapeutics	....	5	....
P. E. 150—Recreational Dance	....	1	....
P. E. 144—Methods in Dance and/or	....	1	....
P. E. 126—Coaching and Officiating	....	2	....
P. E. 148—Teaching Health	....	....	3
P. E. 170—Recreational Dance	....	....	1
P. E. 146—Methods in Dance and/or	....	....	1
P. E. 128—Coaching and Officiating	....	....	2
Electives	....	....	....
Total	16	16–17	16–18

Curriculum in Physical Education for Men*

Freshman Year	Quarter I	II	III
Zool. 1—General Zoology	5	....	....
Bact. 1—General Bacteriology	....	5	....
Zool. 14—Human Anatomy	....	....	5
Eng. 1, 2, 3—Survey and Composition	3	3	3
P. E. 30—History and Principles of Physical Education	5	....	....
Ed. 2—Introduction to Education	....	3	....
P. E. 40—Health—Personal Hygiene	....	3	....
P. E. 50—Health—Community Hygiene	....	....	3
P. E. 31, 33, 35—Physical Education Leadership	1	1	1
P. E.—Physical Activities	1	1	1
M. I. 1, 2, 3—Basic R. O. T. C. (Men)	3	3	3
Total	18	19	16–19

Sophomore Year			
Zool. 15—Physiology	5	....	....
P. E. 70—Physiology of Exercise	....	2	....
P. E. 80—Kinesiology	....	....	5
P. E. 60—Theory and Practice of Gymnastics	3	....	....
P. E. 51—Mass Games Programs	....	2	....
P. E. 53—Organization of Intra Murals	....	....	3
Ed. 3—Educational Forum	....	1	....
Speech 4—Voice and Diction	3	....	....
P. E. 41, 43, 45—Varsity Game Skills	2	2	3
P. E.—Physical Activities	1	1	1
M. I. 4, 5, 6—Basic R. O. T. C. (Men)	3	3	3
Total	17	14–18	16–19

Junior Year			
Psych. 80—Education Psychology	5	....	....
Ed. 105—Educational Measurements and Tests in Physical Education	....	3	....
Ed. 112—Educational Sociology	....	....	3
Ed. 110 (Ed. 103)—Theory of Junior (Senior) High School	3	or 3	....
P. E. 141, 143, 145—Varsity Team Organization	2	2	3
P. E. 133, 135, 137—Advanced Physical Education Leadership	1	1	1
P. E. 110—First Aid and Accident Prevention	....	5	....
P. E. 161—Youth Organizations	....	....	3
Ed. 142—Curriculum, Instruction, and Observation—Physical Education	....	....	5
P. E.—Physical Activities	1	1	1
Total	16–18	16–18	16–18

*Courses offered to both men and women physical education majors. Freshman and sophomore courses are numbered under 100 and all end in zero. Junior and senior courses offered to both men and women start at 100 and end in zero. Courses offered men physical education majors, not open to women, end in uneven numbers.

Senior Year	Quarter I	II	III
P. E. 120—Mental Hygiene and Physical Education	3	....	....
P. E. 171—Coordination and Administration of Physical Education	....	3	....
P. E. 140—Therapeutics	4	....	....
P. E. 150—Recreative Dance	....	3	....
P. E. 181—Training and Conditioning	....	2	....
P. E. 160—Community and Industrial Recreation	....	....	3
Ed. 139-140—Practice Teaching, Major and Minor	5–9	or 5–9	or 5–9
P. E. Physical Activities	1	1	1
Total	16–19	16–19	14–16

In conformance with the general minimum requirements of the College of Education, nine hours of social studies are required. The following courses are recommended: Introduction to Sociology, Juvenile Delinquency, Municipal Government.

Students who carry a major in another teaching field and who wish to prepare to coach interscholastic athletics may develop a minor in physical education by taking the following courses:

P. E. 30—History and Principles of Physical Education	5
P. E. 171—Coordination and Administration of Physical Education	3
P. E. 1-12—Physical Education Activities	12
P. E. 40—Health (Personal Hygiene)	3
P. E. 110—First Aid and Accident Prevention	5
P. E. 181—Training and Conditioning	2
P. E. 120—Mental Hygiene and Physical Education	3
P. E. 41, 43, 45—Varsity Game Skills	7
P. E. 141, 143, 145—Varsity Team Organization	7
Ed. 142—Curriculum, Instruction, and Observation—Physical Education	5

COLLEGE OF ENGINEERING

S. S. STEINBERG, *Dean.*

MARGARET G. ENGLE, *Secretary to Dean.*

The activities of the College of Engineering during the present emergency are all directed toward furthering the war effort. These activities include training civilian students to practice the profession of Engineering; giving special courses for personnel in the armed forces; holding training classes for adults to expedite production in war industries; and conducting research on vital war problems in the several engineering fields.

The College of Engineering includes the Departments of Chemical, Civil, Electrical, and Mechanical Engineering. In the Mechanical Engineering Department an option in Aeronautical Engineering is offered in the junior and senior years. In order to give the student time to choose the branch of engineering for which he is best adapted, the freshman year of the several courses is the same. Lectures and conferences are used to guide the student to make a proper selection. The courses differ only slightly in the sophomore year, but in the junior and senior years the students are directed definitely along professional lines.

Admission Requirements

The requirements for admission to the College of Engineering are, in general, the same as elsewhere described for admission to the undergraduate departments of the University, except as to the requirements in mathematics. See Admission, Section I.

It is possible, however, for high school graduates having the requisite number of entrance units to enter the College of Engineering without the unit of advanced algebra, or the one-half unit of solid geometry. The program for such students would be as follows: during the first term, five hours a week would be devoted to making up advanced algebra and solid geometry; in the second term, mathematics of the first term would be scheduled, and the second term mathematics would be taken in the third term.

Bachelor Degrees in Engineering

Courses leading to the degree of Bachelor of Science are offered in chemical, civil, electrical, and mechanical engineering, and mechanical engineering with aeronautical option, respectively.

Master of Science in Engineering

The degree of Master of Science in Engineering may be earned by students registered in the Graduate School who hold bachelor degrees in engineering, which represent an amount of preparation and work similar to that required for bachelor degrees in the College of Engineering of the University of Maryland.

Candidates for the degree of Master of Science in Engineering are accepted in accordance with the procedure and requirements of the Graduate School. See Graduate School, Section II.

Professional Degrees in Engineering

The degrees of Chemical Engineer, Civil Engineer, Electrical Engineer, and Mechanical Engineer will be granted only to graduates of the University who have obtained a bachelor's degree in engineering. The applicant must satisfy the following conditions:

1. He shall have engaged successfully in acceptable engineering work not less than four years after graduation.

2. He must be considered eligible by a committee composed of the Dean of the College of Engineering and the heads of the Departments of Chemical, Civil, Electrical, and Mechanical Engineering.

3. His registration for a degree must be approved at least twelve months prior to the date on which the degree is to be conferred. He shall present with his application a complete report of his engineering experience and an outline of his proposed thesis.

4. He shall present a satisfactory thesis on an approved subject.

Equipment

The Engineering buildings are provided with lecture-rooms, recitation-rooms, drafting-rooms, laboratories, and shops for various phases of engineering work.

Drafting-Rooms. The drafting-rooms are fully equipped for practical work. The engineering student must provide himself with an approved drawing outfit, material, and books.

Chemical Engineering Laboratories. For instruction and research, the Chemical Engineering Department maintains laboratories for (1) General Testing and Control; (2) Unit Operations; (3) Cooperative Research; (4) Graduate Research.

General Testing and Control Laboratory. In this laboratory there is available complete equipment for the chemical and physical testing of water, gases, coal, petroleum, and their by-products; and for general industrial chemicals, both inorganic and organic.

Unit Operations Laboratory. This laboratory contains equipment for the study of fluid flow, heat flow, drying filtration, distillation, evaporation, crushing, grinding, combustion, gas absorption, extraction, and centrifuging. Organic process equipment includes an autoclave, nitrator, reducer, and mixing kettle. For the study of fluid flow a permanent hydraulic assembly is available, and this includes flow meters of most types.

In the laboratory there is a large column still with a kettle capacity of 100 gallons, equipped for the measurement of temperature and pressure, sampling devices, condensers, and vacuum receivers. This still is so designed that it can be used either as a batch type unit, continuous feed type, direct pot still, steam still, or as a vacuum still. Studies in evaporation can be made on a double effect evaporator, one unit of which is equipped with a horizontal tube bundle and the other with a vertical tube bundle. This evaporator is equipped with vacuum and pressure gauges, stirrer, wet vacuum pump, a condensate pump, and a salt filter with different types of packings in respective sections so that comparative studies may be made. The organic process equipment is all self-driven and designed to afford flexibility in use. Filtration studies may be made either on a large plate and frame press or on the ordinary Sweetland type press. Gas absorption equipment includes a blower and a stoneware packed column. Combustion equipment available consists of an industrial carburetor, pot furnace, premix gas fired furnace and the usual gas analysis equipment. Shop facilities include a lathe, drill press, grinder, welding equipment, and other tools necessary for unit operation and research studies. For grinding there is a jaw crusher, a disc crusher, and a ball mill. A mechanical shaker and standard sieve are available for particle size separation.

Cooperative and Graduate Research Laboratories. These laboratories are arranged to permit the installation of such special equipment as the particular problems under consideration may require. Effort is made to maintain cooperation with the industries of Maryland and the Chemical Engineering activities of the State and Federal governments; for such work important advantages accrue because of the location of the Eastern Experiment Station of the United States Bureau of Mines on the University campus.

Electrical Machinery Laboratories. There is provided a motor-generator set, consisting of a synchronous motor and a compound direct-current generator with motor and generator control panels, to furnish direct current for testing purposes. Through a distribution switchboard, provision is made for distributing to the various laboratories direct current at 125 volts, and alternating current, single-phase, and three-phase, at 110 and 220 volts.

High-current potential dividers and auto-transformers are available at the testing stations for individual voltage control. A single-phase induction regulator with control panel is also available for voltage regulation of experimental circuits. At the individual testing stations, use is made of specially constructed instrument tables which are designed to facilitate measurements in fundamental, direct-current machinery, and alternating-current machinery experiments.

The test equipment includes a variety of direct- and alternating-current generators and motors, distribution transformers, a synchronous converter, an induction regulator, and modern control apparatus. Most of the machines are of modern construction and of such size and design as to give

typical performance characteristics. Flexibility of operation is provided in several ways: for example, direct-current machines and alternating-current machines are mounted on common bases with provisions for easy mechanical coupling and any machine may be readily connected electrically to any other machine through a common distribution panel. Metering and control boards are provided for rapid change of operating conditions with any machine. Water-cooled prony brakes are available for machine testing.

Included in the test equipment are the measuring instruments essential for practical electrical testing, namely, ammeters, voltmeters, wattmeters, watthourmeters, frequency meters, tachometers, stroboscopes, Wheatstone bridges, impedance bridges, and oscillographs.

Illumination Laboratory. The equipment includes electric lamps, shades, and reflectors of various types; bar photometers for determination of candle-power distribution of incandescent lamps; and four types of portable photometers for the measurement of illumination intensities. Several rather large fluorescent light installations are available for study in nearby rooms.

Electrical Measurements Laboratory. The calibrating equipment consists of standards of potential and resistance which are used in conjunction with modern potentiometers to maintain calibration of a standard ammeter, voltmeter, and watthourmeter. Secondary standards of potential, resistance, inductance, capacitance, and frequency are available. Auxiliary devices such as oscillators, amplifiers, rectifiers, wavemeters, bridges, and galvanometers are also available.

A five-machine motor-generator set delivers voltages and currents, both alternating and direct, to test tables for meter testing. Equipment is also available for the experimental study of electric and magnetic fields, nonlinear circuit elements and other topics in the field of electricity and magnetism.

Electronics Laboratory. This laboratory is housed in the same room as the measurements laboratory thereby permitting direct use of the measurements equipment. A wide variety of vacuum tubes, gas-filled tubes, and photo-tubes is provided for studying tube characteristics. Associated equipment is also provided for making quantitative studies of emission, rectification, amplification, and oscillation. This equipment includes cathode-ray oscillographs, vacuum-tube voltmeters, microvoltmeters, and driving oscillators.

Electrical Communications Laboratory. Equipment for studying both wire and wireless communication is provided. Transmission circuits, including artificial lines, filter sections, attenuation sections, and coupling devices are provided. A transmission loss or gain set is available.

Rectifiers, amplifiers, oscillators, and a demonstration radio set are provided for making radio communication studies.

Mechanical Engineering Laboratories. The apparatus consists of slide valve automatic steam engines equipped with Prony brakes, steam turbine-generator set, Waukesha Diesel engine research unit with electric dynamometer and other accessories, two-stage steam-driven air compressor, gas engines, fans, pumps, indicators, gauges, feed water heaters, steam condensers, tachometers, injectors, flow meters, pyrometers, draft gauges, planimeters, thermometers, and other necessary apparatus and equipment for a mechanical engineering laboratory. A refrigeration unit and a heating and ventilation unit have been installed.

Aeronautical Laboratory. The laboratory is equipped for practice and research in engines, metal aircraft construction, structural tests, vibration and noise, and aerodynamics. A three-foot return type wind tunnel, fully equipped with balances and other instruments and electrically operated, has been constructed for standard experiments in aerodynamics and for student thesis research.

A sheet metal shop equipped to construct components of aircraft structures in aluminum alloy and steel is available. This shop includes such equipment as automatic air riveting hammer, planishing machines, squaring shears, rolls, brake, heat treating furnace, etc. A small machine shop is also available for students in constructing research apparatus. Variable speed motors are available for experiments in vibration and noise.

The laboratory also includes a research spot welding machine, a sixty-thousand-pound Baldwin-Southwark aircraft universal testing machine, Tuckerman gauges, oscillographs with accessories, and a Timby hydraulic jack system for static testing.

Hydraulics Laboratory. The equipment consists of electrically driven centrifugal pumps, measuring tanks, various types of weirs, venturi meters, nozzles, Pelton water wheel with Prony brake built especially for laboratory use, hook gauges, dial gauges, tachometers, stop watches, and other apparatus necessary for the study of the flow characteristics of water.

Materials Laboratories. Apparatus and equipment are provided for making standard tests on various construction materials, such as sand, gravel, steel, concrete, timber, and brick.

Equipment includes a 300,000-pound hydraulic testing machine, two 100,000-pound universal testing machines, torsion testing machine, hardness tester, abrasion testing machine, rattler, constant temperature chamber, cement-testing apparatus, extensometer and micrometer gauges, and other special devices for ascertaining the elastic properties of different materials.

Special apparatus which has been designed and made in the shops of the University is also available for student work.

The College of Engineering owns a Beggs deformeter apparatus for the mechanical solution of stresses in structures by use of celluloid models. Equipment is also available for study of models by the photo-elastic method.

Engineering Soils Laboratory. Equipment is available for performing the usual tests on engineering soils. This includes apparatus for grain size analysis, Atterberg limits, permeability, optimum moisture content for compaction, Proctor penetration, and consolidation.

Research Foundation. The National Sand and Gravel Association has, by arrangement with the College of Engineering, established its testing and research laboratory at the University. The purpose of the Research Foundation thus organized is to make available to the Association additional facilities for its investigational work, and to provide for the College of Engineering additional facilities and opportunities for increasing the scope of its engineering research.

Machine Shops and Foundry. The machine shops and foundry are well lighted and fully equipped. Shops for wood working, metal, forge, and foundry practice are provided.

The wood-working shop has full equipment of hand and power machinery.

The machine shops are equipped with various types of lathes, planers, milling machines, drill presses, shaper, midget mill, and precision boring head. Equipment is available for gas and electric arc welding.

The shop equipment not only furnishes practice, drill, and instruction for students, but makes possible the complete production of special apparatus for conducting experimental and research work in engineering.

Surveying Equipment. Surveying equipment for plane, topographic, and geodetic surveying is provided properly to equip several field parties. A wide variety of surveying instruments is provided, including domestic as well as foreign makes.

Special Models and Specimens. A number of models illustrating various types of highway construction and highway bridges are available.

A wide variety of specimens of the more common minerals and rocks has been collected from various sections of the country, particularly from Maryland.

Engineering Library

In addition to the general University Library, each department maintains a library for reference, and receives the standard engineering magazines. The class work, particularly in advanced courses, requires that students consult special books of reference and current technical literature.

The Davis Library of Highway Engineering and Transport, founded by Dr. Charles H. Davis, President of the National Highways Association, is part of the Library of the College of Engineering. The many books, periodicals, pamphlets, and other items included in this library cover all phases of highway engineering, highway transportation, and highway traffic control.

There has also been donated to the College of Engineering the transportation library of the late J. Rowland Bibbins of Washington, D. C. The books and reports in this library deal with urban transportation problems, including railroads, street cars, subways, busses, and city planning.

Curricula

The normal curriculum of each department is outlined on the following pages. Students are expected to attend and take part in the meetings of the student chapters of the technical engineering societies.

Freshman engineering students are given a special course of lectures by practicing engineers covering the work of the several engineering professional fields. The purpose of this course is to assist the freshman in selecting the particular field of engineering for which he is best adapted. The student is required to submit a brief written summary of each lecture. A series of engineering lectures for upper classmen is also provided. These are given weekly by prominent practicing engineers in the various branches of the profession.

Student branches of the following national technical societies are established in the College of Engineering: American Institute of Chemical Engineers, American Society of Civil Engineers, American Institute of Electrical Engineers, and American Society of Mechanical Engineers. The student branches meet regularly for the discussion of topics dealing with the various fields of engineering.

A student in the College of Engineering will be certified as a junior when he shall have passed at least 102 term credit hours with an average grade of C or higher.

The proximity of the University to Baltimore and Washington, and to other places where there are large industrial enterprises, offers an excellent opportunity for the engineering student to observe what is being done in his chosen field. An instructor accompanies students on all inspection trips, and the student is required to submit a written report of each trip.

BASIC CURRICULUM FOR ALL FRESHMAN STUDENTS IN THE COLEGE OF ENGINEERING

All freshman students are required to take the following curriculum during their first year:

	Quarter I	Quarter II	Quarter III
Freshman Year			
Eng. 1, 2, 3—Survey and Composition	3	3	3
Speech 1—Public Speaking	....	....	2
*Math. 15—College Algebra	5	....	....
Math. 16—Plane and Spherical Trigonometry	....	5	....
Math. 17—Analytic Geometry	....	....	5
Chem. 1, 2—General Chemistry	5	5	....
Dr. 1, 2—Engineering Drawing	2	2	....
Dr. 3—Descriptive Geometry	....	....	3
Shop 1—Forge Practice	....	....	1
Engr. 1—Introduction to Engineering	....	....	1
Basic R. O. T. C. I-1, I-2, I-3	3	3	3
Physical Activities	1	1	1
Total	19	19	19

Chemical Engineering deals primarily with the industrial and economic transformation of matter. It seeks to assemble and develop information on chemical operations and processes of importance in modern life and to apply this under executive direction, according to engineering methods, for the attainment of economic objectives. Modern chemical research has contributed so much to industrial and social welfare that the field of the chemical engineer may now be said to cover practically every operation in which any industrial material undergoes a change in its chemical identity.

	Quarter I	Quarter II	Quarter III
Sophomore Year			
Chem. 19—Quantitative Analysis	5	....	....
Ch. E. 10, 11—Water, Fuels and Lubricants	....	4	4
Math. 20—Differential Calculus	5	....	....
Math. 21—Integral Calculus	....	5	....
Math. 22—Applied Calculus	....	....	5
Chem. 35, 37—Elementary Organic Chemistry (Lectures)	3	3	....
Surv. 1—Elements of Plane Surveying	....	....	2
Speech 7—Oral Technical English	....	....	2
Phys. 3A, 4A, 5A—General Physics	5	5	5
M. I. II—Basic R. O. T. C.	2	2	2
Physical Activities	1	1	1
Total	21	20	21

*A qualifying test is given at the close of the first two weeks to determine whether the student is adequately prepared for Math. 15. A student failing this test is required to take Math. 1, without credit.

Chemical Engineering

Junior Year	Quarter I	II	III
Ch. E. 103, 105, 107—Elements of Chemical Engineering	3	3	3
Mech. 3—Statics and Dynamics	....	....	6
Chem. 187, 189—Physical Chemistry (Lectures)	5	5	....
Chem. 188, 190—Physical Chemistry Laboratory	3	3	....
Econ. 31, 32, 33—Principles of Economics	3	3	3
E. E. 51, 52, 53—Principles of Electrical Engineering	4	4	4
Physical Activities	1	1	1
Non-Engineering Elective	3	3	3
Total	22	22	20

Senior Year			
Ch. E. 109, 111, 113—Chemical Engineering Seminar	1	1	1
Ch. E. 115, 117, 119—Advanced Unit Operations	5	5	5
Ch. E. 127, 129, 131—Fuels and Their Utilization	2	2	2
Ch. E. 133, 135, 137—Chemical Technology	2	2	2
Ch. E. 139, 141, 143—Chemical Engineering Thermodynamics	2	2	2
Ch. E. 145, 147, 149—Chemical Engineering Calculations	3	3	3
C. E. 112, 113—Elements of Structures	2	2	....
Physical Activities	1	1	1
Non-Engineering Elective	2	2	2
Total	20	20	18

Civil Engineering

Civil Engineering deals with the design, construction, and maintenance of highways, railroads, waterways, bridges, buildings, water supply and sewerage systems, harbor improvements, dams and surveying and mapping.

Civil Engineering Curriculum

Sophomore Year	Quarter I	II	III
Math. 20—Differential Calculus	5	....	....
Math. 21—Integral Calculus	....	5	....
Math. 22—Applied Calculus	....	....	5
Phys. 3A, 4A, 5A—General Physics	5	5	5
Dr. 4—Advanced Engineering Drawing	3	....	....
Mech. 1—Statics and Dynamics	....	....	5
Surv. 2, 3, 4—Plane Surveying	3	2	2
Econ. 37—Fundamentals of Economics	....	5	....
Basic R. O. T. C. II-1, II-2, II-3	3	3	3
Physical Activities	1	1	1
Total	20	21	21

Junior Year	Quarter I	II	III
Speech 8—Advanced Oral Technical English	....	2	....
Geol. 2—Engineering Geology	....	....	3
Mech. 50, 51—Strength of Materials	4	4	....
C. E. 50—Hydraulics	....	6	....
Mech. 53—Materials of Engineering	....	....	3
M. E. 50—Principles of Mechanical Engineering	....	4	....
E. E. 50—Principles of Electrical Engineering	5	....	4
C. E. 52—Curves and Earthwork	....	....	....
C. E. 100—Theory of Structures	6	....	6
Surv. 100—Advanced Surveying	3	3	....
Non-engineering elective	1	1	3
Physical Activities			1
Total	19	20	20

Senior Year			
Speech 9—Advanced Oral Technical English	2	2	....
Engr. 100—Engineering Law and Specifications	....	....	3
C. E. 101—Elements of Highways	5	....	....
C. E. 102, 103, 104—Concrete Design	3	5	3
C. E. 105, 106, 107—Structural Design	3	5	3
C. E. 108, 109, 110—Municipal Sanitation	3	3	3
C. E. 111—Soils and Foundations	....	....	4
Non-engineering elective	3	3	3
Physical Activities	1	1	1
Total	20	19	20

Electrical Engineering

Electrical Engineering deals with the generation, transmission, and distribution of electrical energy; electrical transportation, communication, illumination, and manufacturing; and miscellaneous electrical applications in industry, commerce, and home life.

Electrical Engineering Curriculum

Sophomore Year	Quarter I	II	III
Speech 7—Oral Technical English	2	....	....
Math. 20—Differential Calculus	5	....	....
Math. 21—Integral Calculus	....	5	....
Math. 22—Applied Calculus	....	....	5
Phys. 3A, 4A, 5A—General Physics	5	5	5
Surv. 1—Elements of Plane Sureying	2	....	....
Shop 2—Machine Shop Practice	2	....	....
E. E. 1, 2—Direct Current Theory	....	3	4
Mech. 2—Statics and Dynamics	....	....	4
Econ. 37—Fundamentals of Economics	....	5	....
Basic R. O. T. C. II-1, II-2, II-3	3	3	3
Physical Activities	1	1	1
Total	20	22	22

Junior Year

	Quarter I	II	III
Speech 8—Advanced Oral Technical English	....	2	....
Math. 64—Differential Equations for Engineers	5	....	....
Mech. 52—Strength of Materials	....	3	....
C. E. 51—Hydraulics	....	....	4
Mech. 53—Materials of Engineering	....	3	....
E. E. 54—Direct Current Machinery	6	....	....
E. E. 55—Electricity and Magnetism	6	....	....
E. E. 100—Alternating Current Circuits	....	7	....
E. E. 101—Engineering Electronics	....	....	6
Elective	....	3	8
Physical Activities	1	1	1
Total	18	19	19

Senior Year

Speech 9—Advanced Oral Technical English	2	2	....
E. E. 102, 103, 104—Alternating Current Machinery	5	5	4
E. E. 105, 106—Radio Communications	4	4	....
E. E. 107—Communication Networks	4	....	....
E. E. 108—Electric Transients	....	....	4
E. E. 109—Ultra High Frequency	....	....	6
M. E. 51—Thermodynamics	....	4	....
M. E. 52—Power Plants	....	....	3
Elective	3	3	3
Physical Activities	1	1	1
Total	19	19	21

Mechanical Engineering

Mechanical Engineering deals with the design, construction, and maintenance of machinery and power plants; heating, ventilation, and refrigeration; and the organization and operation of industrial plants.

Mechanical Engineering Curriculum

Sophomore Year

	Quarter I	II	III
Speech 7—Oral Technical English	2	....	....
Math. 20—Differential Calculus	5	....	....
Math. 21—Integral Calculus	....	5	....
Math. 22—Applied Calculus	....	....	5
Phys. 3A, 4A, 5A—General Physics	5	5	5
Dr. 4—Advanced Engineering Drawing	3	....	....
Surv. 1—Elements of Plane Surveying	....	....	2
Shop 3—Machine Shop Practice	3	....	....
Mech. 3—Statics and Dynamics	....	....	6
Econ. 37—Fundamentals of Economics	....	5	....
Non-Engineering Elective	....	3	....
Basic R. T. O. C. II-1, II-2, II-3	3	3	3
Physical Activities	1	1	1
Total	22	22	22

Junior Year—General

	Quarter I	II	III
Speech 8—Advanced Oral Technical English	....	....	2
Math. 64—Differential Equations for Engineers	5	....	....
Mech. 50, 51—Strength of Materials	4	4	....
C. E. 51—Hydraulics	....	4	....
Mech. 53—Materials of Engineering	....	....	3
E. E. 51, 52, 53—Principles of Electrical Engineering	4	4	4
Shop 50—Foundry Practice	....	....	1
Shop 51—Machine Shop Practice	....	....	2
M. E. 100, 101, 102—Thermodynamics	3	3	3
Non-Engineering Elective	3	3	3
Physical Activities	1	1	1
Total	20	19	19

Junior Year—Aeronautical Option

Speech 8—Advanced Oral Technical English	....	....	2
Math. 64—Differential Equations for Engineers	5	....	....
Mech. 50, 51—Strength of Materials	4	4	....
M. E. 53—Aerodynamics and Hydrodynamics	....	4	....
Mech. 53—Materials of Engineering	....	....	3
E. E. 51, 52, 53—Principles of Electrical Engineering	4	4	4
Shop 50—Foundry Practice	....	....	1
Shop 51—Machine Shop Practice	....	....	2
M. E. 100, 101, 102—Thermodynamics	3	3	3
Non-Engineering Elective	3	3	3
Physical Activities	1	1	1
Total	20	19	19

Senior Year—General

Speech 9—Advanced Oral Technical English	2	....	....
M. E. 103, 104—Heating and Ventilation	3	3	....
M. E. 105—Refrigeration	....	....	3
M. E. 106, 107, 108—Thesis	1	2	2
M. E. 109, 110, 111—Prime Movers	4	4	4
M. E. 112, 113, 114—Mechanical Engineering Design	4	4	4
M. E. 115, 116, 117—Mechanical Laboratory	2	2	2
Non-Engineering Elective	3	3	3
Physical Activities	1	1	1
Total	20	19	19

Senior Year—Aeronautical Option

Speech 9—Advanced Oral Technical English	2	....	....
M. E. 118, 119, 120—Airplane Structures	3	3	3
M. E. 106, 107, 108—Thesis	1	2	2
M. E. 109, 110, 111—Prime Movers	4	4	4
M. E. 112, 113, 114—Mehcanical Engineering Design	4	4	4
M. E. 115, 116, 117—Mechanical Laboratory	2	2	2
Non-Engineering Elective	3	3	3
Physical Activities	1	1	1
Total	20	19	19

AGRICULTURE — ENGINEERING

A five-year combined program in Agriculture and Engineering, arranged jointly by the College of Agriculture and the College of Engineering, permits students to become candidates for the degree of Bachelor of Science in Agriculture at the end of four years and for the degree of Bachelor of Science in Civil, Electrical, Mechanical, or Chemical Engineering at the end of the fifth year.

Details of this program will be found listed in this catalog under College of Agriculture.

BUREAU OF MINES AND CHEMICAL ENGINEERING RESEARCH FELLOWSHIPS IN APPLIED SCIENCE AND ENGINEERING

The University of Maryland, in cooperation with the Bureau of Mines, offers fellowships for research in the field of engineering and applied sciences. Fellows enter upon their duties on July 1, and continue for 12 months, including one month for vacation. Payments under a fellowship are made at the end of each month, and amount to $600 for the year. The University will remit payment of tuition fees, and will grant all fellowship privileges.

Fellows register as students in the Graduate School of the University of Maryland, and become candidates for the degree of Doctor of Philosophy. Class work will be directed by the heads of the departments of instruction, but about half the time will be spent in research, under the direction of the Bureau of Mines staff.

Appropriate problems in physics, chemistry, chemical engineering, or mathematics will be chosen according to the abilities of the candidates and the interests of the Bureau Divisions. The faculty supervisor will be the Professor of Chemical Engineering of the University of Maryland.

The above fellowships will be known as Bureau of Mines Research Fellowships. The recipients will undertake the solution of definite problems confronting the mineral industries. The research will be performed at the Eastern Experiment Station of the Bureau of Mines, a large building recently completed on the campus of the University of Maryland in College Park.

To encourage cooperation with the industries of Maryland and to develop research and instruction in Chemical Engineering, the University of Maryland will offer two fellowships in Chemical Engineering. These fellowships will pay a stipend of $500 per year each, and will ordinarily require residence during the university year from September to June.

All the foregoing fellowships are open to graduates of universities and technical colleges who have the proper training in engineering or applied physical sciences, and who are qualified to undertake research work. Preference will be given to men who have already had one year of graduate work, and who have experience in research.

Applications should include a certified copy of college record, applicant's photograph, statement of technical and practical experience (if any), and letters from three persons, such as instructors or employers, covering specifically the applicant's character, ability, education, and experience. The application should be addressed to Fellowship Committee, Eastern Experiment Station, Bureau of Mines, United States Department of the Interior, College Park, Maryland.

STANTON WALKER FELLOWSHIP OF THE NATIONAL SAND AND GRAVEL ASSOCIATION RESEARCH FOUNDATION

The University of Maryland, in cooperation with the National Sand and Gravel Association, offers a fellowship for research on appropriate problems related to the sand and gravel industry. Fellows enter upon their duties on July 1, and continue for 12 months, including one month for vacation. Payments under the fellowship are made at the end of each month and amount to $600 for the year.

Fellows register as students in the Graduate School of the University of Maryland. Class work will be directed by the heads of the departments of instruction, but about half of the time will be spent in research work. The faculty supervisor will be the Professor of Civil Engineering of the University of Maryland.

This fellowship is open to graduates in Engineering from an accredited college or university, who are qualified to undertake graduate study and research work leading to a Master's degree. Applications should be accompanied by a certified copy of college record, applicant's recent photograph, statement of technical and practical experience (if any), and letters from three persons, such as instructors or employers, covering specifically the applicant's character, ability, education, and experience.

The applications should be addressed: Dean, College of Engineering, University of Maryland, College Park, Md.

ENGINEERING, SCIENCE AND MANAGEMENT WAR TRAINING

The College of Engineering is offering, in cooperation with the U. S. Office of Education, specialized training in engineering, science and management courses essential to the war effort. These courses are designed to train men and women now employed in war industries for more responsible positions, and to train others who desire to enter war work. This training is also available for personnel of the Army and the Navy.

The courses under this program are chiefly part-time evening courses in the fields of aeronautics, radio, drawing, mapping, metallurgy, testing, and industrial safety. Additional courses may be organized as the demands of industry or the armed forces require.

The instruction is given by members of the faculty of the College of Engineering and by specialists from industry.

Qualifications for Admission. Since all courses under this program are of college grade, the minimum requisite for admission is high school graduation. In certain courses additional qualifications may be required to carry on successfully the work outlined.

Cost. There is no charge to the students for tuition for these courses; but each student is required to bear his own living expenses and to furnish his own textbooks, drawing instruments and such other supplies as may be required.

Training Centers. To meet the need of the war industries in Maryland and vicinity, training centers have been established at College Park, Baltimore, Hagerstown, Cumberland, Aberdeen, and Washington, D. C. Additional centers may be established as the need arises.

Certificate. Since the primary purpose of this training is specialized preparation for war industries, no college credit will be given for these courses. However, a certificate will be awarded each student who successfully completes a full course.

Employment. The College of Engineering cannot guarantee positions to those completing the courses, but every effort is made to place the men so trained.

Additional information may be obtained from Dean S. S. Steinberg, College of Engineering.

ENGINEERING SHORT COURSES

Through short courses, the College of Engineering carries the benefits of engineering teaching to persons and industries in various parts of the State. These courses offer, in addition to regular instruction, an opportunity for the discussion of problems of interest to those engaged in public works, in public health and in public safety.

Mining Extension Classes. In cooperation with the Maryland Bureau of Mines and the State Departments of Education of Allegany and Garrett Counties, night mining classes are conducted throughout the year in several training centers in the western part of the State. The subjects studied are coal mine gases, coal mine ventilation, map reading, and mine safety.

Volunteer Firemen's Short Course. In cooperation with the Maryland State Firemen's Association a short course is held annually at College Park for volunteer firemen throughout the State. This four-day course is designed to bring to firemen the newest developments in fire prevention, control and extinguishment, as well as information on inspection, arson investigation and equipment maintenance.

Information regarding fire service extension courses may be found under "Fire Service Extension Department."

Additional information regarding engineering short courses may be obtained from Dean S. S. Steinberg, College of Engineering.

FIRE SERVICE EXTENSION DEPARTMENT

The Fire Service Extension Department is organized under the College of Engineering in cooperation with the State Department of Vocational Education, and operates with both Federal and State funds. The Department provides in-service training for firemen with classes conducted throughout the State by three regional instructors and about 50 local instructors. Basic training of 75 clock hours is given in the fundamentals of firemanship, as well as an advanced course of 69 clock hours, covering the technical field of fire prevention, control and extinguishment. A training course of 45 clock hours for industrial plant fire brigades is also available. Firemen who have completed the prescribed training courses have been given preferential rating in positions in the military and naval fire fighting forces.

To meet the demands of the national emergency, the Department has expanded its activities to the training of auxiliary fire forces and rescue units in defense duties. There is also available a comprehensive training course of 24 clock hours in connection with incendiaries, war gases, infernal machines, sabotage and fire fighting as applied to military explosives and ammunition, that is available for all civilian defense groups.

The Department also serves in an advisory capacity to the State Fire Marshal and municipal authorities in matters of fire prevention, fire protection engineering, and fire safety regulations.

Additional information may be obtained from Chief J. W. Just, Director, Fire Service Extension Department, University of Maryland, College Park, Maryland.

ENGINEERING EXPERIMENT STATION

WILBERT J. HUFF, *Director.*

The Engineering Experiment Station carries on cooperative investigations with industries of Maryland and Departments of the State and Federal Governments. A diversity of engineering training, experience, and equipment represented by the staff and laboratories of the College of Engineering is thus made available for the problems under inquiry.

Among the researches that have been conducted are studies on (1) streamlined steel tubes under loading conditions; (2) high speed wings for airplanes; (3) eccentric rivet groups; (4)D tube sections under various loading conditions; (5) expansion joints for concrete roads; (6) the design of concrete culverts; (7) the conversion of petroleum products to aromatic hydrocarbons; (8) sabotage by explosives; (9) magnetic properties of special alloys. Recently completed reports have involved topics such as (a) the action of manufactured gas on ceramic ware, (b) the fluid characteristics of betonite suspensions, (c) the ferro-magnetic properties of hematite, (d) the separation and estimation of the four general classes of hydrocarbons occurring in the gasoline range of petroleum.

COLLEGE OF HOME ECONOMICS

M. MARIE MOUNT, *Dean.*
GREEBA HOFSTETTER, *Secretary.*

The College of Home Economics serves Maryland and the surrounding area with its educational program for young women. This program combines good personal development with education for homemaking and for a livelihood. Information on better health principles, good study habits, efficient use of time, good grooming, becoming dress and proper adjustment to new situations constitute the student's program for self-development.

In the professional phases of her program, the student advises with members of the faculty and with women well known in home economics who aid in choosing the particular curriculum in which she expects to specialize.

The student is urged to acquire practical experience during vacations. This might begin with the actual management of her family's home for a period of time. Students preparing to teach, gain experience on playgrounds in caring for children and in executing home projects. Commercial firms and institutions provide opportunities for other types of experience.

Organization

For administrative purposes the College of Home Economics is organized into the Departments of Textiles and Clothing, Practical Art, Home and Institution Management, and Foods and Nutrition.

Facilities

The home of the College of Home Economics, following campus tradition, is a new colonial brick building planned and built to present the best equipment and facilities for education in home economics. A home management house is maintained on the campus for experience in homemaking.

Located, as the campus is, between two large cities, unusual opportunities are provided for both faculty and students. In addition to the University's excellent general and specialized libraries, Baltimore and Washington furnish the added library facilities so essential to scientific research and creative work in the arts. The art galleries and museums with their priceless exhibits, the government bureaus and city institutions, stimulate study and provide practical experience for the home economics student.

Professional Organizations

The Home Economics Club, in which membership is open to all home economics students, is affiliated with the American Home Economics Association.

Omicron Nu, a national home economics honor society, is open to students of high scholarship.

Degrees

The degree of Bachelor of Science is conferred for the satisfactory completion of 195 quarter hours, as prescribed in any of the following curricula.

Curricula

At the close of the freshman year a student, who has not already done so, may elect the curriculum in general home economics which is non-professional, or one of the following professional curricula, or a combination of curricula: home economics education, textiles and clothing, practical art, home economics extension, institution management, and foods and nutrition. A student who wishes to teach home economics may register in home economics education in the College of Home Economics, or in the College of Education (see home economics education).

The student who has not decided to specialize at the close of the freshman year may follow the general home economics curriculum until she makes a choice. Before continuing with the third year of any curriculum, the student must have attained junior standing: or 98 credit hours with a C grade average.

GENERAL HOME ECONOMICS CURRICULUM

The general home economics curriculum is planned to give a young woman a good basis for her best personal development, as has been described earlier. It also provides good training for her as a future homemaker. This curriculum also forms the basis of all the professional curricul. The additional requirements of the professional curricula are listed under the description of each curriculum.

	Quarter		
Freshman Year	*I*	*II*	*III*
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 3—General Chemistry or	....	5	5
Chem. 7, 8—Introductory Chemistry	....	3	3
H. E. 10—Textiles	5	....	....
H. E. 70—Design	....	3	....
P. E. 42—Hygiene I	2	....	....
P. E. 44—Hygiene II	....	2	....
P. E.—Physical Activities	1	1	1
Math. 0—Basic Mathematics	0	....	....
H. E. 1—Home Economics Lectures	1	....	....
H. E. 71—Costume Design	....	....	3
Speech 1, 2—Public Speaking	2	2	....
Electives	3	2–4	5–7
Total	17	18	17

Sophomore Year	Quarter I	II	III
H. E. 31, 32, 33—Foods	3	3	3
H. E. 20A or 20B—Clothing	3	....	....
Physics 6, 7, 8—Introductory Physics	3	3	3
P. E.—Physical Activities	1	1	1
Psychology 1—Introduction to Psychology	....	3	....
Soc. 3—Introduction to Sociology	3	....	....
Econ. 37—Fundamentals of Economics	....	....	5
H. E. 21—Clothing	....	....	3
H. E. 74—Survey of Art History	....	....	3
Electives	3	8	....
Total	16	18	18

Junior Year			
H. E. 150, 151, 152—Management of the Home	3	3	3
H. E. 135—Nutrition or	5	....	....
H. E. 34—Elements of Nutrition	5	....	....
Zool. 16—Human Physiology	....	5	....
P. E.—Physical Activities	1	1	1
H. E. 170, 171—Interior Design	....	3	3
H. E. 122—Draping	....	5	....
Bact. 50—Household Bacteriology	....	....	5
Electives	6	....	3
	15	17	15

Senior Year			
H. E. 130—Food Economics	....	2	....
H. E. 131—Meal Service	3	....	....
H. E. 153—Practice in Management of Home	....	3	....
H. E. Ed. 102—Child Study	....	....	5
P. E.—Physical Activities	1	1	1
Electives	11	8	9
	15	14	15

Home Economics Education

(See College of Education; page 125.)

Textiles and Clothing

The Department of Textiles and Clothing offers the following curriculum for students desiring professional training in both textiles and clothing.

For students interested in specializing in either field, substitute courses may replace some of the requirements in this curriculum.

Research and teaching positions are open to textile and clothing majors. In addition, there are positions with wholesale and private dressmaking houses, pattern establishments, the staffs of magazine and radio personnel.

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
P. E.—Physical Activities	1	1	1
P. E. 42—Hygiene I	2	....	....
P. E. 44—Hygiene II	....	2	....
Chem. 1, 3—General Chemistry	....	5	5
H. E. 10—Textiles	....	....	5
Speech 1, 2—Public Speaking	2	2	....
Math. 0—Basic Mathematics	0	....	....
H. E. 70—Design	3	....	....
H. E. 1—Home Economics Lecutres	1	....	....
Electives	3	3	3
Total	15	16	17

Sophomore Year			
Physics 6, 7, 8—Introductory Physics	3	3	3
Chem. 31, 33—Elements of Organic Chemistry	3	3	3
Chem. 32, 34—Elements of Organic Chemistry Laboratory	1	1	....
H. E. 20A—Clothing	....	3	....
H. E. 21—Clothing	....	....	3
H. E. 71—Costume Design	....	3	....
H. E. 30..Introductory Foods	5	....	....
Econ. 37—Fundamentals of Economics	....	....	5
Soc. 3—Introduction to Sociology	....	....	3
P. E.—Physical Activities	1	1	1
Electives	3	3	3
Total	16	17	18

Junior Year			
H. E. 150, 151, 152—Management of the Home	3	3	3
H. E. 135—Nutrition or	5	....	....
H. E. 34—Elements of Nutrition	5	....	....
H. E. 74—Survey or Art History	3	....	....
H. E. 170, 171—Interior Design	....	3	3
H. E. 120—Pattern Design	....	3	....
P. E.—Physical Activities	1	1	1
Zool. 16—Human Physiology	....	5	....
Psych. 1—Psychology	3	....	....
Bact. 50—Household Bacteriology	....	....	5
Electives	3	3	3
Total	18	18	15

Senior Year	Quarter I	II	III
H. E. 110, 111—Advanced Textiles	3	3	....
H. E. 121—Children's Clothing	2	....	....
H. E. 131—Meal Service	3	....	....
H. E. 112—Problems in Textiles	....	....	3
H. E. 122—Draping	5	....	....
H. E. 153—Practice in Management of Home	....	3	....
Sp. 101—Introduction to Radio	....	3	....
H. E. Ed. 102—Child Study	....	....	5
P. E.—Physical Activities	1	1	1
H. E. 125—Problems in Clothing	....	....	3
Electives	1	5	3
Total	15	15	15

Practical Art Curriculum

This curriculum permits a choice of two fields of concentration: interior design and costume design. Emphasis is given to the selection of house furnishings and wearing apparel with relation to personality. Positions available to graduates begin with selling, display, comparison shoppings, textile analysis, and radio work; they develop into advanced positions in these fields or in departmental buying, department managing, style coordination, personality consulting, designing, advertising, and training and personnel work.

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 7, 8—Introductory Chemistry	....	3	3
H. E. 10—Textiles	....	....	5
H. E. 70—Design	3	....	....
P. E. 42, 43—Hygiene I, II	2	2	....
Math. 0—Basic Mathematics	0	....	....
H. E. 1—Home Economics Lectures	1	....	....
H. E. 71—Costume Design	....	3	....
H. E. 74—Survey of Art History	....	....	3
Speech 1, 2—Public Speaking	2	2	....
P. E.—Physical Activities	1	1	1
Modern Language, or elective	3	3	3
Total	15	17	18

Sophomore Year	Quarter I	II	III
H. E. 30—Introductory Foods	5	....	....
H. E. 20, 21—Clothing	3	....	....
H. E. 72—Costume Illustration	3	....	....
Elective Science	5	5	....
H. E. 34—Elements of Nutrition	....	5	....
Psych. 1—Introduction to Psychology	....	3	....
Econ. 37—Fundamentals of Economics	....	....	5
Soc. 3—Introduction to Sociology	....	....	3
P. E.—Physical Activities	1	1	1
Electives	....	3	7
Total	17	17	16

Junior Year			
H. E. 150, 151, 152—Management of the Home	3	3	3
H. E. 198—Graphic Design	3	....	....
H. E. 122—Draping	....	5	....
H. E. 170, 171—Interior Design	3	3	....
H. E. Ed. 102—Child Study	5	....	....
H. E. 131—Meal Service	....	....	3
P. E.—Physical Activities	1	1	1
Electives	2	4	9
Total	17	16	16

Senior Year			
H. E. 177—Store Experience	4	....	....
H. E. 113—Consumer Problems in Textiles	3	....	....
H. E. 174—Merchandise Display	3	....	....
H. E. 176—Advertising Layout and Store Coordination	3	....	....
H. E. 178—Radio in Retailing	3	....	....
H. E. 172—Advanced Interior Design	....	....	3
H. E. 120—Pattern Design	....	3	....
H. E. 196—Journalism in Home Economics	....	4	....
H. E. 153—Practice in Management of Home	....	....	3
Econ. 150—Marketing Principles and Organization	....	4	....
B. A. 154—Retail Store Management and Merchandising	....	....	4
P. E.—Physical Activities	1	1	1
Electives	....	3	3
Total	17	15	16

Home Economics Extension*

This curriculum outlines the training necessary for the young woman who wishes to work with rural people through extension service or other agencies interested in the education and social problems of rural living.

*Practice work in the field of Home Economics Extension or in social case work is encouraged for all students majoring in this curriculum. Such experience should be gained before the completion of the senior year.

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 3—General Chemistry	5	5	....
H. E. 10—Textiles	....	....	5
H. E. 70—Design	3	....	....
P. E. 42—Hygiene I	2	....	....
P. E. 44—Hygiene II	....	2	....
P. E.—Physical Activities	1	1	1
Math 0—Basic Mathematics	0	....	....
H. E. 1—Home Economics Lectures	1	....	....
H. E. 71—Costume Design	....	3	....
Psych. 1—Introduction to Psychology	....	....	3
Speech 1—Public Speaking	....	2	2
Electives	2	2	4
Total	17	18	18

Sophomore Year			
H. E. 31, 32, 33—Foods	3	3	3
H. E. 20A or 20B—Clothing	3	....	....
Physics 6, 7, 8—Introductory Physics	3	3	3
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Chemistry Lab	1	1	....
Soc. 3—Introduction to Sociology	....	3	....
H. E. 21—Clothing	....	3	....
Bact. 50—Household Bacteriology	....	....	5
Econ. 37—Fundamentals of Economics	....	....	5
P. E.—Physical Activities	1	1	1
Electives	2	....	....
Total	16	17	17

Junior Year			
H. E. 150, 151, 152—Management of the Home	3	3	3
H. E. 135—Nutrition	5	....	....
P. E.—Physical Activities	1	1	1
Zool. 16—Human Physiology	....	5	....
H. E. 136—Dietetics	....	....	5
Psych. 80—Educational Psychology	....	5	....
H. E. 122—Draping	5	....	....
H. E. 130—Food Economics	....	2	....
H. E. 131—Meal Service	....	....	3
H. E. Ed. 101—Curriculum, Instruction and Observation	....	....	3
Electives	2	....	....
Total	16	16	15

Senior Year	Quarter I	II	III
H. E. 133—Experimental Foods	....	....	5
H. E. Ed. 102—Child Study	5	....	....
P. E.—Physical Activities	1	1	1
H. E. 132—Demonstrations	....	3	....
H. E. 153—Practice in Management of Home	....	3	....
H. E. 170, 171—Interior Design	....	3	3
H. E. 74—Survey of Art History	3	....	....
H. E. 190—Methods in Home Economics Extension	....	....	3
Rural Ed. 110—Rural Life and Extension	....	4	....
Psych. 17—Mental Hygiene	3	....	....
Electives	3	2	2
Total	15	16	14

Institution Management

This curriculum provides training for those interested in housing and the food service administration for large groups of people. The work is of two general types: (1) food service and (2) housekeeping in such institutions as hospitals and schools and in commercial organizations such as restaurants, inns, hotels and industrial cafeterias.

The preparation for a hospital dietitian requires one year of graduate training in a hospital offering a course approved by the American Dietetic Association. This curriculum meets the academic requirements for entrance to such a course.

The student of this curriculum graduating after June 1944, will be required to have a period of field work of satisfactory length and experience before entering the senior year.

A student planning to do institutional work other than hospital dietetics is not required to take Curriculum, Instruction and Observation and Diet in Disease.

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 3—General Chemistry	....	5	5
H. E. 10—Textiles	5	....	....
H. E. 70—Design	....	3	....
P. E. 42—Hygiene I	2	....	....
P. E. 44—Hygiene II	....	2	....
Math. 0—Basic Mathematics	0	....	....
H. E. 1—Home Economics Lecture	1	....	....
Soc. 3—Introduction to Sociology	....	....	3
H. E. 20—Clothing	....	....	3
Speech 1, 2—Public Speaking	2	2	....
P. E.—Physical Activities	1	1	1
Electives	3	....	....
Total	17	16	15

Sophomore Year	Quarter I	II	III
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Chemistry Lab.	1	1	....
H. E. 31, 32, 33—Foods	3	3	3
H. E. 71—Costume Design	3	....	....
Physics 6, 7, 8—Introductory Physics	3	3	3
Zool. 16—Human Physiology	....	5	....
H. E. 74—Survey of Art History	3	....	....
Bact. 50—Household Bacteriology	....	....	5
Chem. 81—General Bio-Chemistry	....	....	3
Chem. 82—General Bio-Chemistry Lab.	....	....	2
P. E.—Physical Activities	1	1	1
Total	17	16	17

Junior Year			
H. E. 135—Nutrition	5	....	....
H. E. 136—Dietetics	....	5	....
H. E. 133—Experimental Foods	....	....	5
H. E. 150, 151, 152—Management of the Home	3	3	3
Psych. 80—Educational Psychology	....	....	5
H. E. 163—Institutional Cookery	....	5	....
H. E. 160—Institution Organization and Management	3	....	....
Econ. 37—Fundamentals of Economics	5	....	....
H. E. 131—Meal Service	....	3	....
H. E. 162—Accounting and Food Control	....	....	3
P. E.—Physical Activities	1	1	1
Total	17	17	17

Senior Year			
H. E. Ed. 102—Child Study	5	....	....
Psych. 17—Mental Hygiene	....	....	3
H. E. 153—Practice in Management of Home	....	....	3
H. E. 137—Diet in Disease	....	5	....
H. E. 161—Institution Equipment and Food Purchasing	4	....	....
H. E. 166—Advanced Institutional Management	....	3	....
H. E. 101—Curriculum, Instruction and Observation	5	....	....
H. E. 170, 171—Interior Design	....	3	3
P. E.—Physical Activities	1	1	1
Electives	....	3	6
Total	15	15	16

Foods and Nutrition

This department offers the following curriculum for students desiring professional training in both foods and nutrition. Research in government agencies, commercial organizations besides newspaper, magazines, and radio, offer opportunity for students in these fields.

Freshman Year	Quarter I	II	III
Eng. 1, 2, 3—Survey and Composition	3	3	3
Chem. 1, 3—General Chemistry	....	5	5
H. E. 10—Textiles	5	....	....
H. E. 70—Design	....	....	3
P. E. 42—Hygiene I	2	....	....
P. E. 44—Hygiene II	....	2	....
P. E.—Physical Activities	1	1	1
Math. 0—Basic Mathematics	0	....	....
H. E. 1—Home Economics Lectures	1	....	....
Soc. 3—Introductory Sociology	....	....	3
Speech 1, 2—Public Speaking	2	2	....
Electives	3	3	2
Total	17	16	17

Sophomore Year			
H. E. 31, 32, 33—Foods	3	3	3
Physics 6, 7, 8—Introductory Physics	3	3	3
P. E.—Physical Activities	1	1	1
H. E. 71—Costume Design	3	....	....
Chem. 31, 33—Elements of Organic Chemistry	3	3	....
Chem. 32, 34—Elements of Organic Chemistry Lab.	1	1	....
H. E. 20—Clothing	....	3	....
Chem. Gen. 81—General Bio-chemistry	....	....	3
Chem. Gen. 82—General Bio-chemistry Lab.	....	....	2
Econ. 37—Fundamentals of Economics	3	3	5
Electives	....	....	....
Total	17	17	17

Junior Year			
H. E. 150, 151, 152—Management of the Home	3	3	3
H. E. 135—Nutrition	5	....	....
P. E.—Physical Activities	1	1	1
Zool. 16—Human Physiology	....	5	....
H. E. 136—Dietetics	5	....	....
H. E. 130—Food Economics	....	2	....
H. E. 131—Meal Service	....	3	....
Bact. 50—Household Bacteriology	....	....	5
Psychology	2	2	3
Electives	....	....	4
Total	16	16	16

Senior Year	*Quarter* I	II	III
H. E. 133—Experimental Foods	....	5	....
H. E. Ed. 102—Child Study	5	....	....
P. E.—Physical Activities	1	1	1
H. E. 153—Practice in Management of Home	3	....	....
H. E. 132—Demonstrations	....	3	....
H. E. 74—Survey of Art History	3	....	....
H. E. 170, 171—Interior Design	....	3	3
H. E. 134—Advanced Foods	....	....	5
H. E. 138—Child Nutrition	....	....	4
Electives	3	3	3
Total	15	15	16

DEPARTMENT OF MILITARY SCIENCE AND TACTICS

Personnel 1944-1945

COLONEL HARLAND C. GRISWOLD, Commandant
MAJOR JOHN W. CASSELL, Officer in Charge R.O.T.C. Training
CAPT. GEORGE M. BOHLER, Transportation and Supply Officer
CAPT. GEORGE W. DUNLAP, Commanding Officer, Company "A"
CAPT. JOHN E. SMITH, Commanding Officer, Company "C"
CAPT. JAMES V. H. BARKER, Adjutant, 2510th S.U.
CAPT. JAMES R. PINKERTON, Commanding Officer, Company "D"
CAPT. ROBERT N. WALDEN, Commanding Officer, Company "B"
CAPT. HUGH D. DAVIS, Tactical Officer, Company "C"
CAPT. A. B. C. DAVIS, Classification Officer
1ST LT. PAUL M. WADELL, Commanding Officer, Hq. Det.
1ST LT. ROBERT H. MCBRIDE, Dental Surgeon
2ND LT. HAROLD C. YEAGER, Tactical Officer, Company "A"
2ND LT. HAROLD YOURMAN, Tactical Officer, Company "B"
CAPT. GERMAN V. RICE (Retired), Military Property Custodian
MASTER SGT. OTTO SEIBENEICHEN (Retired), Band Leader
MISS E. ANN LITTLE, Secretary to Commandant
M/SGT. CHARLES H. DODSON, 1st Sgt. Company "C"
M/SGT. HOWARD L. SEEBO, Sergeant Major
T/SGT. JAMES K. MCGRAIN, Personnel Sergeant Major
S/SGT. FAY J. NORRIS, R.O.T.C. Instructor
S/SGT. LLEWELLYN W. DAVIS, Acting 1st Sgt. Company "A"
S/SGT. MAX MOSES, Chief Clerk and Typist R.O.T.C.
S/SGT. ELIAS M. FOX, Personnel N.C.O. and Payroll Clerk
S/SGT. CHARLES R. CHRISTIANSEN, Acting 1st Sgt. Company "D"
S/SGT. JOHN P. ROBERTS, Supply Sergeant
SGT. SALVATORE GAGLIEMO, R.O.T.C. Instructor
T/5 GEORGE MANNELLO, JR., Classification Clerk
T/5 WILLIAM S. HALL, Company Clerk, Company "D"
T/5 PULLEN D. MARTIN, Company Clerk, Company "C"
T/5 ROBERT C. TACEY, Mail Clerk
T/5 LAURENCE H. WAPLE, Acting 1st Sgt. Company "B"
T/5 MICHAEL AVEDISIAN, Company Clerk, Company "A"
T/5 SAMUEL L. ABRAMS, Driver
PFC. JOHN D. MCCAGG, Company Clerk, Company "B"
PVT. HERBERT F. SCHAUMANN, Medical Clerk
PVT. KENNETH L. SCHOOLEY, Truck Driver
PVT. GEORGE E. FISLER, Supply Clerk and Truck Driver

General

Instruction in Military Science and Tactics has been an important feature of the work of the College Park Division of the University of Maryland since 1856. Until 1916, the institution was a military school, and since that time military instruction has been a required course for all physically fit freshmen and sophomore male students under 26 years of age and registered for more than six quarter credits, until six quarters have been completed. Each quarter carries three credits.

The Reserve Officers' Training Corps was established at the University under the provisions of the Act of Congress of June 3, 1916, as amended. The instructional work is based on the provisions of Army Regulations No. 145-10. For the duration of the war, the War Department has changed the R. O. T. C. course of instruction and offers Basic I and Basic II courses, which are designed to prepare young men for any branch of the service in which they may serve.

Credit for Previous R. O. T. C. Training

Students who are graduates of class MS schools which are rated as "Honor Schools" by the War Department, will receive credit for the work completed there.

Uniforms

Members of the Basic Courses are issued uniforms without cost to the student. Shoes of a type specified by the Military Department must be purchased.

Army Specialized Training (AST)

In June, 1943, the War Department sent in the first group of soldiers for Specialized College Training. By October, 1943, there were 1146 soldiers receiving Academic and Military Training at this University in Basic Engineering, Advanced Engineering, Area and Language, and Pre-professional Medicine and Dentistry.

The War Department realized the necessity for the continual flow of educated men into the services and encourages every qualified young man to enjoy the advantages of this program.

BATTALION ORGANIZATION, RESERVE OFFICERS' TRAINING CORPS—1944

Battalion Commander.....Colonel Franklyn M. Seeley
Executive Officer .....Major Phillip A. Grill
Adjutant .....Captain James W. Dorsett
Supply Officer.....1st Lt. Leonard E. Eisenberg
Personnel Adjutant.....1st Lt. Charles C. Eads

Company Commander, Company "A".....Captain Sesley B. Smiler
Executive Officer .....1st Lt. Charles D. Everson
Leader, 1st Platoon.....2nd Lt. Rennert M. Smelser
Leader, 2nd Platoon.....2nd Lt. Henry W. Fricke
Leader, 3rd Platoon.....2nd Lt. Randolph Coyle IV

Company Commander, Company "B".....Captain Thomas P. Grahm
Executive Officer .....1st Lt. John Stuntz
Leader, 1st Platoon.....2nd Lt. Peter N. Karangelen
Leader, 2nd Platoon.....2nd Lt. Charles R. Lund
Leader, 3rd Platoon.....2nd Lt. John K. Bowersox

Company Commander, Company "C".....Captain William E. Scull
Executive Officer .....1st Lt. Basil B. Benson
Leader, 1st Platoon.....2nd Lt. Earl W. Lowery
Leader, 2nd Platoon.....2nd Lt. Sam E. Wheatley
Leader, 3rd Platoon.....2nd Lt. Robert K. Warner

Commanding Officer, R.O.T.C. Band.....Captain Avron H. Maser
Executive Officer .....1st Lt. Michael W. Langello

DEPARTMENT OF PHYSICAL EDUCATION, RECREATION, AND ATHLETICS

The purpose of the program of physical education at the University is broadly conceived as the development of the individual student. To accomplish this purpose, physical examinations and classification tests are given the incoming students to determine the relative physical fitness of each. Upon the basis of the needs disclosed by these tests, and individual preferences, students are assigned to the various activities of the program.

For Men

Freshmen and sophomores assigned to physical education take three activity classes each week throughout the year. In the fall, soccer, touch football, and tennis are the chief activities; in the winter, basketball, volleyball, and other team games; and in the spring, track, baseball, and tennis. In addition to these team activities, sophomore students may elect a considerable number of individual sports, such as fencing, boxing, wrestling, horseshoes, ping pong, bag punching, badminton, shuffleboard, and the like.

An adequate program of intramural sports is conducted also. Touch football and soccer in the fall, basketball and volleyball in the winter, baseball and track in the spring, are the chief activities in this program. Plaques, medals, and other appropriate awards in all tournaments of the program are provided for the winning teams and individual members.

Every afternoon of the school session the facilities of the Physical Education Department are thrown open to all students for free unorganized recreation. Touch football, soccer, basketball, basket shooting, apparatus work, fencing, boxing, wrestling, bag punching, tennis, badminton, and ping pong are the most popular contests engaged in.

The University is particularly fortunate in its possession of excellent facilities for carrying on the activities of the program of physical education. Two large modern gymnasia, a new field house, a number of athletic fields, tennis courts, baseball diamonds, running tracks, and the like, constitute the major part of the equipment.

In addition to the activities described above, the University sponsors a full program of intercollegiate athletics for men. Competition is promoted in varsity and freshman football, basketball, baseball, track, boxing, lacrosse, soccer, wrestling, golf, and tennis. The University is a member of the Southern Conference, the National Collegiate Athletic Association, and cooperates with other national organizations in the promotion of amateur athletics.

For Women

The Department of Physical Education for Women has excellent facilities for conducting a full activities program. Seasonal team sports including hockey, soccer, speedball, basketball, volleyball, softball; individual sports, consisting of riding, tennis, badminton, fencing, golf, archery, deck tennis, table tennis, and the like, are offered. Opportunity is given for various types of dancing, including modern, square, folk, and ballroom. The proximity of the University to Washington and Baltimore provides excellent opportunity for groups to attend professional programs in dance.

The Women's Athletic Association sponsors and conducts intramural tournaments in the seasonal sports, sports days with neighboring colleges, and intercollegiate competition in rifle shooting.

The University also maintains curricula designed to train men and women students to teach physical education and coach in the high schools of the State, and to act as leaders in recreational programs in communities.

For a description of the courses in Physical Education, see College of Education, and Courses of Instruction.

This department now is being reorganized with a view to adapting its broad program to war conditions and necessities.

THE GRADUATE SCHOOL

C. O. APPLEMAN, *Dean.*
ELSIE M. PARRETT, *Secretary.*

History and Organization

In the earlier years of the institution the Master's degree was frequently conferred, but the work of the graduate students was in charge of the departments concerned, under the supervision of the general faculty. The Graduate School of the University of Maryland was established in 1918, and organized graduate instruction leading to both the Master's and the Doctor's degree was undertaken. The faculty of the Graduate School includes all members of the various faculties who give instruction in approved graduate courses. The general administrative functions of the graduate faculty are delegated to a Graduate Council, of which the Dean of the Graduate School is chairman.

Admission

An applicant for admission to the Graduate School must hold a Bachelor's or a Master's degree from a college or university of recognized standing. The applicant shall furnish an official transcript of his collegiate record which for unconditional admission must show creditable completion of an adequate amount of undergraduate preparation for graduate work in his chosen field. Application for admission to the Graduate School should be made prior to dates of registration on blanks obtained from the office of the Dean.

After approval of the application a matriculation card, signed by the Dean, is issued to the student. This card permits one to register in the Graduate School. After payment of the fee, the matriculation card is stamped and returned to the student. It is his certificate of membership in the Graduate School and should be retained by the student to present at each succeeding registration.

Admission to the Graduate School does not necessarily imply admission to candidacy for an advanced degree.

Registration

All students pursuing graduate work in the University, even though they are not candidates for higher degrees, are required to register in the Graduate School at the beginning of each quarter. **In no case will graduate credit be given unless the student matriculates and registers in the Graduate School.** The program of work for each session is arranged by the student with the major department and entered upon two course cards, which are signed first by the professor in charge of the student's major subject and then by the Dean of the Graduate School. One card is retained by the Dean. The student takes the other card, and in case of a new student, also the matriculation card, to the

Registrar's office, where the registration is completed. Students will not be admitted to graduate courses until the Registrar has certified to the instructor that registration has been completed. Course cards may be obtained at the Registrar's office or at the Dean's office. The heads of departments usually keep a supply of these cards in their respective offices.

Graduate Courses

Graduate students must elect for credit in partial fulfillment of the requirements for higher degrees only courses designated **For Graduates** or **For Graduates and Advanced Undergraduates.** Students who are inadequately prepared for graduate work in their chosen fields or who lack prerequisites for minor courses may elect a limited number of courses numbered from 1 to 99 in the general catalogue, but graduate credit will not be allowed for these courses. Courses that are audited are registered for in the same way as other courses, and the fees are the same.

Program of Work

The professor who is selected to direct a student's thesis work is the student's adviser in the formulation of a graduate program, including suitable minor work, which is arranged in cooperation with the instructors. To encourage thoroughness in scholarship through intensive application, graduate students in the regular sessions are limited to a program of fifteen credit hours per quarter. If a student is preparing a thesis during the minimum residence for the master's degree, the registration in graduate courses should not exceed twelve hours for the quarter.

Summer Session for Teachers

In addition to the regular summer quarter, the University will conduct a six-weeks summer session for teachers at College Park, with a comprehensive undergraduate and graduate program. The University publishes a separate bulletin giving full information on this summer session for teachers. This bulletin is available upon application to the Director of Summer Session for Teachers, University of Maryland, College Park.

Graduate Work by Seniors in This University

A senior of this University who has nearly completed the requirements for the undergraduate degree may, with the approval of his undergraduate dean and the Dean of the Graduate School, register in the undergraduate college for graduate courses, which may later be transferred for graduate credit toward an advanced degree at this University, but the total of undergraduate and graduate courses must not exceed fifteen credits for the quarter. Excess credits in the senior year cannot later be transferred unless such prearrangement is made. Graduate credits earned during the senior year may not be used to shorten the residence period required for advanced degrees.

Admission to Candidacy for Advanced Degrees

Application for admission to candidacy for the Master's and for the Doctor's degree is made on application blanks which are obtained at the office of the Dean of the Graduate School. These are filled out in duplicate by the student and submitted to his major department for further action and transmission to the Dean of the Graduate School. An official transcript of the candidate's undergraduate record and any graduate courses completed at other institutions must be on file in the Dean's office before the application can be considered. All applications for admission to candidacy must be approved by the Graduate Council.

Admission to candidacy in no case assures the student of a degree, but merely signifies he has met all the formal requirements and is considered by his instructors sufficiently prepared and able to pursue such graduate study and research as are demanded by the requirements of the degree sought. The candidate must show superior scholarship in graduate work already completed.

Application for admission to candidacy is made at the time stated in the sections dealing with the requirements for the degree sought.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS AND MASTER OF SCIENCE

Advancement to Candidacy. Each prospective candidate for the Master's degree is required to make application for admission to candidacy not later than the date when instruction begins for the quarter in which the degree is sought. He must have completed at least twelve quarter hours, but not more than twenty-four quarter hours of graduate work at the University of Maryland. An average grade of "B" in all major and minor subjects is required.

Minimum Residence. A residence of at least three quarters or its equivalent, at this institution, is required.

Course Requirements. A minimum of thirty-six quarter hours, exclusive of research and thesis, with an average grade of "B" in courses approved for graduate credit, is required for the degrees of Master of Arts and Master of Science. At the option of the major department concerned the students may be required also to register for a maximum of nine quarter hours for research and thesis work. The total number of credit hours required for the degree would then be forty-five. If the student is inadequately prepared for the required graduate courses, either in the major or minor subjects, additional courses may be required to supplement the undergraduate work. Of the thirty-six hours required in graduate courses, not less than eighteen quarter hours and not more than twenty-four quarter hours must be earned in the major subject. The remaining credits must be outside the major subject and must comprise a group of coherent courses intended to supplement and support

the major work. Not less than one-half of the total required course credits for the degree, or a minimum of eighteen, must be selected from courses numbered 200 or above. No credit for the degree of Master of Arts or Master of Science may be obtained for correspondence or extension courses. The entire course of study must constitute a unified program approved by the student's major adviser and by the Dean of the Graduate School.

Transfer of Credit. Credit not to exceed nine quarter hours, obtained at other recognized institutions, may be transferred and applied to the course requirements of the Master's degree, provided that the work was of graduate character, and provided that it is approved for inclusion in the student's graduate program at the University of Maryland. This transfer of credit is submitted to the Graduate Council for approval when the student applies for admission to candidacy for the degree. Acceptance of the transferred credit does not reduce the minimum residence requirement. The candidate is subject to final examination by this institution in all work offered for the degree.

Thesis. In addition to the thirty-six quarter hours in graduate courses a satisfactory thesis is required of all candidates for the degrees of Master of Arts and Master of Science. It must demonstrate the student's ability to do independent work and it must be acceptable in literary style and composition. It is assumed that the time devoted to thesis work will be not less than the equivalent of nine quarter hours earned in graduate courses. With the approval of the student's major professor and the Dean of the Graduate School, the thesis in certain cases may be prepared *in absentia* under direction and supervision of a member of the faculty of this institution.

The original copy of the thesis must be deposited in the office of the Graduate School not later than two weeks before the convocation at which the degree is sought. The thesis should not be bound by the student, as the University later binds all theses uniformly. An abstract of the contents of the thesis, 200 to 250 words in length, must accompany it. A manual giving full directions for the physical make-up of the thesis is in the hands of each professor who directs thesis work, and should be consulted by the student before the typing of the manuscript is begun. Individual copies of this manual may be obtained by the student at the Dean's office, at nominal cost.

Final Examination. The final oral examination is conducted by a committee appointed by the Dean of the Graduate School. The student's adviser acts as the chairman of the committee. The other members of the committee are persons under whom the student has taken most of his major and minor courses. The chairman and the candidate are notified of the personnel of the examining committee at least one week prior to the period set for oral examinations. The chairman of the committee

selects the exact time and place for the examination and notifies the other members of the committee and the candidate. The examination should be conducted within the dates specified at the end of the quarter, but upon recommendation of the student's adviser, an examining committee may be appointed by the Dean of the Graduate School at any time when all other requirements for the degree have been completed. A report of the committee is sent to the Dean as soon as possible after the examination. A special form for this purpose is supplied to the chairman of the committee. Such a report is the basis upon which recommendation is made to the faculty that the candidate be granted the degree sought. The period for the oral examination is usually about one hour, but the time should be long enough to insure an adequate examination.

The examining committee also approves the thesis, and it is the candidate's obligation to see that each member of the committee has ample opportunity to examine a copy of the thesis prior to the date of the examination.

A student will not be admitted to final examination until all other requirements for the degree have been met. In addition to the oral examination a comprehensive written examination may be required at the option of the major department.

REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION

Course Requirements. Forty-five quarter hours of course work are required, which may include courses in departments other than Education not to exceed one-half of the total forty-five hours, such courses to be selected in conformity with the student's special needs as agreed upon by the student and his adviser. Of the forty-five hours, not less than one-half must be on the 200 level.

At least six of the forty-five quarter hours must be seminar work, which shall include one or more seminar papers in the student's major field of concentration in the Department of Education.

Included in the program must be courses in educational statistics and in procedure of educational research.

The requirements in regard to advancement to candidacy, transfer of credits, and final oral examination are the same as for the degrees of Master of Arts and Master of Science.

REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration represents a minimum of three quarters of graduate work in addition to the satisfaction of all undergraduate requirements for the Bachelor's degree. This will normally include a minimum of thirty-six quarter course hours and the completion of a satisfactory thesis.

The undergraduate prerequisites for graduate work leading to the degree of Master of Business Administration may be satisfied by completion of work for the degree of Bachelor of Science in Business Administration at the University of Maryland, or by equivalent work leading to a corresponding degree at other institutions, provided this work is of sufficiently high quality. Holders of other Bachelor's degrees must satisfy the prerequisite course requirements for the Bachelor of Science degree in Business Administration at this institution, which include Economics 140, 150, 160, and Business Administration 140, 150, 160, 180, 181, and 182. All other requirements are the same as for the degree of Master of Arts and Master of Science.

The degree of Master of Business Administration represents specialized work in a particular field of business administration. To this end course and thesis work should contribute to one field of specialization such as Accounting, Marketing, Finance, Labor, Public Utilities, Foreign Trade, or to some other field of the candidate's specialized interest.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Advancement to Candidacy. Candidates of the Doctor's degree must be admitted to candidacy at least three quarters before the final examination. Applications for admission to candidacy for the Doctor's degree are filled out by the student and submitted to his major department for further action and transmission to the Dean of the Graduate School.

The applicant must have obtained from the head of the Modern Language Department a statement that he possesses a reading knowledge of French and German. Preliminary examinations or such other substantial tests as the departments may elect are also required for admission to candidacy.

Residence. The equivalent of three years (nine quarters) of full time graduate study and research is the minimum required. Of the three years the equivalent of at least one year must be spent in residence at this University. On a part-time basis the time needed will be correspondingly increased. All work at other institutions offered in partial fulfillment of the requirements for the Ph.D. degree is submitted to the Graduate Council for approval, upon recommendation of the department concerned, when the student applies for admission to candidacy for the degree.

The Doctor's degree is not given merely as a certificate of residence and work, but is granted only upon sufficient evidence of high attainments in scholarship, and ability to carry on independent research in the special field in which the major work is done.

Major and Minor Subjects. The candidate must select a major and one or two closely related minor subjects. At least thirty-six quarter hours, exclusive of research, are required in minor work. The remainder of the required residence is devoted to intensive study and research in the major field. The amount of required course work in the major subject

will vary with the department and the individual candidate. The candidate must register for a minimum of eighteen quarter hours of research.

Thesis. The ability to do independent research must be shown by a dissertation on some topic connected with the major subject. An original typewritten copy and two clear, plain carbon copies of the thesis, together with an abstract of the contents, 250 to 500 words in length, must be deposited in the office of the Dean at least three weeks before the convocation at which the degree is sought. It is the responsibility of the student also to provide copies of the thesis for the use of the members of the examining committee prior to the date of the final examination.

The original copy should not be bound by the student, as the university later binds uniformly all theses for the general university library. The carbon copies are bound by the student in cardboard covers which may be obtained at the students' supply store. The abstracts are published biennially by the university in a special bulletin.

A manual giving full directions for the physical make-up of the thesis is in the hands of each professor who directs thesis work, and should be consulted by the student before typing of the thesis is begun. Students may obtain copies of this manual at the Dean's office, at nominal cost.

Final Examination. The final oral examination is held before a committee appointed by the Dean. One member of this committee is a representative of the graduate faculty who is not directly concerned with the student's graduate work. One or more members of the committee may be persons from other institutions who are distinguished scholars in the student's major field.

The duration of the examination is approximately three hours, and covers the research work of the candidate as embodied in his thesis, and his attainments in the fields of his major and minor subjects. The other detailed procedures are the same as those stated for the Master's examination.

Rules Governing Language Examinations for Candidates for the Degree of Doctor of Philosophy

1. A candidate for the Doctor's degree must show in a written examination that he possesses a reading knowledge of French and German. The passages to be translated will be taken from books and articles in his specialized field. Some 300 pages of text from which the applicant wishes to have his examination chosen should be submitted to the head of the Department of Modern Languages at least three days before the examination. The examination aims to test ability to use the foreign language for research purposes. It is presumed that the candidate will know sufficient grammar to distinguish inflectional forms and that he will be able to translate readily in two hours about 500 words of text, with the aid of a dictionary.

2. Application for admission to these tests must be filed in the office of the Department of Modern Languages at least three days in advance of the tests.

3. No penalty is attached to failure in the examination, and the unsuccessful candidate is free to try again at the next date set for these tests.

4. Examinations are held near the office of the Department of Modern Languages, on the first Wednesday of each quarter, at 2 p. m.

FELLOWSHIPS AND ASSISTANTSHIPS

Fellowships. A number of fellowships have been established by the University. The stipend for the University fellows is $500 and the remission of all graduate fees except the diploma fee. Several industrial fellowships, with varying stipends, are also available in certain departments.

Fellows are required to render minor services prescribed by their major departments. The usual amount of service required does not exceed twelve clock hours per week. Fellows are permitted to carry a full graduate program, and they may satisfy the residence requirement for higher degrees in the normal time.

Applications for fellowships are made on blanks which may be obtained from the office of the Graduate School.. The application, with the necessary credentials, is sent by the applicant directly to the Dean of the Graduate School. Applications which are approved by the Dean are forwarded to the departments, where final selection of the fellows is made. The awards of University fellowships are on a competitive basis.

Graduate Assistantships. A number of teaching and research graduate assistantships are available in several departments. The compensation for these assistantships is $600 to $1000 a year and the remission of all graduate fees except the diploma fee. Graduate assistants are appointed for one year (four quarters) and are eligible to reappointment. The assistant in this class devotes one-half of his time to instruction or to research in connection with Experiment Station projects, and he is required to spend six quarters in residence for the Master's degree. If he continues in residence for the Doctor's degree, the minimum residence requirements from the Bachelor's degree may be satisfied in twelve quarters.

Applications for graduate assistantships are made directly to the departments concerned, and appointments are made through the regular channels for staff appointments. Further information regarding these assistantships may be obtained from the department or college concerned.

SUMMER SESSION FOR TEACHERS

ARNOLD E. JOYAL, *Acting Director.*

A Summer Session for Teachers of six weeks is conducted at College Park during the first half of the regular summer quarter. The program, designed for teachers in service, serves the needs of persons who wish to spend a part of the summer in study but do not find it possible to attend the university for the entire summer quarter.

Terms of Admission

The admission requirements for those who desire to become candidates for degrees are the same as for any other session of the University. Before registering, a candidate for a degree will be required to consult the Dean of the College or School in which he wishes to secure the degree. Teachers and special students not seeking a degree are admitted to the courses of the summer session for which they are qualified. All such selection of courses must be approved by the Director of the Summer Session.

Credits and Certificates

The quarter hour is the unit of credit as in other sessions of the University. In the summer session, a course meeting five times a week for six weeks and requiring the standard amount of outside work has a value of three quarter hours.

Courses satisfactorily completed will be credited by the State Department of Education toward satisfying certification requirements of all classes.

Summer Graduate Work

For persons wishing to do graduate work towards advanced degrees in the summer sessions, special arrangements are made supplementing the regular procedure. Teachers and other graduate students working for degrees on the summer plan must meet the same requirements as to admission, credits, scholarship, and examinations as do students enrolled in the regular sessions of the University.

All teachers or others planning to do work towards graduate degrees in Education must apply to the Dean of the Graduate School as early as possible for admission to candidacy in the Graduate School.

For detailed information in regard to the Summer Session, consult the special Summer Session announcement, issued annually in April. A copy of this announcement may be secured from the Director, Summer Session, University of Maryland, College Park, Md.

EVENING COURSES

ARNOLD E. JOYAL, *Chairman*
Division of Evening Extension Courses.

The University provides a limited program of evening instruction for undergraduates and graduates at College Park, and for undergraduates only in various other centers of the State. During the period 1942-1944, such courses were given at Cambridge, Frederick, Easton, Charlotte Hall, LaPlata, Cumberland, and Salisbury.

Courses in any university subject may be offered in the evening program when there is a sufficient student demand and instructors are available. During 1942-1944, evening courses were given *at College Park* in education, English, history, political science, psychology, sociology, and zoology. During the same period, courses in other centers included work in English, history, and political science.

The evening program is carried on primarily as a service to employed persons. Although the majority of those enrolled in evening classes are teachers in the schools of Maryland, or the District of Columbia, the University is glad to provide evening courses for other vocational groups to the extent of its facilities.

A separate announcement with regard to Evening Courses is issued early in the Fall. A copy of this announcement, or any further information desired may be secured by communicating with:

Division of Evening Extension Courses,
University of Maryland,
College Park, Maryland.

SECTION III

Course Offerings—College Park

This section contains a list of all courses offered in the regular sessions of the University at College Park. Courses offered in the Summer Session for Teachers and in the Baltimore Schools of the University are described in the separate catalogs issued by the several schools.

The University reserves the right to withdraw or discontinue any course for which an insufficient number of students have registered to warrant giving the course. In such an event, no fee will be charged for transfer to another course.

Courses are designated by numbers as follows:

Group I numbered 1 to 49—courses primarily for freshmen, and sophomores.

Group II numbered 50 to 99—courses for juniors and seniors.

Group III numbered 100 to 199—courses for advanced undergraduates (well qualified juniors and seniors) and graduates.

Group IV numbered 200 to 299—courses for graduates only.

Courses not otherwise designated are lecture courses. The number of hours' credit is shown by the arabic numeral in parentheses after the title of the course.

A separate schedule of courses is issued each quarter, giving the hours places of meeting, and other information required by the student in making out his program. Students obtain these schedules when they register.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

A. E. 1. Agricultural Industry and Resoruces (3). Winter.

A course dealing with agriculture as an industry and its relation to climatic, soil and population factors. The history of American agriculture is briefly reviewed. Emphasis is upon the chief crop and livestock products of the United States.

A. E. 2. Farm Organization (3). Fall.

A study of farm organization, consisting of an introduction to the complex problems of the agricultural industry as these problems affect the life and welfare of the individual farmer.

For Advanced Undergraduates

A. E. 90, 91. Seminar (1, 1). Fall, Winter.

Students will prepare and present reports on economic literature and current problems.

For Advanced Undergraduates and Graduates

A. E. 100. Farm Ecnomics (3). Fall. Prerequisite, Econ. 31, 32, 33, or Econ. 37.

A general course in agricultural economics, with special reference to population trends, the factors in agricultural production, agricultural wealth, land tenure, farm labor, agricultural credit, the tariff, price movements, and marketing.

A. E. 101. Marketing of Farm Products (3). Winter. Prerequisite, Econ. 31, 32, 33, or Econ. 37.

The development of marketing, its scope, channels and agencies of distribution, functions, costs, methods used, and services rendered.

A. E. 103. Cooperation in Agriculture (3). Fall.

Hictorical and comparative development of farmers' cooperative organizations; commodity developments; operative practices; banks for cooperatives; present trends.

A. E. 104. Farm Finance (3). Spring.

A study of credit principles as applied to farm businesses and the agencies extending farm credit. The needs and benefits of farm insurance, including fire, crop, livestock, and life insurance.

A. E. 105. Food Products Inspection (2)...One lecture and one laboratory period a week. Summer.

This course is designed to give the students primary instruction in the grading, standardizing and inspection of fruits and vegetables, dairy products, poultry products, meats, and other food products.

A. E. 106. Prices of Farm Products (3). Two lectures and one laboratory period a week. Winter.

A general course in prices, price relationships, and price analysis, with emphasis on prices of agricultural products.

A. E. 107. Analysis of the Farm Business (3). One lecture and two laboratory periods a week. Winter.

A concise, practical course in the keeping, summarizing, and analyzing of farm accounts.

A. E. 108. Farm Management (3). Spring.

A study of the organization and operation of farms from the standpoint of efficiency selection of farms, size of farms, leasing systems, and factors affecting profits. Students will make an analysis of the actual farm business and practices of different types of farms, and make specific recommendations as to how these farms may be organized and operated as successful businesses.

A. E. 109. Research Problems (1-2). Fall, Winter, Spring, Summer.

With the permission of the instructor, students will work on any research problems in agricultural economics. There will be occasional class meetings for the purpose of making reports on progress of work.

A. E. 111. Land Economics (3). Fall.

Concepts of land economy are discussed, as well as conditions and tendencies influencing land requirements in relation to land resources; a study of major land problems and land policies; land use adjustments; and measures for better use of our land resources.

A. E. 112. Agricultural Policy (3). Spring.

A study of the effect of governmental programs and policy on agricultural production, prices and income.

For Graduates

A. E. 200, 201. Special Problems in Farm Economics (2, 2). Winter, Spring.

An advanced course dealing extensively with economic problems affecting the farmer.

A. E. 202. Seminar (1-3). Fall, Winter, Spring.

This course will consist of special reports by students on current economic subjects, and a discussion and criticism of the same by the members of the class and the instructor.

A. E. 203. Research (1-6). Credit determined by work accomplished. Fall, Winter, Spring, Summer.

Students will be assigned research in agricultural economics under the supervision of the instructor. The work will consist of original investigation in problems of agricultural economics.

A. E. 210. Taxation in Relation to Agriculture (2). Winter.

Principles and practices of taxation in their relation to agriculture, with special reference to the trends of tax levies, taxation in relation to land utilization, taxation in relation to ability to pay and benefits received.

A. E. 211. Agricultural Taxation in Theory and Practice (3). Two lectures and one laboratory period a week. Fall.

Economic effects of taxation upon the welfare of rural society; theory of the general property tax, business and license taxes, the income tax, the sales tax, special commodity taxes, inheritance and estate taxes as applied to the support of rural governmental functions; practical and current problems in taxation.

A. E. 212, 213. Land Utilization and Agricultural Production (3, 2). Fall, Winter.

A presentation, by regions, of the basic physical conditions of climate, topography and soils; the economic and social forces that have influenced agricultural settlement, and the resultant utilization of the land, followed by a consideration of the regional trends and inter-regional shifts in land utilization and agricultural production.

A. E. 214. Consumption of Farm Products and Standards of Living (3). Spring.

A presentation of the trends in population and rural-urban migration, of the trends in exports of farm products and their regional significance, and of the trends in per capita consumption of agricultural products.

A. E. 215. Advanced Agricultural Cooperation (3). Winter.

An appraisal of agricultural cooperation as a means of improving the financial status of farmers.

AGRICULTURAL EDUCATION AND RURAL LIFE

For Advanced Undergraduates

R. Ed. 51. Departmental Organization (3). One lecture and two laboratory periods a week. Spring.

This course is designed to orient the student in the teaching of vocational agriculture in secondary schools and to assist him in relating the information acquired at the University with the problems of doing and demonstrating which he faces as a teacher. His experiences are checked for deficiencies which are corrected by laboratory practice.

R. Ed. 90. Practice Teaching (6). Fall. Prerequisite, R. Ed. 107.

Under the direction of a critic teacher the student is required to analyze and prepare special units of subject matter, plan lessons, and teach in cooperation with the critic teacher, exclusive of observation, not less than 100 clock hours of vocational agriculture and related subjects.

R. Ed. 91. Practice Teaching (1-6). Fall, Winter, Spring. Prerequisite, R. Ed. 90.

A continuation of R. Ed. 90 for those students wishing to acquire additional experience in teaching.

For Advanced Undergraduates and Graduates

R. Ed. 107. Observation and Analysis of Teaching for Agricultural Students (3). One lecture and two laboratory periods a week. Fall. Required of majors in Agricultural Education. Elective for others.

This course deals with an analysis of pupil learning in class groups.

R. Ed. 109. Teaching Secondary Vocational Agricultural (5). Fall. Prerequisite, R. Ed. 107.

A comprehensive course in the work of high school departments of vocational agriculture. It emphasizes particularly placement, supervised farming programs, the organization and administration of Future Farmer work, and objectives and methods in all-day instruction.

R. Ed. 110. Rural Life and Education (4). Winter.

An intensive study of the educational agencies at work in rural communities, stressing an analysis of school patronage areas, the possibilities of normal life in rural areas, early beginnings in rural education, and the conditioning effects of economic differences.

R. Ed. 111. Teaching Part-time and Adult Classes (2). Fall.

Characteristics of part-time and adult class instruction. Determining needs for and organizing a course; selecting materials for instruction; and class management. Emphasis is placed on the conference method of teaching.

R. Ed. 112, 113. Departmental Management (1, 1). One laboratory period a week. Winter, Spring. Prerequisites, R. Ed. 107, 109.

The analysis of administrative programs for high school departments of vocational agriculture. Investigations and reports.

R. Ed. 114. Organization and Management of Farm Mechanics in Secondary Schools (2). Two laboratory periods a week. Spring. Prerequisites, Agr. Engr. 54, R. Ed. 107.

An analysis of programs in well-equipped farm mechanics laboratories. Contemporary developments; objectives; determination of projects; procurement of supplies and repairs; shop management; care and operation of equipment; methods of group and individual instruction; safety precautions; keeping records; and the development of charts designed to promote order in shops.

For Graduates

R. Ed. 201, 202, 203. Rural Life and Education (3, 3, 3). Fall, Winter, Spring. Prerequisite, R. Ed. 110 or equivalent.

A sociological approach to rural education as a movement for a good life in rural communities.

R. Ed. 207, 208, 209. Problems in Vocational Agriculture, Related Science, and Shop (2, 2, 2). Fall, Winter, Spring.

In this course special emphasis is placed upon the current problems facing teachers of vocational agriculture. It is designed especially for persons who have had several years of teaching experience in this field.

R. Ed. 250. Seminar in Rural Education (1-3). Fall, Winter, Spring.

Problems in the organization, administration, and supervision of the several agencies of rural education. Investigations, papers, and reports.

R. Ed. 251. Research. Credit hours according to work done.

AGRICULTURAL ENGINEERING

For Advanced Undergraduates

Agr. Engr. 54. Farm Mechanics (2). Two laboratory periods a week. Fall.

This course consists of laboratroy exercises in practical farm shop and farm equipment repair and construction projects. It is offered primarily for prospective teachers of vocational agriculture.

For Advanced Undergraduates and Graduates

Agr. Engr. 101. Farm Machinery (4). Three lectures and one laboratory period a week. Winter.

A study of the economics, design and adjustments of modern horse and tractor-drawn machinery, including applications of electricity to farm operations. Laboratory work consists of detailed study of actual machines, their calibration, adjustment, and repair.

Agr. Engr. 102. Gas Engines, Tractors and Automobiles (4). Three lectures and one laboratory period a week. Spring.

A study of the design, operation, and repair of the internal combustion engines, trucks, tractors, and automobiles used in farm practice.

Agr. Engr. 105. Farm Buildings (3). Two lectures and one laboratory period a week. Winter.

A study of all types of farm structures; also of farm lighting, heating, water supply, and sanitation systems.

Agr. Engr. 107. Farm Drainage (3). Two lectures and one laboratory period a week. Fall.

A study of farm drainage systems, including theory of tile under-drainage, the depth and spacing of laterals, calculation of grades, methods of construction, and the use of engineering instruments. A smaller amount of time will be spent upon drainage by open ditches, and the laws relating thereto.

AGRONOMY

Division of Crops

Agron. 1. Crop Production (5). Three lectures and two laboratory periods a week. Winter.

History, distribution, adaptation, culture, improvement and uses of Cereal and Forage crops.

For Advanced Undergraduates

Agron. 51. Technology of Crop Quality (2). One lecture and one laboratory period a week. Winter. Prerequisites, Agron. 1 or consent of instructor.

Identification, judging and grading farm crops, including market classifications and grades as recommended by the United States Bureau of Markets.

Agron. 54. Selected Crop Studies (2-4). Fall, Winter, Spring. Prerequisite, Agron. 1.

Advanced individual study of field crops of special interest to the students.

For Advanced Undergraduates

Agron. 103. Crop Breeding (3). Fall. Prerequisite, Zool. 104.

The principles of breeding as applied to field crop plants and methods used in plant improvement.

Agron. 151. Cropping Systems (3). Spring.

The bringing to bear of information from various courses upon the development of balanced cropping systems, appropriate to different objectives and different areas of the state.

For Graduates

Agron. 201. Crop Breeding (3-6). Fall. Prerequisite, consent of instructor.

Similar to Agron. 103, but better adapted to graduate students and offering a wider range of choice of material to suit special cases.

Agron. 203. Seminar (1, 1, 1). Fall, Winter, Spring.

Reports by students on current scientific publications on crops or soils.

Agron. 209. Research (6-12). Any quarter.

Credit according to work accomplished. With approval or suggestion of the head of the department, the student will choose his own problem for study.

Division of Soils

Soils 1. General Soils (5). Spring. Prerequisites, General Chemistry.

A broad conception and appreciation of the development of soils as a home for plants; major soil areas of the world; their importance, use,

climatic relationships, effect on civilization; the relation of Soils as a science to other sciences.

Soils 2. Principles of Soil Fertility (3). Fall. Prerequisites, Soils 1, Elements of Organic Chemistry, and General Bacteriology.

Those biological, chemical, and physical characteristics of soils that are necessary for crop growth; the uses of lime materials, fertilizers, organic materials and rotations in creating these desired conditions.

For Advanced Undergraduates

Soils 51. Laboratory Problems in Soils (3). Two three-hour laboratory periods a week. Winter. Prerequisites, Soils 1 and 2 and Quantitative Chemistry.

The common biological, chemical, and physical methods of examining a soil in the laboratory to determine its nutritional and potential fertility level. The student is required to provide about a bushel of soils for his own use in this study.

For Advanced Undergraduates and Graduates

Soils 103. Soil Geography (4). Three lectures and one laboratory period a week. Spring. Prerequisites, Soils 1 and Geology.

The factors and processes of soil formation in the world and Maryland; the development and use of soil classification, soil capability groupings, and soil uses. The laboratory period is used for field trips into different sections of the state to examine soils in place. Special problems according to the interests of the student are required for graduate credit.

Soils 112. Soil Conservation (3). Two lectures and one discussion period a week. Fall. Prerequisite, Soils 1.

The factors affecting the preservation of soil and of soil moisture, and their influence on society; methods of soil conservation. Field trips are conducted to see practical application of these methods of soil conservation.

Soils 120. Soil Management (3). Two lectures and one laboratory period a week. Winter. Prerequisites, Soils 1 and 2.

Detailed soil problems; practical solutions of these problems; soil management practices for maximum production maintenance.

For Graduates

Soils 201. Special Problems and Research (10-12). Laboratory and library work. Any quarter.

Original investigations of problems in soils, fertilizers, and nutritional deficiency.

Soils 202, 203, 204. Soil Science (3, 3, 3). Three lectures a week. Fall, Winter, Spring. Prerequisites, Soils 1 and 2 or their equivalent.

A review of the development and modern conception of soil science. Fall quarter, the physical nature of soils; winter quarter, the chemical nature of soils; spring quarter, the biological nature of soils.

Soils 212, 213, 214. Soil Technique (2, 2, 2). Two laboratory periods a week. Fall, Winter, Spring.

To accompany the Soil Science course; procedures for obtaining data and research methods for studying various soil problems.

ANIMAL HUSBANDRY

A. H. 2. Fundamentals of Animal Husbandry (4). Four laboratory periods a week. Fall or Spring.

A study of the types, breeds and market classes of beef cattle, sheep, hogs and horses; general problems in breeding, feeding and management. Practice in the selection, fitting and showing of livestock.

A. H. 31. Livestock Judging (2). Two laboratory periods a week. Spring. Prerequisite, A. H. 2.

Training in judging of beef cattle, sheep, hogs and draft horses. Occasional trips to farms where outstanding heards and flocks are maintained.

For Advanced Undergraduates

A. H. 52. Feeds and Feeding (4). Three lectures and one laboratory period a week. Winter or Spring. Prerequisites, Chem. 1, 3, 31 and 33.

Elements of nutrition, source, characteristics, and adaptability of the various feeds to the several classes of livestock; feeding standards; the calculation and compounding of rations.

A. H. 53. Principles of Breeding (4). Three lectures and one laboratory period a week. Fall or Spring. Prerequisite, Zool. 104.

The practical aspects of animal breeding, heredity, variation, selection, development, systems of breeding, and pedigree work are considered.

A. H. 55. Livestock Management (2). Two laboratory periods a week. Fall or Spring. Prerequisite, A. H. 2.

A course designed to familiarize students with the practical handling and management of livestock. Practice and training in the feeding, fitting and preparation of animals for show and work purposes.

A. H. 56. Meat and Meat Products (1). One laboratroy period a week. Winter. Prerequisite, A. H. 2.

Designed to give information on the processing and handling of the nation's meat supply. A study of the physical and structural qualities which affect the value of meat and meat products. Trips are made to packing houses and meat distributing centers.

A. H. 58. Advanced Livestock Judging (2). Two laboratory periods a week. Fall. Prerequisite, A. H. 31.

An advanced course in the selection and judging of purebred and commercial meat and work animals. The most adept students enrolled in this course are chosen to represent the University of Maryland in intercollegiate livestock judging contests.

A. H. 60. Beef Cattle Production (3). Fall. Prerequisite, A. H. 2.

Principles and practices underlying the economical production of beef cattle, including a study of breeds and their adaptability; breeding, feeding and management of purebred and commercial herds.

A. H. 64. Sheep Production (3). Winter. Prerequisite, A. H. 2.

Principles and practices underlying economical production of sheep, including a study of the breeds and their adaptability. Breeding, feeding and management of purebreed and commercial flocks.

A. H. 67. Pork Production (3). Winter. Prerequisite, A. H. 2.

Principles and practices underlying the economical production of hogs; breeding, feeding and management of purebred and commercial herds; breeds of swine and their adaptability.

A. H. 69. Draft Horse Production (3). Spring. Prerequisite, A. H. 2.

Principles and practices underlying economical production and use of draft horses, including a study of breeds and their adaptability.

For Advanced Undergraduates and Graduates

A. H. 112. Livestock Markets and Marketing (3). Fall. Prerequisite, A. H. 2.

History and development of livestock markets and systems of marketing; trends of livestock marketing; effect of changes in transportation and refrigeration facilities; the merchandising of meat products.

A. H. 114. Animal Nutrition (4). Winter. Prerequisites, Chem. 31 and 33, A. H. 52.

Processes of digestion, absorption, and metabolism of nutrients; nutritional balances; nature of nutritional requirements for growth, production, and reproduction.

A. H. 116. Light Horse Production (1). Fall.

A study of the light horse breeds with emphasis on the types and usefulness of each. A discussion of principles of selection and breeding of light horses is included in this course.

A. H. 117. Advanced Light Horse Production (1). Spring. Prerequisite, A. H. 116.

A continuation of A. H. 116. Included is a study of the organization of the light horse farm, proper methods of feeding and training, control of disease, treatment and care of injuries, sale of surplus stock.

For Graduates

A. H. 201. Special Problems in Animal Husbandry (2-4). Credit given in proportion to amount of work completed. Fall, Winter, Spring.

Problems which relate specifically to the character of work the student is pursuing will be assigned.

A. H. 202. Seminar (1). Fall, Winter, Spring.

Students are required to prepare papers based upon current scientific publications relating to animal husbandry or upon their research work for presentation before and discussion by the class.

A. H. 203. Research. Credit to be determined by the amount and character of work done. Fall, Winter, Spring.

With the approval of the head of the department, students will be required to pursue original research in some phase of animal husbandry, carry the same to completion, and report the results in the form of a thesis.

A. H. 204. Advanced Breeding (3). Spring. Prerequisites, Zool. 104, A. H. 53.

This course deals with the more technical phases of heredity and variation; selection and selection indices; breeding systems; specific inheritance in farm animals.

A. H. 206, 207, 208. Advanced Livestock Management (3, 3, 3). Two lectures and one laboratory period a week. Fall, Winter, Spring.

An intensive study of the newer developments in animal breeding, animal physiology, animal nutrition, endocrinology and other closely allied fields as they apply to the management and commercial production of livestock.

*ART

Art 1. Art in Ancient Civilization (2). Spring. Prehistoric period and Egypt to 1000 B. C. Survey of architectural remains, sculpture, painting. Attention is given to stages of culture as reflected in the archaelogical and artistic remains. Lectures fully illustrated by slides.

Art 2. Art in Ancient Civilization (2). Near East and Pre-Greek civilization of the eastern Mediterranean. Sumerian, Babylonian, Assyrian, Persian. The important archaelogical discoveries of Schliemann and Evans at Troy, the Greek mainland and in Crete are treated in detail. Conducted with the use of slides.

Art 3. Art in Classical Civilization (2). Summer. Monuments of Ancient Rome. A survey of the architectural remains and the decorative art of the Romans. The related Etruscan art development will also be treated, as well as the remains of Pompeii and important outlying sites of the Roman world. Illustrated with slides.

Art 4. Art in Classical Civilization (2). Greek Art: Architecture, sculpture, and vase-painting. The course covers the achaeic period, treats in detail the highly developed forms of the Golden Age, and shows the main trends in the late Greek or Hellenistic era. Illustrated by slides.

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* For other courses in Art, see Home Economics.

Art 11. Medieval Art (3). Summer. An introduction to the figurative arts, and to the development of style. European architecture, sculpture, and painting, from the third century A. D. to the Renaissance, studied by means of slides.

Art 13. Modern Art (3). Three lectures. Occasional gallery visits. European art from the Renaissance to the present. Illustrated lectures. Visits to the museums in Washington.

Art 23. Italian Painting (3). One lecture; two consecutive hours of museum study in the National Gallery of Art in Washington.

A study of the development of Italian art since the Middle Ages, with special emphasis on the painting of the Renaissance and the Baroque. Occasional comparison of painting with sculpture, and architecture. Lectures illustrated with slides.

For Advanced Undergraduates

Art 51. Principles of Art Appreciation (3). Three lectures. Occasional gallery visits. Spring.

A course designed to help those who seek the proper approach to figurative art, and the best enjoyment of it.

ASTRONOMY

For Advanced Undergraduates

Astr. 51, 52. Astronomy (4). Summer, Fall.

An elementary course in descriptive astronomy.

BACTERIOLOGY

Bact. 1. General Bacteriology (5). Summer, Fall, Winter, Spring. Three lectures; two laboratories.

A brief history of bacteriology. Application to water, milk, foods, and soils; bacteria causing disease and methods of control. Preparation of culture media; sterilization and disinfection; isolation, cultivation and identification of bacteria. Laboratory fee, $5.00.

Bact. 5. Bacteriological Technique (3). Fall, Spring. One lecture; two laboratories. Prerequisite, Bact. 1.

Isolation of bacteria in pure cultures and their identification. The preparation of special bacteriological media and reagents. Advanced staining techniques and the measurement of bacteria. Anaerobic cultivation of bacteria and the use of specialized bacteriological apparatus. Laboratory fee, $7.00.

For Advanced Undergraduates

Bact. 50. Household Bacteriology (5). Fall, Spring. Three lectures; two laboratories. Junior year. For Home Economics students only.

A brief history of bacteriology; bacterial morphology, classification, and metabolism; relation to water, milk, dairy products, and other foods; infection and immunity; personal, home and community hygiene. Laboratory fee, $5.00.

Bact. 60. Pathogenic Bacteriology (5). Winter, Summer. Three lectures; two laboratories. Sophomore standing. Prerequisites, Bact. 1 and 5.

Principles of infection and immunity; characteristics of pathogenic microorganisms. Isolation and identification of bacteria from pathological material; effects of pathogens and their products. Laboratory fee, $8.00.

Bact. 60A. Pathogenic Bacteriology (3). Winter, Summer. Prerequisites, Bact. 1 and 5.

This course consists of the lectures only of Bact. 60.

Bact. 65. Public Health (2). Fall. Prerequisite, Bact. 1.

A series of weekly lectures on public health and its administration, by the staff members of the Maryland State Department of Health, representing each of the bureaus and divisions. Offered in alternate years, alternating with Bact. 116.

Bact. 70. Elements of Sanitary Bacteriology (2). Fall. Senior year. For Engineering students only.

Bacteria and their application to water purification and sewage disposal.

Bact. 91, 92, 93, 94, Journal Club (1, 1, 1, 1). Fall, Winter, Spring, Summer. Prerequisites, 16 hours Bacteriology, including Bact. 1, 5 and 60.

Students report on current scientific literature or on individual problems in bacteriology, which will be discussed and criticized by members of the class and staff. No graduate credit for students majoring in bacteriology.

For Advanced Undergraduates and Graduates

Bact. 101. Milk Bacteriology (5). Summer, Winter. Three lectures; two laboratories. Prerequisites, Bact. 1 and 5.

The sources and development of bacteria in milk; milk fermentation; sanitary production; care and sterilization of equipment; care and preservation of milk and cream; pasteurization; public health requirements. Standard methods of milk analysis; the bacteriological control of milk supplies and plant sanitation; occasional inspection trips. Laboratory fee, $7.00.

Bact. 102. Dairy Products Bacteriology (4). Spring, Fall. Two lectures; two laboratories. Prerequisites, Bact. 1 and 5; Bact. 101 is desirable.

Relation of bacteria, yeasts, and molds to cream, concentrated milks, fermented milks, starters, butter, ice cream, cheese, and other dairy products; sources of contamination. Microbiological analysis and control; occasional inspection trips. Laboratory fee, $7.00.

Bact. 111. Food Bacteriology (5). Fall, Spring. Three lectures; two laboratories. Prerequisites, Bact. 1 and 5.

Bacteria, yeasts and molds associated with fruits and vegetables, meats, seafoods, and poultry products. Methods of examination, and standards of quality. Microorganisms causing food spoilage and methods for their control. Laboratory fee, $7.00.

Bact. 112. Sanitary Bacteriology (4). Fall, Spring. Two lectures; two laboratories. Prerequisites, Bact. 1 and 5.

Bacteriological and public health aspects of water supplies and water purification; swimming pool sanitation; sewage disposal; disposal of garbage and refuse; municipal sanitation. Standard methods for examination of water and sewage and for other sanitary analyses; differentiation and significance of the coli-aerogenes group. Laboratory fee, $7.00.

Bact. 115. Serology (5). Fall, Spring. Three lectures; two laboratories. Prerequisite, Bact. 60.

Infection and resistance; agglutination, precipitation, complement fixation reactions, principles of immunity and hypersensitiveness. Preparation of necessary reagents; general immunological techniques; factors affecting reactions; applications in the identifications of bacteria and diagnosis of disease. Laboratory fee, $8.00.

Bact. 116. Epidemiology (2). Winter. Prerequisites, Bact. 1 and credit or registration in Bact. 60 or 60A.

Epidemiology of important infectious diseases, including history, characteristic features, methods of transmission, immunization and control; periodicity; principles of investigation; public health applications.

Bact. 118. Systematic Bacteriology (4). Two lectures; two laboratories. Prerequisite, 10 hours of Bacteriology.

History of bacterial classification; genetic relationships; international codes of nomenclature; bacterial variation as it affects classification. Laboratory fee, $7.00.

Bact. 125. Clinical Methods (2). Fall, Spring. Two laboratories. Prerequisites, Bact. 5 and 60 and consent of instructor.

Methods for microscopic examination of blood; bacteriological examination of sputum, feces and spinal fluids; microscopic and routine chemical methods for examination of urine. Laboratory fee, $5.00.

Bact. 181, 182, 183, 184. Bacteriological Problems (1-3). Fall, Winter, Spring, Summer. Three laboratories. Prerequisites, Bact. 1, 5 and any other courses needed for the projects. Registration limited.

This course is arranged to provide qualified students an opportunity to continue specific bacteriological problems under the supervision of a member of the department. Results are presented in the form of a thesis. No graduate credit for students majoring in Bacteriology. Laboratory fee, $7.00.

For Graduates

Bact. 205. Research Methods (2). (Not offered 1944-45.) Prerequisites, Bacteriology, 6 hours.

Methods of research; library practice; current literature; preparation of papers; research institutions, laboratory design, equipment and supplies; academic practices; professional aids.

Bact. 211. Bacterial Metabolism (3). Winter. Prerequisites, Bact. 1, Chem. 31, 32, 33, 34, Chem. 81 and 82 or equivalent.

Growth, nutrition, physiological inter-relationships; bacterial enzymes; respiration; fermentations; chemical activities of microorganisms; industrial fermentations.

Bact. 212. Advanced Food Bacteriology (4). Spring. Two lectures; two laboratories. Prerequisites, Bact. 111 or equivalent.

Microorganisms used in food manufacture; bacterial, yeast, and mold fermentations. Food infections and food poisonings; the role of flies, rodents, human carriers, etc., in the contamination of food products. Laboratory fee, $7.00.

Bact. 216. Advanced Serology (3). Winter. Prerequisite, Bact. 115 or equivalent.

Immunology of individual infectious diseases, including virus and rickettsial diseases. Discussion of recent literature on serological problems. Offered for graduate students interested in doing research in immunology.

Bact. 221. Research (1-9). Fall, Winter, Spring, Summer. Credit will be determined by the amount and character of the work accomplished. Prerequisites, Bact. 1, 5, and any other courses needed for the particular project.

Properly qualified students will be admitted upon approval of the department head and, with his approval, the student may select the subject for research. The investigation is outlined in consultation with and pursued under the supervision of a faculty member of the department. Laboratory fee, $3.00 per credit hour.

Bact. 231. Seminar (2). Fall, Winter, Spring, Summer. Prerequisite, Bacteriology 10 hours.

Discussions and reports prepared by the students on current research, selected subjects, and recent advances in bacteriology.

FOOD TECHNOLOGY

F. Tech. 1. Introduction to Food Technology (1). (Not offered 1944-45). Discussions of the general phases of study comprising food technology.

For Advanced Undergraduates and Graduates

F. Tech. 100. Food Microscopy (3). Fall, Spring. Two laboratories.

Microscopical analysis of foods following the methods used in the Federal Government and other agencies. Studies of the structural composition of agricultural and manufactured foods. Use of microscopic tests in factory control and analyses. Laboratory fee, $7.00.

F. Tech. 108. Preservation of Poultry Products (3). Spring. One lecture; two labroatories. Prerequisites, Bact. 1 and 5.

Studies of the microbiology of poultry, alive and during storage; microbiology of shell eggs, fresh and during storage; microbiology of frozen and dried eggs. This is taught in cooperation with the Department of Poultry Husbandry. Laboratory fee, $7.00.

F. Tech. 110. Regulatory Control (1). Summer. One lecture and demonstration.

Methods followed in the control of foods in interstate and intrastate commerce. Consideration laboratory basis of standards of control.

F. Tech. 120. Food Sanitation (3). Fall. Lecture, laboratory and field work. Prerequisites, Bact. 1, 111 or equivalent. Enrollment limited, with preference given to students majoring in this field.

Principles of sanitation in food manufacture and distribution; methods of control of sanitation in commercial canning, pickling, bottling, preserving, refrigeration, dehydration, etc. Laboratory fee, $7.00.

F. Tech. 130. Technology Conference (1). Winter, Summer. One lecture.

Reports and discussions of current developments in the field of food technology.

BOTANY

Bot. 1. General Botany (5). Summer, Fall, Spring. Three lectures and two laboratory periods a week.

General introduction to botany, touching briefly on all phases of the subject. Laboratory fee, $5.00.

Bot. 2. General Botany (5). Winter. Three lectures and two laboratory periods a week. Prerequisite, Bot. 1.

A continuation of Bot. 1. A brief evolutionary study of algae, fungi, liverworts, mosses, ferns and their relatives, and the seed plants. Laboratory fee, $3.00.

Bot. 20. Diseases of Plants (5). Fall, Spring. Three lectures and two laboratory periods a week. Prerequisite, Bot. 1, or equivalent.

An introductory study in the field, in the laboratory, and in the literature, of symptoms, causal agents, and control measures of plant diseases. Laboratroy fee, $3.00.

For Advanced Undergraduates

Bot. 50. Plant Taxonomy (3). Spring. One lecture and two laboratory periods a week. Prerequisite, Bot. 2.

Classification of the vegetable kingdom, and the principles on which classification is based.

Bot. 51. Plant Microtechnique (3). Winter. One lecture and two laboratory periods a week. Prerequisite, Bot. 1.

Principles and methods involved in the preparation of permanent microscope slides of plant materials. Laboratory fee, $3.00.

Bot. 52. Seminar (1-3). Fall, Winter, Spring.

Discussion of current literature, problems, and progress in botany, plant physiology and plant pathology. For undergraduate majors and minors.

Bot. 70. Research Methods in Plant Pathology (2). Fall, Winter, Spring. Two laboratory periods a week. Prerequisite, Bot. 20, or equivalent.

For students who are interested in obtaining advanced training in basic technics of plant pathology. Laboratory fee, $3.00 per quarter.

A. General Botany and Morphology

For Advanced Undergraduates and Graduates

Bot. 101. Plant Anatomy (3). Fall. One lecture and two laboratory periods a week. Prerequisite, Bot. 51.

The origin and development of the organs and tissue systems in the vascular plants. Laboratory fee, $3.00.

Bot. 104. Advanced Plant Taxonomy (3). Summer. One lecture and two laboratory periods a week. Prerequisite, Bot. 50.

Principles and criteria of plant taxonomy. Reviews and criticisms of current taxonomic literature.

Bot. 105. Structure of Economic Plants (2). Winter. Two laboratory periods a week. Prerequisite, Bot. 101.

A detailed microscopic study of the chief fruit and vegetable crops. Laboratory fee, $3.00.

Bot. 106. History and Philosophy of Botany (1). (Not offered 1944-45.)

Discussion of the development of ideas and knowledge about plants, also a survey of contemporary work in botanical science.

For Graduates

Bot. 201. Cytology (5). Spring. Three lectures and two laboratory periods a week. Prerequisites, Bot. 51, Zool. 104, or equivalent.

A detailed study of the chromosomes in mitosis and meiosis, and the relation of these to current theories of heredity and evolution. Laboratory fee, $3.00.

Bot. 202. Plant Morphology (2). (Not offered 1944-45.) Two laboratory periods a week. Prerequisites, Bot. 50, 101, or equivalent.

A comparative study of the morphology of the flowering plants, with special reference to their phylogeny and development. Laboratory fee, $3.00.

Bot. 203. Seminar (1). Fall, Winter, Spring. Prerequisite, permission of instructor.

The study of special topics in plant morphology, anatomy, and cytology.

Bot. 204. Research. Credit according to work done.

B. Plant Pathology

For Advanced Undergraduates and Graduates

Plt. Path. 101. Diseases of Special Crops (3). Fall. Prerequisite, Bot. 20, or equivalent.

Intended for students who wish to obtain more detailed information on diseases of special crops than is available in Bot. 20.

Plt. Path. 108. Mycology (5). Spring. Three lectures and two laboratory periods a week. Prerequisite, Bot. 2.

An introductory study of the morphology, life histories, classifications, and economics of the fungi. Laboratory fee, $3.00.

For Graduates

Plt. Path. 201. Virus Diseases (2-3). Spring. Two lectures, or two lectures and one laboratory period a week. Prerequisite, Plt. Phys. 101.

Consideration of the physical, chemical, and physiological aspects of plant viruses and plant virus diseases. Laboratory fee, $3.00.

Plt. Path. 205. Research. Credit according to work done.

Plt. Path. 206. Plant Disease Control (3). Winter. Prequisite, Bot. 20, or equivalent.

An advanced course dealing with the theory and practices of plant disease control.

Plt. Path. 209. Seminar (1). Fall, Winter, Spring.

Attention is given to the advanced technical literature of phytopathology.

C. Plant Physiology

For Advanced Undergraduates and Graduates

Plt. Phys. 101. Plant Physiology (5). Fall. Three lectures and two laboratory periods a week. Prerequisite, Bot. 1.

A summary view of the general physiological activities of plants. Laboratory fee, $3.00.

Plt. Phys. 102. Plant Ecology (3). Summer. Two lectures and one laboratory period a week. Prerequisites, Bot. 1 and Bot. 50.

The study of plants in relation to their environments. Plant formations and successions in various parts of the country are briefly treated.

For Graduates

Plt. Phys. 201. Plant Biochemistry (4). Winter. Prerequisite, an elementary knowledge of plant physiology and organic chemistry.

This course deals with the important substances in the composition of the plant body.

Plt. Phys. 202A. Plant Biophysics (2). (Not offered in 1944-45.) Prerequisites, Bot. 1, Plt. Phys. 101, or equivalent.

An advanced course dealing with the operation of physical forces in plant life processes.

Plt. Phys. 202B. Biophysical Methods (2). (Not offered in 1944-45.)

Plt. Phys. 203. Plant Metabolism (3). Spring. Prerequisite, an elementary knowledge of plant physiology and organic chemistry.

An advanced course in plant physiology, in which the chemical aspects are especially emphasized.

Plt. Phys. 204. Growth and Development (2). Fall. Prerequisite, 18 hours of plant science.

Plt. Phys. 205. Seminar (1). (Not offered in 1944-45.)

Students are required to prepare reports on papers in the current literature. These are discussed in connection with the recent advances in the subject.

Plt. Phys. 206. Research. Credit according to work done.

Students must be specially qualified by previous work to pursue with profit the research to be undertaken.

BUSINESS ADMINISTRATION

B. A. 10, 11, 12. Organization and Control I, II, III (2, 2, 2). Fall, Spring, Summer. Prerequisite, sophomore standing. Required for B. P. A. students.

A survey course treating the internal and functional organization of a business enterprise. B. A. 12 includes industrial management, organization and control.

B. A. 20, 21, 22. Principles of Accounting I, II, III (12). Fall, Spring, Summer. Required of all B. P. A. students.

The fundamental principles and problems involved in the accounting system; capital and surplus; bonds; and manufacturing and cost accounting.

For Advanced Undergraduates and Graduates

B. A. 120. Intermediate Accounting (5). Fall, Summer. Prerequisite, B. A. 22.

A comprehensive study of the theory and problems of valuation of assets, corporation accounts and statements, consignment and installments, and the interpretation of accounting statements.

B. A. 121. Cost Accounting (5). Winter. Prerequisite, B. A. 22.

A study of the fundamental principles of cost accounting including job order, process, and standard cost accounting.

B. A. 122. Auditing Theory and Practice (5). Spring. Prerequisite, B. A. 120.

A study of the principles and problems of auditing and the application of accounting principles, to the preparation of audit working papers and reports.

B. A. 123. Income Tax Accounting (5). Winter. Prerequisite, B. A. 120.

A study of the important provisions of the Federal Tax Law, using illustrative examples, selected questions and problems, the preparation of individual, partnership, estate and trusts, and corporation returns.

B. A. 124. Advanced Accounting (5). Fall, Winter. Prerequisite, B. A. 120.

Advanced accounting theory applied to specialized problems in partnerships, estates and trusts, banks, mergers and consolidations, receivership and liquidations.

B. A. 125. C. P. A. Problems (5). Spring. Prerequisite, consent of the instructor.

Designed to coordinate all previous work in accounting with special emphasis placed on the solution of problems typical of those presented in C. P. A. examinations.

B. A. 129. Apprenticeship in Accounting (0). Prerequisites, minimum of 27 quarter hours in accounting and the consent of the accounting staff.

A period of apprenticeship is provided with nationally known firms from about January 25 to February 15.

B. A. 130. Elements of Statistics (4). Fall, Spring, Summer. Prerequisite junior standing. Required for graduation.

The fundamentals of statistics and the necessary preparation for the further study of statistics and its applications.

B. A. 131. Business Statistics (4). Winter, Summer. Prerequisite, B. A. 130.

This course is devoted to the collection of data; hand and machine tabulation; graphic charting; statistical distribution; averages; index numbers; sampling; elementary tests of reliability; and simple correlations.

B. A. 132, 133. Advanced Business Statistics (4, 4). Fall, Spring. Prerequisite, B. A. 131.

The use of statistical methods and techniques in economic studies and in the fields of business and public administration. During the latter part of the course advanced methods of correlation and other selected techniques

are applied to statistical analyses of economic fluctuations, price changes, cost analysis, and market demand indexes and functions.

B. A. 140. Financial Management (4). Winter, Summer. Prequisite, Econ. 140. Required for graduation.

This course deals with the problems to be faced by management in the organization and financing of corporate enterprise; the various types of securities and their use in raising capital and apportioning income, risk, and control.

B. A. 141. Investment Management (4). Spring. Prerequiste, B. A. 140.

A study of the problems and methods involved in the analysis, selection, and management of investments.

B. A. 142. Banking Policies and Practices (4). Spring. Prerequisite, Econ. 140.

A study of the organization and management of the commercial Bank, the operation of its departments, and the methods used in the extension of commercial credit.

B. A. 143. Credit Management (3). Spring. Prerequisite, B. A. 140.

A study of the nature of credit and the principles applicable to its extension for industrial, commercial, and consumer purposes; the organization and management of a credit department, and the collection of accounts.

B. A. 144. Life, Group, and Social Insurance (3). Fall, Summer. Prequisite, Econ. 33 or 37.

A study of the types of life insurance and the basic principles underlying all life insurance relating to reserves, investments, premiums, and regulations.

B. A. 145. Property, Casualty, and Liability Insurance (3). Winter. Prerequisite, Econ. 33 or 37.

A survey of the insurance coverages written to protect business and personal risks arising from such hazards as fire, windstorm, ocean and inland transportation, fidelity, and liability.

B. A. 146. Real Estate Financing and Appraisals (3). Spring. Prerequisites, Econ. 33 or 37, B. A. 156.

A study of the methods used in financing real estate of all types—residential, industrial, and commercial. The fundamental problem of valuation will be studied from the viewpoint of the appraiser. Appraisal technique will be applied in the field.

B. A. 147. Business Cycle Theory (4). Spring. Prerequisite, Econ. 140 and senior standing. B. A. 131 recommended.

Definition and measurement of business cycles, theories of the business cycle and the dynamic interrelations of economic processes; the problem of controlling economic instability.

B. A. 150. Marketing Management (4). Winter, Summer. Prerequisite, Econ. 150. Required for graduation.

A study of the work of the marketing division in a going business organization. The problems of developing organizations and procedures for the control of marketing activities are surveyed. The emphasis throughout the course is placed on the determination of policies, methods, and practices for the effective marketing of merchandise.

B. A. 151. Advertising Programs and Campaigns (3). Fall. Prerequisite, B. A. 150.

Deals with the fundamental principles of advertising. Covers the organization and carrying through of advertising campaigns and programs, the selection of ideas, types of appeal and different media, and the methods of judging the effectiveness of advertising.

B. A. 152. Advertising Copy Writing and Layout (3). Winter. Prerequisite, B. A. 151.

Studies the practices and techniques of copy writing and layout that are useful for those who expect to prepare advertising or to direct the actual production of advertising. Covers the most essential principles of various kinds of copy writing. Surveys the process of production from the original idea to the published advertisement, and analyzes methods of testing its effectiveness.

B. A. 153. Purchasing Management (3). Spring. Prerequisite, B. A. 150.

Studies the problems of determining the proper sources, quality and quantity of supplies, and of methods of testing quality; price policies, price forecasting, forward buying, bidding and negotiation; budgets and standards of achievement. Particular attention is given to government purchasing, the sources and supplies of war materials, and methods and procedures used in their procurement.

B. A. 154. Retail Store Management (4). Spring. Prerequisite, Econ. 150.

Retail store organization, location, layout and store policy; pricing policies, price lines, brands, credit policies; records as a guide to buying; purchasing methods; supervision of selling; training and supervision of retail sales force; and administrative problems.

B. A. 156. Real Estate Principles and Practice (3). Fall. Prerequisite, Econ. 33 or 37.

The principles and practices involved in the acquisition and utilization of land and the improvements thereon.

B. A. 157. Foreign Trade Procedure (4). (Not offered 1944-45.) Prerequisite, B. A. 150.

Functions of various exporting agencies; documents and procedures used in exporting and importing transactions. Methods of procuring goods in foreign countries; financing of import shipments; clearing through the customs districts; and distribution of goods in the United States.

B. A. 160. Personal Management (4). Winter, Summer. Prerequisite, Econ. 160. Required for graduation.

This course deals essentially with functional and administrative relationships between management and the labor force. It comprises a survey of the scientific selection of employees, "in-service" training, job analysis, classification and rating, motivation of employees, employee adjustment; wage incentives, employee discipline and techniques of supervision, elimination of employment hazards, etc.

B. A. 162. Contemporary Trends in Labor Relations (3). Fall. Prerequisite, B. A. 160.

A study of contemporary trends in society's effort through legislation, mediation, and other methods to bring about a harmonious relationship between labor and management. State and Federal laws, and court decisions affecting labor relations are studied.

B. A. 163. Industrial Relations (3). Spring. Prerequisite, Econ. 160.

A study of the development and methods of organized groups in industry with reference to the settlement of labor disputes. An economic and legal analysis of labor union and employer association activities, arbitration, mediation, and conciliation; collective bargaining, trade agreements, strikes, boycotts, lockouts, company unions, employee representation, and injunctions.

B. A. 165. Office Management (3). Fall, Spring. Prerequisite, B. A. 10 or junior standing.

Considers the application of the principles of scientific management in their application to office work.

B. A. 170. Industrial Management (4). Spring. Prerequisites, B. A. 11 and 12 and B. A. 160.

Factory organization and management including plant layout and location, product design, personnel relations, wage setting, job analysis, production planning, etc.

B. A. 171. Transportation II (4). (Not offered 1944-45.) Prerequisite, P. A. 170.

Designed for students interested in the practical aspects of transportation; for example, shippers, traffic managers and regulators.

B. A. 172. Transportation III (4). (Not offered 1944-45.) Prerequisite, B. A. 171.

This course treats the details of classification and rate construction for the inland transportation services.

B. A. 173. Transportation IV (4), Overseas Shipping. (Not offered 1944-45.) Prerequisite, P. A. 170, 171.

B. A. 180, 181, 182. Business Law I, II, III (9). Fall, Winter, Spring. Prerequisite, senior standing. Required of all graduates in B. P. A.

Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property, and sales.

B. A. 183. Law for Accountants (3). (Not offered 1944-45.) Prerequisite, B. A. 181.

Principles of law relating to the accounting profession, special emphasis being placed upon sections of the Maryland Annotated Code dealing with accountants, corporations, estates, and trusts.

B. A. 186. Real Estate Law and Conveyancing (3). (Not offered 1944-45.) Prerequisite, B. A. 156 and 181.

This course attempts to cover in a general way those phases of real property law which are of interest not only to real estate dealers but to all business men.

For Graduates

B. A. 220. Managerial Accounting (4). (Not offered 1944-45.)

B. A. 228. Research in Accounting. (Arranged.)

B. A. 229. Studies of Special Problems in the Fields of Control and Organization. (Arranged.)

B. A. 240. Seminar in Financial Management (1-3). Prerequisites, Ec. 140, B. A. 22, B. A. 140.

B. A. 250. Problems in Sales Management (3). Spring.

B. A. 251. Problems in Advertising (3).

B. A. 252. Problems in Retail Store Management (3). Spring, Summer.

B. A. 257. Seminar in Marketing Management. (Arranged.)

B. A. 258. Research in Marketing. (Arranged.)

B. A. 262. Seminar in Contemporary Trends in Labor Relations. Fall, Summer.

B. A. 266. Research in Personnel Management. (Arranged.) Winter.

B. A. 267. Research in Industrial Relations. (Arranged.)

B. A. 269. Studies in Special Problems in Employer-Employee Relationships. (Arranged.)

B. A. 299. Thesis. (Arranged.)

CHEMISTRY

A. Inorganic Chemistry

Chem. 1, 3. General Chemistry (10). Fall, Winter, Spring, Summer. Three lectures and two three-hour laboratory periods per week.

Laboratory fee, $7.00 per quarter.

Chem. 5. General Chemistry, Introductory Qualitative Analysis (3). Fall, Spring. Prerequisite, Chem. 1, 3. One lecture and two three-hour laboratory periods per week.

This course is necessary, in addition to Chem. 1, 3, to satisfy the premedical requirements in General Chemistry. Laboratory fee, $7.00.

Chem. 7, 9. Introductory Chemistry (6). Winter, Spring. Prerequisite, Math. 0. Three lectures and one section meeting per week.

A course designed for students desiring only a superficial knowledge of chemistry; this course is not accepted as a prerequisite for more advanced courses. Demonstration fee, $3.00 per quarter.

Chem. 101. Advanced Inorganic Chemistry (3). Spring. Three lectures per week. Prerequisites, Chem. 23 and 37, 38.

An advanced study of selected topics in inorganic chemistry.

Chem. 201, 203. The Chemistry of Rarer Elements (6). Fall, Winter. Three lectures per week.

A study of elements not usually considered in an elementary course.

Chem. 202, 204. Advanced Inorganic Laboratory (2, 2). Fall, Winter. Prerequisite, consent of instructor. Two three-hour laboratory periods per week.

A laboratory study of the compounds of elements considered in Chem. 201. Laboratory fee, $7.00 per quarter.

Chem. 206. An Introduction to Spectrographic Analysis (2). Winter, Spring. Prerequisite, consent of instructor. Two three-hour laboratory periods per week.

A study of the fundamentals of spectrographic analysis. Laboratory fee, $7.00.

B. Analytical Chemistry

Chem. 15, 17. Qualitative Analysis (8). Fall, Spring, Winter, Summer. Three lectures and two laboratory periods (Chem. 15), and one lecture and two laboratory periods (Chem. 17). Prerequisites, Chem. 1, 3.

A study of the separation of the common inorganic cations and anions; the physical chemistry of the processes is stressed. Laboratory fee, $7.00 per quarter.

Chem. 19. Quantative Analysis (5). Fall, Spring. Prerequisite, Chem. 1, 3. Two lectures and three three-hour laboratory periods per week.

A brief survey of quantitative analysis with particular reference to volumetric methods. Laboratory fee, $7.00.

Chem. 21, 23. Quantitative Analysis (10). Fall, Spring Winter, Summer. Prerequisite, Chem. 15, 17. Two lectures and three three-hour laboratory periods per week.

This course includes a study of the principal operations of gravimetric and volumetric analysis. Required of all students majoring in chemistry. Laboratory fee, $7.00 per quarter.

Chem. 121, 123. Chemical Microscopy (3, 3). Fall, Winter. One lecture, two three-hour laboratory periods per week. Chem. 121 is a prerequisite for Chem. 123.

A course designed to acquaint the student with the fundamentals of microscopic analysis. Chem. 123 includes a study of textile fibers. Laboratory fee, $7.00 per quarter.

Chem. 221, 223. Chemical Microscopy (3, 3). Fall, Winter. One lecture, two three-hour laboratory periods per week.

An advanced study of the principles of microscopic analysis; Chem. 223 is devoted to a study of the optical properties of crystals. Laboratory fee, $7.00 per quarter.

Chem. 226, 228. Problems in Quantitative Analysis (3, 3). Fall, Winter, Spring, Summer. Prerequisite, consent of instructor. Three three-hour laboratory periods per week.

A study of some special problem chosen to meet the needs of the individual. Laboratory fee, $7.00 per quarter.

C. Organic Chemistry

Chem. 31, 33. Elements of Organic Chemistry (6). Fall, Winter. Prerequisite, Chem. 1, 3. Three lectures per week.

Organic chemistry for students in agriculture and home economics.

Chem. 32, 34. Elements of Organic Laboratory (2). Fall, Winter. One laboratory period per week.

A course designed to accompany Chem. 31, 33. Laboratory fee, $8.00 per quarter.

Chem. 35, 37. Elementary Organic Chemistry (6). Fall, Spring, Winter, Summer. Three lectures per week. Prerquisite, Chem. 1, 3.

A course for chemists, chemical engineers, and premedical students.

Chem. 36, 38. Elementary Organic Laboratory (4). Fall, Spring, Winter, Summer. Two three-hour laboratory periods per week.. Prerequisite, Chem. 35, 37 or concurrent registration therein.

A course to accompany Chem. 35, 37. Laboratory fee, $8.00 per quarter.

Chem. 141, 143. Advanced Organic Chemistry (6). Fall, Spring. Three lectures per week. Prerequisites, Chem. 37, 38.

An advanced study of the compounds of carbon.

Chem. 142, 144. Advanced Organic Laboratory (3, 3). Fall, Winter, Spring, Summer. Three three-hour laboratory periods per week. Prerequisites, Chem. 19 or 23 and Chem. 37, 38.

Syntheses and the quantitative determination of carbon and hydrogen, halogen, and nitrogen are studied. Laboratory fee, $8.00 per quarter.

Chem. 146, 148. The Identification of Organic Compounds (3, 3). Fall, Winter, Spring, Summer. One lecture, and one or two laboratory periods per week. Prerequisite, Chem. 141, 143, or concurrent registration therein.

The systematic identification of organic compounds. Laboratory fee, $8.00 per quarter.

(One course from the group 241-251 is offered each quarter excepting the Summer quarter.)

Chem. 241. Stereochemistry (2). Two lectures per week.

Chem. 243. The Polyene Pigments and Certain Vitamins (2). Two lectures per week.

Chem. 245. The Sterols and Sex Hormones (2). Two lectures per week.

Chem. 247. The Chemistry of Nitrogen Compounds (2). Two lectures per week.

Chem. 249. Physical Aspects of Organic Chemistry (2). Two lectures per week.

Chem. 251. The Heterocyclics (2). Two lectures per week.

Chem. 254. Advanced Organic Preparations (3 to 5). Fall, Winter, Spring, Summer. Three to five three-hour laboratory periods per week. Laboratory fee, $8.00 per quarter.

Chem. 256. Organic Microanalysis (5). Fall, Winter, Spring. Five three-hour laboratory periods per week. Prerequisite, consent of instructor. Laboratory fee, $8.00.

Chem. 258. The Identification of Organic Compounds, an Advanced Course (3 to 5). Fall, Winter, Spring, Summer. Three to five three-hour laboratory periods per week. Laboratory fee, $8.00 per quarter.

Chem. 260. Advanced Organic Laboratory (2 to 3). Fall, Winter, Spring, Summer. Two or three three-hour laboratory periods per week.

An orientation course designed to demonstrate a new student's fitness to begin research in organic chemistry. Laboratory fee, $8.00.

D. Biochemistry

Chem. 41. The Chemistry of Textiles (4). Summer. Three lectures and one laboratory period per week. Prerequisites, Chem. 31, 32, 33, 34.

A study of the principal textile fibres. Laboratory fee, $7.00.

Chem. 81. General Biochemistry (3). Fall, Spring. Three lectures per week. Prerequisites, Chem. 31, 32, 33, 34.

This course is designed primarily for students of home economics. Chem. 82 *must* be taken concurrently.

Chem. 82. General Biochemistry Laboratory (2). Fall, Spring. Two three-hour laboratory periods per week.

A laboratory course which *must* be taken concurrently with Chem. 81. Laboratory fee, $8.00.

Chem. 161. Biochemistry (3). Winter. Three lectures per week. Prerequisites, Chem. 37, 38, or consent of instructor.

A comprehensive study of certain aspects of biochemistry.

Chem. 162, 164. Biochemistry Laboratory (2, 2). Winter, Spring. Two three-hour laboratory periods per week.

A laboratory course which may accompany Chem. 161. Laboratory fee, $8.00 per quarter.

Chem. 166, 168. Food Analysis (3, 3). Fall, Spring, Winter, Summer. One lecture and two three-hour laboratory periods per week. Prerequisites, Chem. 31, 32, 33, 34, and Chem. 19. Laboratory fee, $8.00 per quarter.

Chem. 261, 263. Advanced Biochemistry (6). Fall, Winter. Three lectures per week. Prerequisites, Chem. 141, 143, or its equivalent.

A comprehensive study of carbohydrates, lipids, proteins, enzymes, nutrition, metabolism and excretion.

Chem. 262, 264. Advanced Biochemistry Laboratory (4). Fall, Winter. Two three-hour laboratory periods per week. Prerequisites, Chem. 36, 38.

An elective laboratory course designed to accompany Chem. 261, 263. Laboratory fee, $8.00 per quarter.

Chem. 266. Biological Analysis (2). Fall, Winter. Two three-hour laboratory periods per week. Prerequisite, Chem. 19. Laboratory fee, $8.00.

Chem. 268. Special Problems in Biochemistry (3 to 6). Fall, Winter. Two to six three-hour laboratory periods per week. Prerequisite, consent of instructor. Laboratory fee, $8.00.

E. Physical Chemistry

Chem. 181, 183. Elements of Physical Chemistry (6). Fall, Winter. Three lectures per week. Prerequisites, Chem. 1, 3; Phys. 1, 2; Math. 10, 11.

A course intended primarily for premedical students and students in the biological sciences. This course *must* be accompanied by Chem. 182, 184.

Chem. 182, 184. Elements of Physical Chemistry Laboratory (2). Fall, Winter. One three-hour laboratory per week. May be taken *only* when accompanied by Chem. 181, 183.

The course includes quantitative experiments illustrating the principles studied in Chem. 181, 183. Laboratory fee, $7.00 per quarter.

Chem. 187, 189. Physical Chemistry (10). Fall, Spring, Winter, Summer. Five lectures per week. Prerequisites, Chem. 21, 23; Phys. 3, 4, 5; Math. 20, 21, 22.

A course primarily for chemists and chemical engineers.

Chem. 188, 190. Physical Chemistry Laboratory (6). Fall, Spring, Winter, Summer. Three three-hour laboratory periods per week.

A laboratory course for students taking Chem. 187, 189. Laboratory fee, $7.00 per quarter.

The common prerequisites for the following courses are Chem. 187, 189 and Chem. 188, 190, or equivalent.

Chem. 281, 283. Theory of Solutions (3, 3). Fall. Three lectures per week.

Chem. 285, 287. Colloid Chemistry (6). Fall, Winter. Three lectures per week.

A discussion of the effect of surface on chemical reactions. (Not given 1944-45.)

Chem. 286, 288. Colloid Chemistry Laboratory (2, 2). Fall, Winter. Two three-hour laboratory periods per week. This course must accompany or be preceded by Chem. 285, 287. Laboratory fee, $7.00 per quarter. (Not given 1944-45.)

Chem. 289. Quantum and Statistical Mechanics (3). Fall. Three lectures per week. (Not given 1944-45.)

Chem. 291. Valence Theory (3). Winter. Three lectures per week.

A course to follow Chem. 289. (Not given 1944-45.)

Chem. 295. Phase Rule (3). Winter. Three lectures per week.

Chem. 297. Catalysis (3). Spring. Three lectures per week.

Chem. 299, 301. Reaction Kinetics (4). Fall, Winter. Two lectures per week.

Chem. 303, 305. Electrochemistry (6). Fall, Winter. Three lectures per week.

Chem. 304, 306. Electrochemistry Laboratory (3, 3). Three three-hour laboratory periods per week. Laboratory fee, $7.00 per quarter.

Chem. 307, 309. Chemical Thermodynamics (6). Winter, Spring. Three lectures per week. (Not given 1944-45.)

Chem. 351. Seminar (1). Fall, Winter, Spring.

Chem. 360. Research. Fall, Winter, Spring, Summer.

CHEMICAL ENGINEERING

Chem. E. 11, 13. Water, Fuels and Lubricants (8). Two lectures and two laboratory periods a week. Summer and Fall quarters, 1944; Spring and Summer quarters, 1945. Prerequisites, registration in Organic Chemistry lectures; General Physics; or permission of instructor. (This is a course extending through two quarters, and completion of both quarters is required.)

Laboratory work consists of exercises in the usual control methods for testing water, fuels, and lubricants, and some related engineering materials.

Chem. E. 103, 105, 107. Elements of Chemical Engineering (9). Summer, Fall, Winter. Three hours a week. Chem. E. 103 offered in Spring, 1945. Prerequisites, General Chemistry; Chem. 1A, 3A; General Physics; Physics 3A, 4A, 5A.

Theoretical discussion of underlying philosophy and methods in chemical engineering and elementary treatment of important operations involving fluid flow, heat flow, evaporation, humidity and air conditioning, distillation, and absorption. Illustrated by problems and consideration of typical processes.

Chem. E. 109, 111, 113. Chemical Engineering Seminar (3). Summer, Fall, Winter. One hour a week. Chem. E. 109 offered in Spring, 1945.

Students prepare reports on current problems in chemical engineering and participate in the discussion of such reports.

Chem. E. 115, 117, 119. Advanced Unit Operations (15). Summer, Fall, Winter. Two lectures and one all-day laboratory period a week. Chem. E. 115 offered in Spring, 1945. Prerequisites, Chem. E. 103, 105, 107; Chem. 187, 188, 189, 190. (This is a course extending through three quarters, and completion of all quarters is required.)

Advanced theoretical treatment of basic chemical engineering operations. Study and laboratory operation of small scale semi-commercial type equipment. A comprehensive problem involving theory and laboratory operations is included to illustrate the development of a plant design requiring the utilization of a number of fundamental topics.

Chem. E. 121, 123, 125. Minor Problems (18). Six hours a week. Prerequisites, Chem. E. 115, 117, 119, or simultaneous registration therein. (Not offered 1944-45.)

Original work on a special problem assigned each student, including preparation of a complete report covering the study.

Chem. E. 127, 129, 131. Fuels and Their Utilization (6). Summer, Fall, Winter. Two hours a week. Chem. E. 127 offered in Spring, 1945. Prerequisites, Chem. E. 103, 105, 107, or permission of Department of Chemical Engineering.

A study of the sources of solid, liquid, and gaseous fuels, their economic conversion, distribution, and utilization. Problems.

Chem. E. 133, 135, 137. Chemical Technology (6). Summer, Fall, Winter. Two hours a week. Chem. E. 133 offered in Spring, 1945. Prerequisites, Chem. E. 103, 105, 107, or simultaneous registration therein, or permission of the Department of Chemical Engineering.

A study of the principal chemical industries. Plant inspections, trips, reports, and problems.

Chem. E. 139, 141, 143. Chemical Engineering Thermodynamics (6). Summer, Fall, Winter. Two hours a week. Chem. E. 139 offered in Spring, 1945. Prerequisites, Physical Chemistry 187, 188, 189, 190; Chem. E. 103, 105, 107, or permission of instructor.

A study of the application of the principles of engineering and chemical thermodynamics to some industrial problems encountered in the practice of chemical engineering.

Chem. E. 145, 147, 149. Chemical Engineering Calculations (9). Summer, Fall, Winter. Three hours a week. Chem. E. 145 offered in Spring. 1945. Prerequisites, Math. 20, 21, 22; Chem. E. 103, 105, 107.

A study of methods for analyzing chemical engineering problems along quantitative and mathematical lines, with the calculus and other mathematical aids such as infinite series. Emphasis is placed on graphical presentation and the engineering utility of the results.

Chem. E. 151, 153, 155. Explosives and Toxic Gases (6). Two hours a week. Prerequistes, Organic Chemistry 35, 37; Physical Chemistry 187, 188, 189, 190. (Not offered 1944-45.)

A study of the properties, production, testing, use and defense against outstanding explosives and a few of the well-known war gases.

For Graduates

Chem. E. 201, 203, 205. Graduate Unit Operations (15 or more). One hour conference, three or more laboratory periods a week. Prerequisite, permission of Department of Chemical Engineering. (This is a course extending through three quarters, and completion of all quarters is required.)

Advanced theoretical treatment of typical unit operations in chemical engineering. Problems. Laboratory operation of small scale semi-commercial type equipment with supplementary reading, conferences, and reports.

Chem. E. 207. Gas Analysis (3). One lecture and two laboratory periods a week. Prerequisite, permission of Department of Chemical Engineering.

Quantitative determination of common gases, fuel gases, gaseous vapors, and important gaseous impurities. Problems.

Chem. E. 209. Graduate Seminar (1). One hour a week. Required of all graduate students in Chemical Engineering.

Students prepare reports on current problems in chemical engineering and participate in the discussion of such reports.

Chem. E. 211. Research in Chemical Engineering. Credit hours to be arranged.

The investigation of special problems and the preparation of a thesis in partial fulfillment of the requirements of an advanced degree.

Chem. E. 213, 215, 217. Plant Design Studies (9). Three conference hours a week. Prerequisite, permission of Department of Chemical Engineering.

Chem. E. 214, 216, 218. Plant Design Studies Laboratory (6). Three laboratory periods a week. Prerequisite, permission of Department of Chemical Engineering. (This is a course extending through three quarters, and completion of all quarters is required.)

This laboratory work may be elected to accompany or be preceded by Chem. E. 213, 215, 217.

Chem. E. 219, 221, 223. Gaseous Fuels (6). Two hours a week. Prerequisite, permission of Department of Chemical Engineering.

An advanced treatment of some of the underlying scientific principles involved in the production, transmission and utilization of gaseous fuels. Problem in design and selection of equipment.

CIVIL ENGINEERING

For Advanced Undergraduates

C. E. 50. Hydraulics (6). Winter. Five lectures and one laboratory period a week. Prerequisite, Mech. 50 and to be taken concurrently with Mech. 51. Required of juniors in civil engineering.

Hydrostatic pressures on tanks, dams, and pipes. Flow through orifices, nozzles, pipe lines, open channels, and weirs. Use of Reynold's number. Measurement of water. Elementary hydrodynamics.

C. E. 51. Hydraulics (4). Winter, Spring. Three lectures and one laboratory period a week. Prerequisite, Mech. 50 or Mech. 52. Required of juniors in electrical and mechanical engineering.

A shorter course than C. E. 50 with emphasis on water wheels, turbines, and centrifugal pumps.

C. E. 52. Curves and Earthwork (5). Fall. Three lectures and two laboratory periods a week. Prerequisites, Surv. 2, 3, 4, and concurrent registration in Surv. 100.

Computation and field work for simple, compound, and reversed circular curves and spirals; parabolic curves; earthwork computations; complete survey and map, including mass diagram, of a short route.

For Advanced Undergraduates and Graduates

C. E. 100. Theory of Structures (6). Spring. Five lectures and one laboratory period a week. Prerequisite, Mech. 51.

Analytical and graphical determination of dead and live load stresses in beams and framed structures; influence lines; lateral bracing and portals; elements of slope and deflection.

C. E. 101. Elements of Highways (5). Fall. Three lectures and two laboratory periods a week. Prerequisite, Mech. 51.

Location, design, construction, and maintenance of roads and pavements. Laboratory problems and field inspection trips.

C. E. 102, 103, 104. Concrete Design (11). Fall, Winter, Spring. Three hours a week, Fall and Spring quarters; four lectures and one laboratory period a week, Winter quarter. Prerequisite, C. E. 100.

Design and detailing of plain and reinforced concrete structures, applications of slope-deflection and moment distribution theories; rigid frames.

C. E. 105, 106, 107. Structural Design (11). Fall, Winter, Spring. Three lectures a week, Fall and Spring quarters; four lectures and one laboratory period a week, Winter quarter. Prerequisite, C. E. 100.

Design and detailing of wood and structural steel members and their connections; wind stresses in building frames; structural frameworks.

C. E. 108, 109, 110. Municipal Sanitation (9). Fall, Winter, Spring. Two lectures and one laboratory period a week. Prerequisite, C. E. 50.

Methods of estimating consumption for and the design of water supply and sewerage systems.

C. E. 111. Soils and Foundations (4). Spring. Three lectures and one laboratroy period a week. Prerequisite, C. E. 100.

An introductory study of the properties and behavior of soil as an engineering material. Applications to engineering construction.

C. E. 112, 113. Elements of Structures (4). Fall, Winter. Prerequisites, Phys. 5A, or Mech. 1 or 2. For non-civil engineering students.

Analysis and design of elementary members and their connections for wood, steel, concrete, and reinforced concrete structures.

For Graduates

C. E. 200. Advanced Properties of Materials (3). Fall, Winter, Spring. Prerequisite, Mech. 53, or equivalent.

A critical study of elastic and plastic properties, flow of materials, resistance to failure by fracture, impact, and corrosion, the theories of failure. Assigned reading from current literature.

C. E. 201. Advanced Strength of Materials (3). Fall, Winter, Spring. Prerequisite, Mech. 50, 51, or equivalent.

Special problems in engineering stress analysis. Limitations of flexure and torsion formulas, unsymmetrical bending, curved beams, combined stresses, thin tubes, thick-walled cylinders and flat plates.

C. E. 202. Applied Elasticity (3). Fall, Winter, Spring. Prerequisite, Math. 114, or equivalent.

Two dimensional elastic problems, general stress-strain analysis in three dimensions, stability of beams, columns, and thin plates.

C. E. 203. Soil Mechanics (3). Fall, Winter, Spring. Prerequisite, C. E. 111, or equivalent.

A detailed study of the properties of engineering soils. Assigned reading from current literature.

C. E. 204. Advanced Foundations (3). Fall, Winter, Spring. Prerequisite, C. E. 102, 103, 104, or equivalent.

A detailed study of types of foundations. Design and construction to meet varying soil conditions.

C. E. 205. Highway Engineering (3). Fall, Winter, Spring. Prerequisite, C. E. 101, or equivalent.

An intensive course in the location, design, and construction of highways.

C. E. 206. Theory of Concrete Mixtures (6). Fall, Winter, Spring. Prerequisite, Mech. 53, or equivalent.

A thorough review of the methods for the design of concrete mixtures, followed by a study of factors affecting the properties of the resulting concrete. This course is intended as a background for work in the field of concrete, concrete aggregates, or reinforced concrete.

C. E. 207. Advanced Structures (4). Fall, Winter, Spring. Three lectures and one laboratory period a week. Prerequisite, C. E. 102, 103, 104 and C. E. 105, 106, 107, or equivalents.

The solution of statically indeterminate structures by classical and modern methods, with emphasis on the latter.

C. E. 208. Research. Credit in accordance with work outlined. Fall, Winter, Spring.

DRAWING

Dr. 1, 2. Engineering Drawing (2). Fall, Winter, Spring. Two laboratory periods a week.

Lettering, use of instruments, orthographic projection, technical sketches, dimensioning.

Dr. 3. Descriptive Geometry (3). Fall, Winter, Spring. One lecture and two laboratory periods a week. Prerequisite, Dr. 1, 2.

Orthographic projection as applied to the solution of space problems relating to the point, line, and plane. Intersection of planes with solids; development. Applications to practical problems in engineering drafting.

Dr. 4. Advanced Engineering Drawing (3). Fall, Winter, Spring. One lecture and two laboratory periods a week.

Continuation of descriptive geometry, including applications to practical engineering drafting.

Dr. 5. Mechanical Drawing (2). Fall, Winter, Spring. One lecture and one laboratory period a week. Open to non-engineering students.

Lettering, sketching, and working drawings of machines; including conventions, tracing, isometric and cabinet projections, and blueprinting.

ELECTRICAL ENGINEERING

E. E. 1, 2. Direct-Current Theory (7). Winter, Spring. Two lectures and one laboratory period a week, Winter quarter; three lectures and one laboratory period a week, Spring quarter. Prerequisites, concurrent registration in Math. 22, 23, and Phys. 4A, 5A. Required of sophomores in electrical engineering.

Current, voltage, power, and energy relationships in D-C networks. Working concepts of electric and magnetic potential difference, electric and magnetic field intensity, and electric and magnetic flux density. Electric and magnetic circuit experiments.

For Advanced Undergraduates

E. E. 50. Principles of Electrical Engineering (4). Spring. Three lectures and one laboratory period a week. Prerequisites, Math. 22, Phys. 5A. Required of juniors in civil engineering.

Fundamentals of direct-current and alternating-current machinery; application of machines for specific duties; operating characteristics of generators, motors, and transformers.

E. E. 51, 52, 53. Principles of Electrical Engineering (12). Fall, Winter, Spring. Three lectures and one laboratory period a week. Prerequisites, Math. 22, Phys. 5A. Required of juniors in chemical and in mechanical engineering.

Study of elementary direct-current and alternating-current circuit characteristics. Principles of construction and operation of direct and alternating current machinery. Experiments on the operation and characteristics of generators, motors, transformers, and control equipment.

E. E. 54. Direct-Current Machinery (6). Fall. Five lectures and one laboratory period a week. Prerequisites, Math. 22, Phys. 5A, and E. E. 1, 2. Required of juniors in electrical engineering.

Construction, theory of operation, and performance characteristics of direct-current generators, motors, and control apparatus. Experiments on the operation and characteristics of direct-current generators and motors.

E. E. 55. Electricity and Magnetism (6). Fall. Five lectures and one laboratory period a week. Prerequisites, Math. 22, Phys. 5A, and E. E. 1, 2. Required of juniors in electrical engineering.

Electric and magnetic field theory with special consideration of capacitance and reluctance calculations by curvilinear-square field mapping methods. Elements of electro-chemistry. Network theorems and systematized notational schemes employed in circuit analysis.

For Advanced Undergraduates and Graduates

E. E. 100. Alternating Current Circuits (7). Winter. Five lectures and two laboratory periods a week. Prerequisite, E. E. 55. Required of juniors in electrical engineering.

Single- and polyphase-circuit analysis under sinusoidal and non-sinusoidal conditions of operation. Harmonic analysis by the Fourier series method. Theory and operation of mutually-coupled circuits and of electric wave filters. Elementary concepts of symmetrical-component analysis applied only to static circuit elements.

E. E. 101. Engineering Electronics (6). Spring. Five lectures and one laboratory period a week. Prerequisites, E. E. 55 and concurrent registration in E. E. 100. Required of juniors in electrical engineering.

Theory and application of electronic tubes and associated control circuits. Emphasis on tube characteristics and electron-tube measuring devices, including the cathode-ray oscillograph as a measuring device. Applications of thyratrons and other rectifier tubes.

E. E. 102, 103, 104. Alternating-Current Machinery (14). Fall, Winter, Spring. Three lectures and two laboratory periods a week, Fall and Winter quarters; three lectures and one laboratory period a week, Spring quarter. Prerequisite, E. E. 100. Required of seniors in electrical engineering.

The operating principles of alternating-current machinery considered from theoretical, design, and laboratory points of view. Synchronous generators and motors; single and polyphase transformers; three-phase induction generators and motors; single phase induction motors; rotary converters and mercury-arc rectifiers.

E. E. 105, 106. Radio Communication (8). Fall, Winter. Three lectures and one laboratory period a week. Prerequisites, E. E. 100 and E. E. 101. Required of seniors in electrical engineering.

Principles of radio communication from both theoretical and laboratory points of view. Amplification, detection, and oscillation with particular emphasis on audio amplification and broadcast range reception.

E. E. 107. Communications Networks (4). Fall. Prerequisites, concurrent registration in E. E. 102.

Calculation of transmission line inductance and capacitance on a per-wire basis. Long-line theory applied to both power and telephone circuits. Electrical, mechanical, and economic consideration of power transmission and distribution systems.

E. E. 108. Electric Transients (4). Spring. Prerequisite, concurrent registration in E. E. 104.

Current, voltage, and power transients in lumped-parameter networks. Transient phenomena in sweep circuits and inverters. Starting transients in transformers and short-circuit transients in alternators with oscillographic demonstration.

E. E. 109. Ultra-High-Frequency (6). Spring. Five lectures and one laboratory period a week.

Theoretical and experimental studies of ultra-high-frequency oscillators, detectors, wave guides, transmission lines, and antenna arrays. Most of the experimental work is performed at 200 megacycles and at 3000 megacycles.

E. E. 112. Illumination (4). Fall, Winter, Spring. Three lectures and one laboratory period a week. Senior elective. Prerequisite, E. E. 100.

Electric illumination; principles involved in design of lighting systems, illumination calculations, photometric measurements.

E. E. 113. Electric Railways (4). Fall, Winter, Spring. Senior elective. Prerequisite, concurrent registration in E. E. 102, 103, 104.

Mechanism of train motion. Application of electrical equipment to transportation. Construction and operation of control apparatus used in different fields of electrical transportation such as urban railways, trunk line railways, trolley busses and diesel-electric equipment. Power requirements, distribution systems and signal systems.

E. E. 114. Thesis (2). Fall, Winter, Spring. One laboratory period a week. Senior elective.

The student selects, with faculty approval, a special problem in electrical engineering. He makes such field or laboratory studies as may be needed. Weekly progress reports are required, and frequent conferences are held with the members of the faculty to whom the student is assigned for advice. A written report, including an annotated bibliography, is required to complete the thesis.

For Graduates

E. E. 200. Symmetrical Components (3). Fall. Prerequisite, E. E. 104, or equivalent.

Application of the method of symmetrical components to synchronous generators, transmission lines, transformers, static loads possessing mutual coupling, and induction motor loads. Methods of measuring positive, negative, and zero sequence reactances of synchronous generators and methods

of calculating these component reactances of transmission lines. Complete network solutions in terms of symmetrical components and comparison of these solutions with those obtained by classical methods.

E. E. 202. Advanced Circuit Analysis (3). Winter. Prerequisite, Bachelor's degree in electrical engineering or physics.

Advanced circuit analyses of current importance, either transient or steady state. Solution and comparison of electrical-system and mechanical-system transients by classical and operation methods. Theory of square-wave testing.

E. E. 204. Operational Circuit Analysis (3). Spring. Prerequisite, E. E. 104, or equivalent.

Solution of network transients involving both lumped and distributed circuit parameters by the method of Heaviside's operational calculus. Carson's infinite integral theorem, Duhamel's superposition theorem, Heaviside's expansion theorem and direct operational methods.

GENERAL ENGINEERING SUBJECTS

Engr. 1. Introduction to Engineering (1). Spring. Required of all freshmen in engineering.

A course of lectures by the faculty and by practicing engineers covering the engineering professional fields. The purpose of this course is to assist the freshmen in selecting the particular field of engineering for which he is best adapted.

For Advanced Undergraduates and Graduates

Engr. 100. Engineering Law and Specifications (3). Spring. Prerequisite, senior standing in engineering.

The fundamental principles of law relating to business and engineering, including contracts, agency, negotiable instruments, corporations, and common carriers, and their application to engineering contracts and specifications.

MECHANICS

Mech. 1. Statics and Dynamics (5). Spring. Four lectures and one laboratory period a week. Prerequisite, Dr. 3 and to be taken concurrently with Math. 22 and Phys. 5A.

Solutions of force systems; graphic statics; friction, centroids and moments of inertia; kinematics and kinetics; work, power, energy, impulse and momentum.

Mech. 2. Statics and Dynamics (4). Spring. Prerequisite, Dr. 3 and to be taken concurrently with Math. 22 and Phys. 5A.

Same as Mech. 1 with the addition of laboratory period.

Mech. 3. Statics and Dynamics (6). Spring, Fall, Winter. Prerequisite, Dr. 3 and to be taken concurrently with Math. 22 and Phys. 5A.

Analytical and graphical solutions in statics. Kinematics and kinetics; work, power, energy; impulse and momentum.

For Advanced Undergraduates

Mech. 50, 51. Strength of Materials (8). Fall, Winter. Prerequisite, Mech. 1, 2 or 3, or equivalent. Required of juniors in civil and mechanical engineering.

Thin-walled cylinders; riveted and welded joints; torsion; stresses in beams; design of columns; use of structural steel handbook. Beam deflections; statically indeterminate beams; combined loadings; composite beams; impact and energy loadings.

Mech. 52. Strength of Materials (3). Winter. Prerequisite, Mech. 1 or 2. Required of juniors in electrical engineering.

A shorter course than Mech. 50, 51 designed for non-civil engineering students.

Mech. 53. Materials of Engineering (3). Winter, Spring. Two lectures and one laboratory period a week. Prerequisite, Mech. 50, 51.

The composition, manufacture, and properties of the principal materials used in engineering; performance of standard tests; interpretation of specifications and tests.

MECHANICAL ENGINEERING

For Advanced Undergraduates

M. E. 50. Principles of Mechanical Engineering (4). Winter. Three lectures and one laboratory period a week. Prerequisites, Phys. 4A, 5A, and Math. 21. Required of juniors in Civil Engineering.

Elementary thermodynamics and the study of heat, fuel and combustion in the production and use of steam for generation of power. Supplemented by laboratory tests and trips to industrial plants.

M. E. 51. Thermodynamics (4). Winter. Three lectures and one laboratory period a week. Prerequisites, Math. 22, Phys. 5A. Required of juniors in Electrical Engineering.

The theory and application of thermodynamics to the steam engine, steam turbine, etc.

M. E. 52. Power Plants (3). Spring. Two lectures and one laboratory period a week. Prerequisite, senior standing. Required of seniors in Electrical Engineering.

The theory and operation of steam engines, boilers, condenser, steam turbines, and their accessories.

M. E. 53. Aerodynamics and Hydrodynamics (4). Winter. Three lectures and one laboratory period a week. Prerequisites, Math. 22, Phys. 5A. Required of juniors in Mechanical Engineering, aeronautics option.

A study of the fundamentals of the flow of air and of water.

For Advanced Undegraduates and Graduates

M. E. 100, 101, 102. Thermodynamics (9). Fall, Winter, Spring. Two lectures and one laboratory period a week. Required of juniors in Mechanical Engineering.

The properties and fundamental equations of gases and vapors.

M. E. 103, 104. Heating and Ventilation (6). Fall, Winter. Two lectures and one laboratory period a week. Prerequisites, M. E. 100, 101, 102. Required of seniors in Mechanical Engineering.

Design of heating and ventilation systems.

M. E. 105. Refrigeration (3). Spring. Two lectures and one laboratory period a week. Prerequisites, M. E. 100, 101, 102. Required of seniors in Mechanical Engineering.

Problems involving the different methods and processes of refrigeration. Air conditioning for offices, buildings, factories and homes.

M. E. 106, 107, 108. Thesis (5). Fall, Winter, Spring. One laboratory period a week, Fall quarter; one lecture and one laboratory period a week, Winter and Spring quarters. Prerequisite, senior standing. Required of seniors in Mechanical Engineering.

The student carries out a research project under faculty supervision.

M. E. 109, 110, 111. Prime Movers (12). Fall, Winter, Spring. Two lectures and two laboratory periods a week. Required of seniors in Mechanical Engineering. Prerequisites, Mech. 50, M. E. 100, 101, 102.

Design and use of prime movers to convert heat energy into power.

M. E. 112, 113, 114. Mechanical Engineering Design (12). Fall, Winter, Spring. Two lectures and two laboratory periods a week. Prerequisites, Mech. 50, M. E. 100, 101, 102. Required of seniors in Mechanical Engineering.

The design of machine members and mechanisms.

M. E. 115, 116, 117. Mechanical Laboratory (6). Fall, Winter, Spring. One lecture and one laboratory period a week. Prerequisite, senior standing. Required of seniors in Mechanical Engineering.

Experiments on engines and other machines are performed in the laboratory. Reports are required on tests.

M. E. 118, 119, 120. Airplane Structures (9). Fall, Winter, Spring. Three hours a week. Required of seniors in Mechanical Engineering, aeronautics option.

The fundamental principles of structural analysis and design of airplanes.

For Graduates

M. E. 200, 201, 202. Advanced Dynamics (6). Fall, Winter, Spring. Two hours a week.

A study of dynamical problems in machines, with special reference to vibrations.

M. E. 203, 204, 205. Applied Elasticity (6). Fall, Winter, Spring. Two hours a week.

General theorems of elastic bodies with applications.

M. E. 206, 207, 208. Advanced Aircraft Structures (6). Fall, Winter, Spring. Two hours a week.

Methods of analysis in advanced problems of airplane design. Study of research reports on aircraft structures.

M. E. 209, 210, 211. Advanced Hydrodynamics and Aerodynamics (6). Fall, Winter, Spring. Two hours a week.

Theoretical and experimental study of the flow of fluids.

M. E. 212, 213, 214. Advanced Thermodynamics and Heat Transfer (6). Fall, Winter, Spring. Two hours a week.

Application of the laws of thermodynamics to industrial processes.

M. E. 215. Seminar (1-3). Fall, Winter, Spring. Credit in accordance with work outlined.

Seminar may be organized in any field of Mechanical Engineering for study of general theory or specific problems.

M. E. 216. Research (1-3). Fall, Winter, Spring. Credit in accordance with work outlined.

SHOP

Shop 1. Forge Practice (1). Spring. One combination lecture and laboratory period a week. Required of freshmen in Engineering.

Principles of forging and heat treatment. Demonstration of welding, cutting and heat treatment. Laboratory practice.

Shop 2. Machine Shop Practice (1). Fall, Winter, Spring. One laboratory period a week. Required of sophomores in Electrical Engineering.

Practice in bench work, turning, planing, drilling, tapping and tool hardening.

Shop 3. Machine Shop Practice (3). Fall. One lecture and two laboratory periods a week. Required of sophomores in Mechanical Engineering.

Study and practice of fundamental principles of machine tools.

For Advanced Undergraduates

Shop 50. Foundry Practice (1). Spring. One combination lecture and laboratory period a week. Required of juniors in Mechanical Engineering.

Lectures and recitations on foundry products and layouts, materials and equipment, molding, casting, etc.

Shop 51. Machine Shop Practice (1). Spring. One laboratory period a week. Prerequisite, Shop 3. Required of juniors in Mechanical Engineering.

Advanced practice with standard machine tools. Exercises in thread cutting, fluting, cutting spur and helical gears, jig work, and cutter and surface grinding.

SURVEYING

Surv. 1. Elements of Plane Surveying (2). Fall, Spring. One lecture and one laboratory period a week. Prerequisite, Math. 20, or concurrent registration in Math. 20. Required of sophomores in Chemical, Electrical, and Mechanical Engineering.

A brief course in the use of the tape, compass, level, transit, and stadia. Computation for area, coordinates, volume, and plotting.

Surv. 2, 3, 4. Plane Surveying (7). Fall, Winter, Spring. Two lectures and one laboratory period a week, Fall quarter; one lecture and one laboratory period a week, Winter and Spring quarters. Prerequisite, Math. 20, 21, 22 taken concurrently.

Theory and practice in the use of the tape, compass, transit, and level. General survey methods, traversing, area, coordinates, profiles, cross-sections, volume, stadia.

Surv. 100. Advanced Surveying (6). Fall. Three lectures and three laboratory periods a week. Prerequisite, Surv. 2, 3, 4.

Adjustment of instruments, latitude, longitude, azimuth, time, triangulation, precise leveling, geodetic surveying, together with the necessary adjustments and computations. Topographic surveys. Plane table, land surveys, and boundaries. Mine, tunnel, and hydrographic surveys.

COMPARATIVE LITERATURE

A general prerequisite for all courses in Comparative Literature is English 2, 3. Requirements for major include Comparative Literature 101, 102. Comparative Literature courses can be counted toward a major or minor in English.

Comp. Lit. 1. Greek Poetry (2). Fall, Spring.

Homer's *Iliad* and *Odyssey* with special emphasis on the literary form and the historical and mythological background.

Comp. Lit. 2. Later European Epic Poetry (2). Winter, Summer.

Virgil's *Aeneid*, Dante's *Divine Comedy*, *Nibelungenlied*, *Song of Roland*, and other European epics, with special emphasis on their relationship to and comparison with the Greek epic.

For Advanced Undergraduates and Graduates

Comp. Lit. 101. Introductory Survey of Comparative Literature (3). Fall, Spring.

Survey of the background of European literature through study of English translations of Greek and Latin literature. The debt of modern literature to the ancients is discussed and illustrated.

Comp. Lit. 102. Introductory Survey of Comparative Literature (3). Winter, Summer.

Continuation of Comp. Lit. 101; study of medieval and modern Continental literature.

Comp. Lit. 104. The Old Testament as Literature (3). Spring.

A study of the sources, development, and literary types.

Comp. Lit. 105. Romanticism in France (3). Winter.

Lectures and readings in the French romantic writers from Rousseau to Baudelaire. Texts are read in English translations.

Comp. Lit. 106. Romanticism in Germany (3). Spring.

Continuation of Comp. Lit. 105. German literature from Buerger to Heine in English translations.

Comp. Lit. 107. The Faust Legend in English and German Literature (3). Fall, Spring.

A study of the Faust legend of the Middle Ages and its later treatment by Marlowe in *Dr. Faustus* and by Goethe in *Faust*.

Comp. Lit. 110. Introduction to Folklore (3).

Origin, evolution, and bibliography of types. Literary significance, as seen in the development of prose fiction. Collections, such as the *Panchatantra*, *Seven Sages*, *Arabian Nights*, etc., and the continuation of these tales through medieval and modern literature.

Comp. Lit. 111. A Study of Literary Criticism (3).

A survey of the major schools of criticism from Plato to the present day.

Comp. Lit. 112. Ibsen (3). Spring.

A study of the life and chief works of Ibsen with special emphasis on his influence on the modern drama.

For Graduates

Comp. Lit. 200. The History of the Theatre (3). Prerequisite, a wide acquaintance with modern drama and some knowledge of the Greek drama.

A detailed study of the history of the European theater. Individual research problems will be assigned for term papers.

The following courses may also be counted in this group: **Eng. 104. Chaucer; English 108. Milton; Eng. 113, 114. Prose and Poetry of the Romantic Age; Eng. 124. Contemporary Drama; Eng. 125. Emerson,**

Thoreau, and Whitman; Eng. 201. Medieval Romance in England; Eng. 205. Seminar in Sixteenth Century Literature; Eng. 207. Seminar in Shakespeare; French 204. Georges Duhamel; German 203. Schiller; Spanish 107. Cervantes.

DAIRY HUSBANDRY

D. H. 1. Fundamentals of Dairying (4). Fall, Spring. Three lectures and one laboratory period a week. Prerequisite, Chem. 1, 3.

This course is designed to cover the entire field of dairy husbandry. The content of the course deals with all phases of dairy cattle feeding, breeding and management and the manufacturing, processing, distributing and marketing of dairy products. Laboratory fee, $2.00.

D. H. 30. Dairy Cattle Judging (2). Spring. Two laboratory periods a week. Not open to freshmen.

This course offers complete instruction in the selection and comparative judging of dairy cattle. Trips to various dairy farms for judging practice will be made.

D. H. 40. Grading Dairy Products (2). Spring. One laboratory period a week. Not open to freshmen.

Market grades and the judging of milk, butter, cheese, and ice cream in the commercial field. Laboratory fee, $3.00.

For Advanced Undergaduates

D. H. 50. Dairy Cattle Management (2). Fall, Spring. Two laboratory periods a week. Prerequisite, D. H. 1.

A management course designed to familiarize students with the practical handling and management of dairy cattle. Students are given actual practice and training in the University dairy barns.

D. H. 54. Advanced Dairy Cattle Judging (1). Fall. One laboratory period a week. Prerequisite, D. H. 30.

Advanced work in judging dairy cattle. Credit only to students who do satisfactory work in competition for the dairy cattle judging team.

D. H. 60. Advanced Grading of Dairy Products (1). Fall. One laboratory period a week. Prerequisite, D. H. 40.

Advanced work in the judging of milk, butter, cheese, and ice cream. Open only to students who comprise the dairy products judging team. Laboratory fee $3.00.

D. H. 64. Dairy Mechanics (3). Spring. One lecture and two laboratory periods a week. Prerequisite, D. H. 1.

The theory and operation of the compression system of mechanical refrigeration. Construction, design, and care of dairy equipment; repairing, soldering, pipe fitting, and wiring. Laboratory fee, $2.00.

D. H. 68. Dairy Accounting (1). Fall. One laboratory period a week. Prerequisite, D. H. 1.

Methods of accounting in market milk and dairy manufacturing plants.

D. H. 70. Dairy Plant Management (1). Fall, Winter, Spring, Summer. One laboratory period a week. Prerequisite, D. H. 1.

This course is designed to give the student practice in the management of a dairy manufacturing plant. The course will involve classroom instruction and a three weeks' practice period in management of the University Plant.

D. H. 72. Dairy Plant Experience (2). Spring. Prerequisite, 10 hours of dairy husbandry.

Ten weeks' practical experience or its equivalent (following completion of junior year) in an approved market milk plant or factory manufacturing dairy products. A written report of the work is required.

For Advanced Undergraduates and Graduates

D. H. 101. Dairy Production (4). Fall. Three lectures and one laboratory period a week. Prerequisites, D. H. 1, A. H. 52.

A comprehensive course in dairy cattle feeding, breeding and herd management, designed for advanced students in dairy husbandry.

D. H. 53. Dairy Breeds and Breeding (3). Winter. Two lectures and one laboratory period a week. Prerequisites, D. H. 1, Zool. 104, A. H. 103.

A study of the historical background; characteristics; prominent blood lines; noted families and individuals of the major dairy breeds. A survey of breeding systems; genetic and environmental factors as applied to dairy cattle. The use of the pedigree, various indices, herd and production records in selection and formulating breeding programs.

D. H. 109. Cheese Making (4). Winter. One lecture and three laboratory periods a week. Prerequisites, D. H. 1, Bact. 1.

The principles and practice of making casein and cheese, including a study of the physical, chemical, and biological factors involved. Laboratory practice will include visits to commercial factories. Laboratory fee, $2.00.

D. H. 110. Butter Making (2). Winter. One lecture and one laboratory period a week. Prerequisites, D. H. 1, Bact. 1.

The principles and practice of making butter, including a study of the physical, chemical, and biological factors involved. Laboratory practice will include visits to commercial factories. Laboratory fee, $1.00.

D. H. 111. Concentrated Milks (3). Spring. One lecture and two laboratory periods a week. Prerequisites, D. H. 1, Bact. 1.

The principles and practice of making condensed milk, evaporated milk, and milk powder, including a study of the physical, chemical, and biological factors involved. Laboratory practice will include visits to commercial factories. Laboratory fee, $1.00.

D. H. 112. Ice Cream Making (4). Spring. One lecture and three laboratory periods a week. Prerequisites, D. H. 1, Bact. 1.

The principles and practice of making ice cream, sherbets, and ices, including a study of the physical, chemical, and biological factors involved. Laboratory practice will include visits to commercial factories. Laboratory fee, $2.00.

D. H. 113. Market Milk (5). Fall. Three lectures and two laboratory periods a week. Prerequisites, D. H. 1, Bact. 1.

Commercial and economic phase of market milk, with special reference to its transportation, processing, and distribution; certified milk; commercial buttermilk; milk laws; duties of milk inspectors; distribution; milk plant construction and operation. Laboratory practice includes visits to local dairies. Laboratory fee, $3.00.

D. H. 114. Analysis of Dairy Products (5). Winter. Two lectures and three laboratory periods a week. Prerequisites, D. H. 1, Bact. 1, Chem. 19, 31, 32, 33, 34.

The application of chemical and bacteriological methods to commercial dairy practice; analysis by standard chemical, bacteriological, and factory methods; standardization and composition control; tests for adulterants and preservatives. Laboratory fee, $3.00.

D. H. 119, 120, 121. Dairy Literature (1, 1, 1). Fall, Winter, Spring. Prerequisite, D. H. 1.

Presentation and discussion of current literature in dairying.

D. H. 123, 124. Methods of Dairy Research (2-5, 2-5). Winter, Spring. Credit in accordance with the amount and character of work done. Prerequisites, D. H. 1, D. H. 101.

This course is designed especially to meet the needs of those dairy students who plan to enter the research or technical field of dairying. Methods of conducting dairy research and the presentation of results are stressed. A research problem which relates specifically to the work the student is pursuing will be assigned.

For Graduates

D. H. 201. Advanced Dairy Production (3). Fall.

A study of the newer discoveries in animal nutrition, breeding, and management. Readings and assignments.

D. H. 202. Dairy Technology (2). Fall.

A consideration of milk and dairy products from the physiochemical point of view.

D. H. 203. Milk Products (2). Winter.

An advanced consideration of the scientific and technical aspects of milk products.

D. H. 204. Special Problems in Dairying (2-5). Fall, Winter, Spring, Summer. Credit in accordance with the amount and character of work done.

Special problems which relate specifically to the work the student is pursuing will be assigned.

D. H. 205. Seminar (1). Fall, Winter, Spring.

Students are required to prepare reports on current literature in dairy husbandry and allied fields. These reports are presented and discussed in the class.

D. H. 208. Research (2-5). Fall, Winter, Spring, Summer. Credit to be determined by the amount and quality of work done.

The student will be required to pursue, with the approval of the Head of the Department, an original investigation in some phase of dairy husbandry, carry the same to completion, and report results in the form of a thesis.

ECONOMICS

Econ. 1, 2, 3. Economic Resources (3, 2, 2). Spring, Summer, Fall; Summer, Fall, Winter; Fall, Winter, Spring. Two lectures and one laboratory period a week for Econ. 1. Freshman requirement in College of Business and Public Administration.

General comparative study of the geographic factor underlying production economics. Emphasis upon climate, soils, landforms, agricultural products, power resources, and major metallic minerals, concluding with brief survey of geography of commerce and manufacturing.

Econ. 4, 5, 6. Economic Developments I, II, III (6). Fall, Spring, Summer. Freshman requirement in the College of Business and Public Administration.

An introduction to modern economic institutions—their origins, development, and present status. Commercial revolution, industrial revolution, and age of mass production. Emphasis on developments in England, Western Europe and the United States.

Econ. 31, 32, 33. Principles of Economics I, II, III (9). Fall, Winter, Spring, Summer. Prerequisite, sophomore standing.

A general analysis of the functioning of the economic system. A considerable portion of the course is devoted to a study of basic concepts and explanatory principles. The remainder deals with the major problems of the economic system.

Econ. 37. Fundamentals of Economics (5). Fall, Winter, Spring, Summer. Not open to students who have credit in Econ. 31, 32, and 33. Not open to freshmen.

A survey study of the general principles underlying economic activity. Designed to meet the needs of special technical groups such as students of

Engineering, Home Economics, Agriculture and others who are unable to take the more complete course provided in Economics 31, 32, 33.

For Advanced Undergraduates and Graduates

Econ. 130. Economics of Consumption (3). Spring. Prerequisite, Econ. 33 or 37.

The place of the consumer in our economic system. An analysis of demand for consumer goods. The need for consumer consciousness and a technique of consumption. Cooperative and governmental agencies for consumers. Special problems.

Econ. 131. Comparative Economic Systems (4). Fall. Prerequisite, Econ. 33 or 37.

An investigation of the theory and practice of various types of economic systems. The course begins with an examination and evaluation of the capitalistic system, and is followed by an analysis of alternative types of economic systems such as fascism, socialism, and communism.

Econ. 132. Advanced Economic Principles (4). Spring. Prerequisite, Econ. 33.

This course is an analysis of price and distribution theory with special attention being paid to recent developments in the theory of imperfect competition.

Econ. 134. Contemporary Economic Thought (4). Spring. Prerequisite, Econ. 33.

A survey of recent trends in American, English, and Continental Economic thought with special attention being given to the work of such economists as W. C. Mitchell, J. R. Commons, T. Veblen, W. Sombart, J. A. Hobson and other contributors to the development of economic thought since 1900.

Econ. 135. Economic Institutions and War (4). Summer. Prerequisite, Econ. 33 or 37.

An analysis of the economic causes and problems of war. Industrial mobilization, theory and techniques of price control; war finance, international trade and foreign exchange controls; and the problems of readjustment in a post-war economy.

Econ. 140. Money and Banking (4). Fall, Spring, Summer. Prerequisite, Econ. 33 or 37. Required for graduation in B. P. A.

A study of our money and banking system and the basic principles involved in its proper operation.

Econ. 141. Theory of Money, Credit, and Prices (4). Fall. Prerequisites, Econ. 33 and 140.

A study of recent developments in the theory of money and credit, of domestic and international price problems, and of monetary and credit policies in their relation to the problem of full employment.

Econ. 150. Marketing Principles and Organization (4). Fall, Spring. Prerequisite, Econ. 33 or 37. Required for graduation in B. P. A.

This is an introductory course in the field of marketing. Its purpose is to give a general understanding and appreciation of the forces operating, institutions employed, and methods followed in marketing agricultural products, natural products, services, and manufactured goods.

Econ. 151. Economics of Cooperatives (3). Winter. Prerequisite, Econ. 33 or 37.

Analysis of and contrast between economic problems and contributions of cooperative and other types of business organizations; the significance of cooperation in the free enterprise system. Nominal fees are collected to cover the expense of occasional field trips.

Econ. 160. Labor Economics (4). Fall, Winter, Summer. Prerequisite, Econ. 33 or 37. Required for graduation in B. P. A.

The historical development and chief characteristics of the American labor movement are first surveyed. Present day problems are then examined in detail: wage theories, unemployment, social security, labor organization, collective bargaining.

Econ. 170. Industrial Combination and Competition (4). Spring, Fall. Prerequisite, Econ. 33 or 37.

Growth of large-scale production, development of industrial combinations, the economies of vertical and horizontal combination, the anti-trust acts, and some conclusions as to policy in relation to competition and monopoly. Problems of small business.

Econ. 171. Economics of American Industry (4). Fall, Summer. Prerequisite, Econ. 33 or 37.

A study of the technology, economics and geography of twenty representative American industries.

For Graduates

Econ. 230. History of Economic Thought (4). Fall. Prerequisite, Econ. 132 and graduate or senior standing.

A study of the development of economic thought and theories including the Greeks, Romans, canonists, mercantilists, physiocrats, Adam Smith, Malthus, Ricardo. Relation of ideas to economic policy.

Econ. 231. Economic Theory in the Nineteenth Century (4). Spring. Prerequisite, Econ. 230 or consent of the instructor.

A study of various nineteenth and twentieth century schools of economic thought, particularly the classicists, neo-classicists, Austrians, German historical school, American economic thought, the socialists, and the economics of J. M. Keynes.

Econ. 237, 238, 239. Seminar in Economic Investigation (3, 3, 3). Fall, Winter, Spring.

Econ. 240. Comparative Banking Systems (4). Winter.

Econ. 270. Seminar in Economics of American Industries (3). (Arranged.)

Econ. 299. Thesis. (Arranged.)

EDUCATION

Courses Primarily for Freshmen and Sophomores

Ed. 2. Introduction to Education (3). Fall, Winter, Spring. Required of freshmen in Education and recommended for other students who are interested in teaching.

An exploratory or guidance course designed to help students choose wisely in their preparation for the teaching profession. Types of positions, teacher supply and demand, favorable and unfavorable aspects of teaching, and types of personal and professional competence required of teachers are among the topics included. The testing and observational program of the College of Education is begun in this course. Fee, $1.00.

Ed. 3. Educational Forum (1). Fall, Winter, Spring. Required of sophomores in the College of Education.

In this course the prospective teacher is introduced in a variety of ways to problems and processes of education around which much of the work in later professional courses will be centered. Guidance is stressed.

Ed. 4. Reading Clinic (2). Fall, Winter, Spring.

This course is designed for anyone wishing to improve reading skill. Reading difficulties are diagnosed through telebinocular eye examinations, photographs of eye movements, and standardized tests. Remedial treatment is given to improve speed, comprehension, and organization of ideas. Attention is given to the improvement of study habits.

For Advanced Undergraduates and Graduates

Ed. 100. History of Education in the United States (3). Winter, Summer.

A study of the origins and development of the chief features of the present system of education in the United States.

Ed. 102. History of Modern Education (3). Fall, Spring.

A survey of the history of education with emphasis on the modern period in Europe.

Ed. 103. Theory of the Senior High School (3). Fall.

The secondary school population; the school as an instrument of society; relation of the secondary school to other schools; aims of secondary education; curriculum and methods; extra-curricular activities; guidance and placement; teacher certification and employment in Maryland and the District of Columbia. This course is somewhat more general than Ed. 110.

Ed. 104. Principles of Education (3). Winter, Summer.

The characteristics of modern society, the trends of social change, and characteristics of children are analyzed to arrive at the principles which are basic to the development and functioning of a sound program of education.

Ed. 105. Educational Measurements (3). Winter, Spring, Summer. Prerequisite, consent of instructor.

A study of tests and examinations with emphasis upon their construction and use. Types of tests; purposes of testing; elementary statistical concepts, and processes used in summarizing and analyzing test results; school marks.

Ed. 107. Comparative Education (3). (Not offered in 1944-45.)

A study of national systems of education with the primary purpose of discovering their characteristic differences and formulating criteria for judging their worth.

Ed. 108. Comparative Education (3). (Not offered in 1944-45.)

This course is a continuation of Ed. 107, with emphasis upon the national educational systems of the Western Hemisphere.

Ed. 110. Theory of the Junior High School (3). Winter, Spring, Summer.

This course gives a general overview of the junior high school. It includes consideration of the purposes, functions, and characteristics of this school unit; a study of its population, organization, program of studies, methods, and staff; and other similar topics, together with their implication for prospective teachers.

Ed. 112. Educational Sociology—Introductory (3). Fall, Spring.

This course deals with data of the social sciences which are germane to the work of teachers. Consideration is given to implications of democratic ideology for educational endeavor, educational tasks imposed by changes in population and technological trends, the welfare status of pupils, the socio-economic attitudes of individuals who control the schools, and other elements of community background which have significance in relation to schools.

Ed. 114. Guidance in Secondard Schools (3). Winter, Summer.

This course is primarily designed for the classroom teacher in terms of the day-by-day demands made upon him *as a teacher* in the guidance of the youth in his classes and in the extra-class activities which he sponsors. The stress is upon usable materials and upon practical common-sense guidance procedures of demonstrated workability.

Ed. 120. Curriculum, Instruction, and Observation—English (5). Fall, Winter. Prerequisite, Psych. 80.

Objectives in English; selection and organization of subject matter; methods of procedure and types of lessons; the use of auxiliary materials; lesson plans; measuring results; extra-curricular activities of English teachers. Twenty periods of observation.

Ed. 122. Curriculum, Instruction, and Observation—Social Studies (5). Fall, Spring. Prerequisite, Psych. 80.

Trends in the social studies; sources of instructional materials; basic teaching procedures; types of learning activities; lesson planning; unit planning; selection and organization of content; maps and their uses; evaluations. Twenty periods of observation.

Ed. 124. Curriculum, Instruction, and Observation—Foreign Language (5). Spring. Prerequisite, Psych. 80.

Objectives of foreign language teaching; selection and organization of subject matter; evaluation of texts and references; bibliographies; methods of procedure and types of lessons; lesson plans; special devices; measuring results. Twenty periods of observation.

Ed. 125. General Science for the Elementary School (3). Spring, Summer.

This course is designed principally for students who are candidates for the B. S. degree in Elementary Education. It is accepted by the College of Education to meet the general requirement in science, but not as a part of a major or minor. General principles and practical applications of science are stressed. (Undergraduate credit only.)

Ed. 126. Curriculum, Instruction, and Observation—Science (5). Winter, Spring. Prerequisite, Psych. 80.

Objectives of science teaching; selection and organization of subject matter; history, trends, and status; textbooks, reference works, and laboratory equipment; technic of class room and laboratory; measurement; professional organizations and literature. Twenty periods of observation.

Ed. 127. High School Course of Study—Literature (3). Spring, Summer.

The course is concerned with literature for junior and senior high schools. It includes study of the literature as well as selection of literature for different grade levels.

Ed. 128. Curriculum, Instruction, and Observation—Mathematics (5). Winter, Spring. Prerequisite, Psych. 80.

Objectives; the place of mathematics in secondary education; content and construction of courses; recent trends; textbooks and equipment; methods of instruction; measurement of standardized tests; professional organizations and literature. Twenty periods of observation.

Ed. 129. High School Course of Study—English (3). Winter.

This course is principally concerned with the selection and organization of content for English classes in secondary schools. Subject matter is analyzed to clarify controversial elements of form, style, and usage.

Ed. 133. Remedial Reading Instruction (3). Fall.

Causes for reading disabilities; diagnostic techniques; and corrective methods are studied. Instructional materials are evaluated. The course is designed for both elementary and secondary school teachers.

Ed. 138. Visual Education (3). Fall, Spring, Summer.

Visual impressions in their relation to learning; investigations into the effectiveness of instruction by visual means; projection apparatus, its cost and operation; slides, film strips, and films; physical principles underlying projection; integration of visual materials with organized courses of study; means of utilizing commercial moving pictures as an aid in realizing the aims of the school. Laboratory fee, $1.00.

Ed. 139. Methods and Practice of Teaching (5). Fall, Winter, Spring. Prerequisite, grade point average of 2.275 and approval of faculty committee.

Thirty periods of observation, participation, and teaching in a high school class under the direction of the regular teacher and the university supervisor. The student carries major responsibility for the instruction of the pupils for approximately 25 class periods. Two hours of class sessions are included, in which study is made of principles and methods of teaching.

Application forms for the course must be submitted, properly filled in, at the time of registration. Students should arrange their university schedule to allow ample time for the student teaching assignment. In registering, add to the course number: E for English, L for Language, M for Mathematics, C for Commercial, SS for Social Studies; Sc for Science, P. E. for Physical Education, or I for Industrial Education. (Undergraduate credit only.)

Ed. 140. Methods and Practice of Teaching (9). Fall, Winter, Spring. Prerequisite, grade average of 2.275 and approval of faculty committee.

Students who register in this course serve as apprentice teachers in the high schools to which they are assigned. One-half of each school day throughout the quarter is devoted to this work, which is carried on under the direction of a university supervisor. Opportunity is afforded for experience in connection with school activities, guidance, records, reports, and other phases of school life, as well as class room teaching. Two hours weekly of class sessions are included in which study is made of the principles and methods of teaching.

Application forms for this course must be obtained and submitted, properly filled in, not less than thirty days before registration. In registering, add letters as indicated above in Ed. 139. (Undergraduate credit only.)

Ed. 141. Administration and Supervision in the Elementary School (3). Summer.

A study of the problems connected with organizing and operating elementary schools and directing instruction.

Ed. 142. Curriculum, Instruction, and Observation—Physical Education (5). Spring. Prerequisite, Psych. 80.

Materials and procedures in relation to program planning, physical examinations, records, grading, directed observation, reports, conferences, and criticisms. Twenty periods of observation.

Ed. 143. The Elementary School Curriculum (3). Winter, Summer.

A study of important developments in elementary education with particular attention to methods and materials which may be used to improve the development of pupils in elementary schools. Problems which are encountered in day-to-day teaching situations receive much attention.

Ed. 150. Curriculum, Instruction, and Observation—Commercial Subjects (5). Fall, Spring. Prerequisite, Psych. 80.

Aims and methods for the teaching of shorthand, typewriting, and bookkeeping in high schools. Twenty periods of observation.

Ed. 180. Introduction to Special Education (3). Fall, Summer.

This course is designed to give teachers, principals, attendance workers, and supervisors an understanding of the needs of all types of exceptional children. Preventive and remedial measures are stressed.

Ed. 182. Education of Retarded and Slow-Learning Children (2). Spring.

A study of retarded and slow-learning children, including discovery, analysis of causes, testing techniques, case studies, and remedial educational measures.

For Graduates

Ed. 200. The Organization and Administration of Public Education (2). Fall.

This course deals with so-called "external" phases of school administration. It includes study of the present status of public school administration; organization of local, state, and federal educational authorities; and the administrative relationships involved therein.

Ed. 202. The Organization, Administration, and Supervision of Secondary Schools (2). Winter.

This course is designed as a continuation of Ed. 200, but may be taken independently. It includes what is called "internal" administration; the organization of units within a school system; the personnel problems involved; and such topics as schedule making, teacher selection, public relations, and school supervision.

Ed. 203. High School Supervision (2). Spring.

This course deals with the nature and function of supervision; recent trends in supervisory theory and practice; teacher participation in the determination of policies; planning of supervisory programs; appraisal of teaching methods; curriculum reorganization, and other means for the improvement of instruction.

Ed. 204. Source Materials in Education (3). Fall, Winter.

A course based on the text and work-book by Carter Alexander, "How to Locate Educational Information and Data." The work involves attendance at class for one hour with two additional hours of work in the library. Especially valuable for students interested in research.

Ed. 209. Public Education in Maryland (3). Summer.

A study of the Maryland Public School System, with special reference to the school law.

Ed. 211. The Adolescent: Characteristics and Problems (3). Summer,

This course deals with the intellectual, emotional, social, and vocational problems which arise in the transitional period between childhood and adulthood, the secondary school period.

Ed. 216. School Finance and Business Administration (3). Summer.

This course deals principally with school revenue and taxation; federal and state aid and equalization; purchase of supplies and equipment; internal school accounting; and other selected problems of local school finance.

Ed. 217. Research Methods (3). Spring, Summer.

A study of the types of research in education, the techniques and devices available in research, and the correct form and style in thesis writing. The course is designed to be of assistance in the criticism and evaluation as well as the carrying on of research.

Seminars for Graduate Students

Students qualifying for the degree of Master of Education will elect the required four hours of seminar work from the following list of seminars. These courses are open for election by other graduate students in Education.

Ed. 220. Seminar in Secondard Education (2). Fall, Summer.

Ed. 222. Seminar in Adult Education (2). (Not offered in 1944-45.)

Ed. 226. Seminar in Administration (2). Summer.

Ed. 228. Seminar in Special Education (2). (Not offered in 1944-45.)

Ed. 230. Seminar in Science Education (2). Fall.

Ed. 232. Seminar in Educational Sociology (2). Winter.

Ed. 234. Seminar in Comparative Education (2). (Not offered in 1944-45.)

Ed. B236. Seminar in Vocational Education (3). Commonly given in the Baltimore Division; may be used to satisfy this requirement. (Arranged.)

Ed. 237. Curriculum Development in the Secondary School (3). Summer.

Attention will be given to the improvement of content and teaching procedures in the major fields of instruction. Trends operative in major curriculum development programs and methods of approaching curriculum revision will be considered.

Ed. 299. Research (1-6).

Special Note Regarding Related Courses

For the description of **Psych. 80—Educational Psychology,** and other courses in Psychology, see pages 285-290.

See also Agricultural Education and Rural Life.

See also **H. E. Ed. 103—Teaching Secondary Vocational Home Economics;** and **Ind. Ed. 162—Curriculum, Instruction, and Observation—Industrial Education.**

HOME ECONOMICS EDUCATION

For Advanced Undergraduates and Graduates

H. E. Ed. 101. Curriculum, Instruction, and Observation (5). Fall, Spring. Required of juniors in Home Economics Education. Prerequisite, Psych. 80.

Philosophy of homemaking education; community survey; analysis of characteristics, interests, and needs of the high school girl; construction of a course of study; directed observations; use of various technics; selection of illustrative materials; the home project.

H. E. Ed. 102. Child Study (5). Spring, Summer.

The study of child development in relation to the physical, mental, and emotional phases of growth; adaptation of material to teaching of child care in high school; observation and participation in a nursery school.

H. E. Ed. 103. Teaching Secondary Vocational Home Economics: Methods and Practice (5-9). Winter, Summer. Prerequisite, H. E. Ed. 101.

Observation and teaching in a vocational department of a Maryland high school or in a junior high school in Washington. Organization of units, lesson plans, field trips; planning and supervision of home projects. After completing the teaching unit the student observes in home economics departments other than the one in which she has taught.

H. E. Ed. 104. Nursery School Techniques (3). Fall, Summer. Prerequisite, H. E. Ed. 102. (Not open to juniors.) Designed for nursery school teachers.

Philosophy of preschool education; principles of learning; routines; study of children's interests and activities; observation and teaching in the nursery school.

H. E. Ed. 105. Special Problems in Child Study (5). Winter. (Not open to juniors.) Prerequisite, H. E. Ed. 102.

Methods and practice in nursery school; making of particular studies related to the mental, emotional, or physical development of preschool children.

H. E. Ed. 106, 107. Problems in Teaching Home Economics (2, 2). Winter, Spring.

Reports of units taught; construction of units for high school course of study; study of various methods of organization of class period; analysis of text books; evaluation of illustrative material.

For Graduates

H. E. Ed. 201. Advanced Methods of Teaching Home Economics (3-5). (Arranged.)

Study of social trends as applied to the teaching of home economics.

H. E. 250. Seminar in Home Economics Education (3-5). (Arranged.)

INDUSTRIAL EDUCATION

For each quarter hour of credit for shop and drawing courses two or three periods of lecture and practice are scheduled depending upon the specific needs of the course.

***Ind. Ed. 1. Mechanical Drawing (3).** Fall.

Fundamental practices in orthographic projection followed by auxiliary projection, the drawing of threads and bolts, working drawings and isometric views. Sketching and use of conventions are emphasized. Laboratory fee, $2.50.

***Ind. Ed. 21. Mechanical Drawing (3).** Winter. Prerequisite, Ind. Ed. 1, or equivalent.

A more advanced course dealing with working drawings, machine design, pattern layouts, tracing and blue-printing. Detail drawings followed by assemblies are presented. Laboratory fee, $2.50.

Ind. Ed. 41. Architectural Drawing (3). Winter. Prerequisite, Ind. Ed. 1, or equivalent.

Practical experience is given in the design and planning of homes and other buildings. Working drawings, specifications and blue-prints are featured. Laboratory fee, $2.50.

Ind. Ed. 101. Mechanical Drafting Procedures of Industry (3). Summer. Prerequisitie, Ind. Ed. 1, or equivalent.

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*Alternate courses offered by the College of Engineering.

A comprehensive drafting course designed to give students practice in the modern methods of industry. Laboratory fee, $2.50.

Ind. Ed. 121. Essentials of Design (3). Fall. Prerequisites, Ind. Ed. 1 and basic shop work.

A study of the basic principles of design and practice in their application to the construction of high school shop projects. Laboratory fee, $2.50.

Ind. Ed. 2. Elementary Woodworking (3). Fall.

A hand woodworking course dealing with the use and care of tools used in bench joinery. It deals with materials and supplies, and practice in wood finishing. Laboratory fee, $3.50.

Ind. Ed. 22. Machine Woodworking (3). Winter. Prerequisite, Ind. Ed. 2, or equivalent.

Practice in the application of design and construction of projects in wood involving the use of woodworking machinery suitable for the high school shop. Basic wood turning is introduced. Laboratory fee, $3.50.

Ind. Ed. 42. Advanced Machine Woodworking (3). Spring. Prerequisite, Ind. Ed. 22, or equivalent.

Advanced production methods with emphasis on cabinet making and design. Laboratory fee, $3.50.

Ind. Ed. 102. Advanced Woodfinishing and Design (3). Summer. Prerequisite, Ind. Ed. 22, or equivalent.

Advanced finishing room methods applied. The application of color and its use in the improvement of design. Laboratory fee, $2.50.

***Ind. Ed. 23. Forge Practice (1).** Fall.

Laboratory practice in forging and the heat treatment of metals. Theory and principles of handling tools and materials. Laboratory fee, $2.50.

Ind. Ed. 24. Sheet Metal Work (3). Fall.

Information is given on materials, tools and processes. Practice is given in soldering, the laying out of patterns, and the making of elementary graded projects. Laboratory fee, $2.50.

Ind. Ed. 104. Advanced Practices in Sheet Metal Work (3). Summer. Prerequisite, Ind. Ed. 24, or equivalent.

Study of the more complicated processes involved in commercial items. Calculations and pattern making are emphasized. Laboratory fee, $2.50.

Ind. Ed. 65. Hand Craft (3). Summer.

Arts and crafts experiences in designing and constructing projects in woodwork, weaving, bookbinding, metalwork, leatherwork, block printing, and practice with other materials, including home mechanics activities. Laboratory fee, $3.50.

*Alternate courses offered by the College of Engineering.

Ind. Ed. 85, 105. General Shop (1-1). Fall, Winter.

Designed to meet needs in organizing and administering a high school General Shop course. Students are rotated through skill and knowledge developing activities in mechanical drawing, electricity, woodworking, and general metal working. Laboratory fee, $2.50.

Ind. Ed. 125. Fundamentals of Shopwork (3). Summer.

Designed to give direct help to those interested in conducting the War Department pre-induction basic course in Fundamentals of Shopwork. Laboratory fee, $3.50.

Ind. Ed. 26. Art Metal Work—Elementary (3). Spring.

Deals with the designing and construction of art metal projects, including such operations as spotting, saw piercing, etching, and enameling. Laboratory fee, $3.50.

Ind. Ed. 66. Art Metal Work—Bowl Raising (3). Summer. Prerequisite, Ind. Ed. 6, or equivalent.

Advanced practicum. It includes methods of bowl raising and bowl ornamenting. Laboratory fee, $3.50.

Ind. Ed. 106. Art Metal Work—Jewelry Work (3). Summer.

Includes simple operations in the art of making jewelry as well as the more difficult work of ring making and built up pieces using semi-precious stones as settings. Laboratory fee, $3.50.

Ind. Ed. 67. Cold Metal Work (3). Spring.

This course is concerned with the development of knowledges and skills involved in the design and construction of projects from band iron and other forms of mild steel. Laboratory fee, $2.50.

Ind. Ed. 28. Electricity (2). Winter.

Deals with the characteristics of wire, the electrical circuit, magnetism, house and signal wiring, and simple ignition wiring. Laboratory fee, $2.50.

Ind. Ed. 48. Advanced Electricity (3). Spring.

Principles involved in A-C and D-C electrical equipment, including heating, measurements, motors and control, electro-chemistry, the electric arc, inductance and reactance, condensers, and radio. Laboratory fee, $2.50.

Ind. Ed. 108. Experimental Electricity (3). Summer. Prerequisite, Ind. Ed. 28, or equivalent.

A shop practicum course in the development of apparatus and equipment for teaching the principles of electricity. Laboratory fee, $3.50.

***Ind. Ed. 69. Elementary Machine Shop Practice (3).** Spring. Prerequisite, Ind. Ed. 1, or equivalent.

*Alternate courses offered by the College of Engineering.

Bench work, turning, planing, milling, and drilling. Related technical information. Laboratory fee, $2.50.

*Ind. Ed. 89. **Advanced Machine Shop Practice (3).** Spring. Prerequisite, Ind. Ed. 69, or equivalent.

Advanced shop practicum in thread cutting, grinding, boring, reaming, and gear cutting. Related technical information. Laboratory fee, $2.50.

*Ind. Ed. 110. **Foundry (1).** Fall.

Bench and floor molding and elementary core making. Theory and principles covering foundry materials, tools and appliances. Laboratory fee, $2.50.

Ind. Ed. 94. Shop Maintenance (3). Spring. Prerequisite, 12 quarter hours of shop credit, or equivalent.

Skill developing practice in the up-keep and care of school shop tools and equipment.

Ind. Ed. 162. Curriculum, Instruction, and Observation (5). Winter. Prerequisite, Psych. 80.

Major functions and specific aims of industrial education; their relation to the general objectives of the junior and senior high schools; selection and organization of subject matter in terms of modern practices and needs; methods of instruction; expected outcomes; measuring results; professional standards. Twenty periods of observation.

Ind. Ed. 164. Shop Organization and Management (3). Fall.

Organization and management of pupils; daily programs; projects; pupils' progress charts; selection, location, and care of tools, machines, equipment, and supplies; records and reports; and good shop keeping.

Ind. Ed. 165. Evolution of Modern Industry (3). (Not offered in 1944-45.)

A review of the industrial progress of man through the various stages of civilization down to modern factory organization and practice.

Ind. Ed. 166. Educational Foundations of Industrial Arts (3). (Not offered in 1944-45.)

A study of the factors which definitely place industrial arts education in any well-rounded program of general education. Lectures, class discussions, reading and reports.

Ind. Ed. 167. Problems in Occupational Education (2). (Not offered in 1944-45.)

The purpose of this course is to secure, assemble, organize, and interpret data relative to the scope, character and effectiveness of occupational education.

*Alternate courses offered by the College of Engineering.

Ind. Ed. 168. Trade or Occupational Analysis (3). Spring, Summer.

Provides a working knowledge of occupational and job analysis which is basic in organizing industrial education courses of study. This course should precede Ind. Ed. 169.

Ind. Ed. 169. Construction of Vocational and Occupational Courses of Study (3). (Not offered in 1944-45.)

Surveys and applies techniques of building and reorganizing courses of study for effective use in vocational and occupational schools.

Ind. Ed. 170. Principles and Practices of Vocational Education (3). Summer.

The course develops the vocational education movement as an integral phase of the American program of public education.

Ind. Ed. 171. History of Vocational Education (3). (Not offered in 1944-45.)

An overview of the development of vocational education from primitive times to the present. The evolution of industrial arts is also considered.

Voc. Ed. 220. Organization, Administration, and Supervision of Vocational Education (3). (Not offered in 1944-45.)

This course surveys objectively the organization, administration, supervision, curricular spread and viewpoint, and the present status of vocational education. Alternate, Ed. 200.

Voc. Ed. 236. Seminar in Vocational Education (3). (Arranged.)

This seminar deals with the issues and functions of vocational education, particularly in respect to the emerging changes in educational planning on the secondary school level. Opportunity is given to students majoring in Industrial Education to write one of the seminar reports required for the degree of Master of Education.

Voc. Ed. 240. Research in Vocational Education (3). (Arranged.)

Direction will be provided for persons currently engaged in research in vocational education.

ENGLISH LANGUAGE AND LITERATURE

Eng. 1, 2, 3. Survey and Composition (9). Repeated in all quarters. Prerequisite, three units of high school English and successful passing of the qualifying examination given by the department, or successful completion of **Eng. A.** Required of all students.

A study of style, syntax, spelling, and punctuation, combined with an historical study of English and American literature of the nineteenth and twentieth centuries. Written themes, book reviews, and exercises.

Eng. A. Special Preparatory Course (0). Fall, Winter, Spring. Prerequisite, three units of high school English. Required of all students who

fail to pass the qualifying examination. Students who show sufficient progress after four weeks of **Eng. A** will be transferred to **Eng. 1.** Others will continue with **Eng. A** for one quarter. The department reserves the right to transfer from **Eng. 1** to **Eng. A** students who make unsatisfactory progress.

A laboratory course in grammatical and rhetorical principles and remedial reading designed to help students whose preparation has been insufficient for **Eng. 1.** Exercises, precis writing.

Eng. 4, 5, 6. Survey and Composition (3, 3, 3). Repeated in all quarters. One general lecture given by various members of the department; two quiz sections. Prerequisite, **Eng. 1, 2, 3.**

A continuation of work in composition based on the work accomplished in **Eng. 1, 2, 3.** An historical study of English literature from the beginning to the Romantic Age. Themes, book reports, conferences.

Eng. 7, 8. Expository Writing (3, 3). Repeated in all quarters. Prerequisite, **Eng. 1, 2, 3.**

A study of the principles of exposition. Analysis and interpretation of the expository essay. Themes, papers, and reports. The first quarter is not prerequisite to second quarter.

Eng. 10. Introduction to Narrative Literature (3). Spring. Prerequisite, **Eng. 1, 2, 3.**

An intensive study of representative stories, with lectures on the history and technique of the short story and of other narrative forms.

Eng. 11, 12. Survey of American Literature (3, 3). Winter, Spring. Prerequisite, **Eng. 1, 2, 3.**

First quarter, American thought and expression from 1607 to 1865, with emphasis upon colonial cultural patterns, upon the rise of nationalism, and upon sectional conflict. Reports and term paper.

Second quarter, emphasis upon the changing social forces which influenced American writers after 1865. Reports and term paper.

Eng. 13, 14. Shakespeare (3, 3). Fall, Winter. Prerequisite, **Eng. 1, 2, 3.**

First quarter, eleven significant early plays, illustrating the drama as a distinct form of art. Dramatic criticism; preparation of acting script; experimental production.

Second quarter, ten significant late plays.

Eng. 15. College Grammar (5). Fall, Spring (repeated). Prerequisite, **Eng. 1, 2, 3.**

Studies in the descriptive grammar of modern English.

Eng 16. The Contemporary Novel (2). (Not offered in 1944-45.) Prerequisite **Eng. 1, 2, 3.**

A study of the contemporary novel in Britain, America and on the Continent.

For Advanced Undergraduates

Eng. 50, 51. The Novel (3, 3). Summer, Fall. Prerequisite, **Eng. 4, 5, 6.**

A study of the novel in England and on the Continent.

Eng. 52. Children's Literature (2). Summer. Prerequisite, **Eng. 1, 2, 3.**

A study of the literary values in prose and verse for children.

Eng. 54, 55. Play Production (2, 2). Fall, Winter. Prerequisite, **Eng. 4, 5, 6.**

The theory and practice of acting and directing.

Eng. 57. Types of English Literature (3). Winter. Prerequisite, **Eng. 4, 5, 6.**

An historical and critical survey of the principal types of English literature, with especial attention to the influence of classical myths and legends and of classical literary ideals upon English and American writers.

For Advanced Undergraduates and Graduates

Eng. 101. History of the English Language (5). Summer, Winter (repeated). Prerequisite, **Eng. 15.**

An historical survey of the English language; its nature, origin, and development, with special stress upon structural and phonetic changes in English speech and upon rules which govern modern usage.

Eng. 102. Old English (3). Fall. Prerequisite, **Eng. 15.**

A study of Old English grammar and literature. Lectures on the principles of phonetics and comparative philology.

Eng. 103. Beowulf (3). Winter. Prerequisite, **Eng. 102.**

A study of the Old English epic in the original.

Eng. 104. Chaucer (3). Fall. Prerequisite, **Eng. 4, 5, 6.**

A study of the *Canterbury Tales, Troilus and Criseyde,* and the principal minor poems, with lectures and readings on the social background of Chaucer's time.

Eng. 105. Medieval Drama in England (3). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.**

A study of the development of medieval English drama from its beginning to 1540. Class discussion of significant plays, outside reading, reports.

Eng. 106. Elizabethan Drama (3). Spring. Prerequisite, **Eng. 4, 5, 6.**

A study of the change in spirit and form from 1540 to 1640, as seen in the works of the most important dramatists other than Shakespeare.

Eng. 107. Renaissance Poetry and Prose (3). Summer. Prerequisite, **Eng. 4, 5, 6.**

A study of the literary manifestations of humanism and the new national spirit in sixteenth-century England.

Eng. 108. Milton (3). Spring. Prerequisites, Eng. 4, 5, 6.

A study of the poetry and the chief prose works.

Eng. 109. Literature of the Seventeenth Century to 1660 (3). Summer. Prerequisite, **Eng. 4, 5, 6.**

A study of the chief prose writers and of the Metaphysical and Cavalier traditions in poetry.

Eng. 110. The Age of Dryden (2). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.**

This course emphasizes the relation of literature to the philosophical movements of the age.

Eng. 111, 112. Literature of the Eighteenth Century (3, 3). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.**

First quarter, readings in the period dominated by Defoe, Swift, Addison, Steele, Pope.

Second quarter, Dr. Johnson and his Circle; The Rise of Romanticism; and the Letter Writers.

Eng. 113, 114. Prose and Poetry of the Romantic Age (3, 3). Fall, Winter. Prerequisite, **Eng. 4, 5, 6.**

Fall quarter, a study of the development of the romantic movement in England as exemplified by the prose and poetry of Wordsworth, Coleridge, Lamb, DeQuincey, and others; the revolution toward democracy.

Winter quarter, a study of the later Romantic writers, including Byron, Shelley, Keats, and others.

Eng. 115. Scottish Poetry (2). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.** No knowledge of the Scottish language required.

Readings in the Scottish Chaucerians.

Eng. 116, 117. Victorian Prose and Poetry (3, 3). Spring, Summer. Prerequisite, **Eng. 4, 5, 6.**

A study of the chief English authors of the Nineteenth Century from the close of the Romantic Period.

Eng. 118. Modern and Contemporary British Poets (3). Winter. Prerequisite, **Eng. 4, 5, 6.**

A study of the chief English and Irish poets of the Twentieth Century.

Eng. 119. Tennyson and Browning (3). Summer. Prerequisite, **Eng. 4, 5, 6.**

A study of the lyrics and some of the longer works of the two major Victorian poets.

Eng. 123. Modern Drama (3). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.**

A survey of the English drama during the two centuries from 1660 to 1860. Class discussion of significant plays; outside readings, reports.

Eng. 124. Contemporary Drama (3). Fall. Prerequisite **Eng. 4, 5, 6.**

A study of significant European and American dramatists from Ibsen to O'Neill. Class discussion of significant plays; outside reading, reports.

Eng. 125. Emerson, Thoreau, and Whitman (3). (Not offered 1944-45.) Prerequisite, **Eng. 11, 12.**

A study of the major writings of Emerson, Thoreau, and Whitman, with emphasis on transcendentalism, idealism, and democracy.

Eng. 126. American Fiction (3). (Not offered 1944-45.) Prerequisite, **Eng. 11, 12.**

Historical and critical study of the short story and novel in the United States from 1789 to 1920.

Eng. 127. Contemporary American Poetry and Prose (3). Spring. Prerequisite, **Eng. 11, 12.**

Tendencies and forms in non-dramatic literature since 1920.

Eng. 128. American Drama (3). (Not offered 1944-45.) Prerequisite, **Eng. 11, 12.**

Historical study of representative American plays and playwrights, from 1787 to 1920.

Eng. 134. Playwriting (2). Spring. Two lectures. Prerequisite, **Eng. 1, 2, 3.**

Practice in the construction of one-act plays.

Eng. 135. Creative Writing (3). Fall, Spring. Prerequisite, **Eng. 4, 5, 6.**

Theory and practice in the short story and lyric, with some study of the novelette and radio verse drama at the election of the class. Major students in English must elect either this course or Eng. 136.

Eng. 136. Magazine Writing (3). Summer. Prerequisite, **Eng. 4, 5, 6.**

The production and marketing of such literature forms as the magazine article, the personal essay, the biographical essay, and the book review.

Eng. 137. Advanced Creative Writing (3). Winter. Prerequisite, **Eng. 135 or 136;** open to other advanced students by permission of the instructor after submission of an original composition. This course may be taken twice for credit.

Study and exercise in original literary expression as an interpretative art.

Eng. 140. Major American Poets (3). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.**

Intensive study of the poetry and poetic theories of the major American poets since Bryant.

Eng. 141. Major American Prose Writers (3). (Not offered 1944-45.) Prerequisite, **Eng. 4, 5, 6.**

Intensive study of the major non-fiction prose writers of nineteenth-century United States.

For Graduates

Eng. 200. Seminar in Special Studies (2-5). (Arranged.) Credit proportioned to the importance of the problem assigned.

Work under personal guidance in some problem of especial interest to the graduate student, but not connected with the thesis.

Eng. 201. Research (2-6). (Arranged.) Credit proportioned to the amount of work done and results accomplished.

Original research and the preparation of dissertations for the doctor's degree. As requested.

Eng. 202. Middle English Language (3). Spring. Prerequisite, **Eng. 102, 103.**

A study of readings of the Middle English period with reference to etymology and syntax.

Eng. 203. Gothic (3). Summer. Prerequisite, **Eng. 102.**

A study of forms and syntax, with readings from the Ulfilas Bible. Correlation of the Gothic speech sounds with those of the Old English.

Eng. 204. Medieval Romance in England (3). (Not offered 1944-45.)

Lectures and readings in the cyclical and non-cyclical Medieval England, and their sources, including translations from the Old French.

Eng. 205. Seminar in Sixteenth Century Literature (3). Fall.

Studies and problems in sixteenth-century literature other than Shakespeare.

Eng. 206. Seminar in Elizabethan Drama (3). (Not offered 1944-45.)

Lectures and readings in the drama (not including Shakespeare) from about 1550 to the closing of the theatres in 1642.

Eng. 207. Seminar in Shakespeare (3). Winter. Prerequisite, **Eng. 11 and 12, or equivalent.**

Studies and problems in Shakespeare.

Eng. 208. Seminar in Eighteenth Century Literature (3). (Not offered 1944-45.)

Intensive study of one man's work or of one important movement of the century.

Eng. 209. Seminar in American Literature (3). (Not offered 1944-45.)

Critical and biographical problems in nineteenth-century American literature.

Eng. 210. Seminar in the Romantic Period (3). Spring. One discussion period of two hours. Prerequisite, **Eng. 113, 114,** or equivalent satisfactory to the instructor.

Special studies of problems or persons associated with the Romantic movement.

Eng. 211. Seminar in the Victorian Period (2-3). (Not offered 1944-45.) Prerequisite, **Eng. 116, 117,** or the permission of the instructor.

Special studies of problems or persons in the Victorian age. The subject matter of the course will vary with the interests of the class.

Eng. 212. Old English Poetry (2-3). (Not offered 1944-45.) Prerequisite, **Eng. 102,** or equivalent.

A study of Old English poetic masterpieces other than *Beowulf.*

Eng. 213. Bibliography (2).. (Not offered 1944-45.)

A study of methods of research and standard bibliographical works. Required of all candidates for advanced degrees.

ENTOMOLOGY

Ent. 1. Introductory Entomology (4). Two lectures and two laboratory periods a week. Fall, Spring, Summer. Prerequisite, General Zoology desirable.

The position of insects in the animal kingdom, their gross structure, classification into orders and the principal families, their general economic status. Fee, $3.00.

Ent. 2. Insect Morphology (2). Two laboratory periods a week. Fall. Prerequisite, Ent. 1.

Intensive study of the external anatomy of the grasshopper. Less intensive study of internal anatomy and comparison with homologous structures of other insects in preparation for insect taxonomy. Fee, $2.00.

Ent. 3, 4. Insect Taxonomy (3, 3). Two laboratory periods a week. Winter, Spring. Prerequisite, Ent. 2.

Intensive study of the classification of the orders and principal families based on individual collections supplemented by typical material from the department collections. Fee, $2.00.

Ent. 5. Apiculture (4). Two lectures and two laboratory periods a week. Spring. Prerequisite, Ent. 1 desirable.

A study of the life-habits, yearly cycle, behavior and activities of the honeybee. The value of the bee in the pollination of economic plants and in the production of honey and beeswax. Fee, $3.00.

Ent. 6. Advanced Apiculture (4). Two lectures and two laboratory periods a week. Summer. Prerequiiste, Ent. 5.

The theory and practice of apiary management. Designed for the student who wishes to keep bees or requires a practical knowledge of bee management. Fee, $4.00.

For Advanced Undergraduates and Graduates

Ent. 101. Economic Entomology (3). Winter. Prerequisite, consent of the department.

An intensive study of the theory and problems of applied entomology, including life history, ecology, behavior, distribution, parasitism and control.

Ent. 103, 104. Insect Pests (4, 4). Two lectures and two laboratory periods a week. Winter, Spring. (Not offered 1944-45.)

A comprehensive study of the principal pests of crops, livestock, the household, man and forests. Fee, $2.00.

Ent. 105. Medical Entomology (3). Two lectures and one laboratory period a week. Spring, Summer. Prerequisite, consent of the department.

The relation of the Arthropoda to disease of man, both directly and as vectors of pathogenic organisms. The fundamentals of parasitology and sanitation as they are related to entomology. The control of pests of man. Fee, $3.00.

Ent. 107. Insecticides (3). Winter. Prerequisites, Ent. 1 and elementary organic chemistry.

The development and use of contact and stomach poisons, fumigants and other important chemicals, with reference to their chemistry, toxic action, compatability, and host injury. Recent research emphasized.

Ent. 109. Insect Physiology (3). Three lectures, occasional demonstrations. Fall. Prerequisite, consent of the department.

The functioning of the insect body with particular reference to blood, circulation, digestion, absorption, excretion, respiration, reflex action and the nervous system, and metabolism.

Ent. 110, 111. Special Problems (2, 2). Winter, Spring, Summer. Prerequisite, to be determined by the department.

An intensive investigation of some entomological problem, preferably of the student's choice. Required of majors in entomology.

Ent. 112. Seminar (1-3). Fall, Winter, Spring. Prerequisite, senior standing.

Presentation of original work, review and abstracts of literature by major students in the department.

Ent. 113. Photomicography (2). Two laboratory periods a week and occasional lectures. Winter.

An elementary course in photomicography and macrophotography. Fee, $5.00.

For Graduates

Ent. 201. Advanced Entomology . Credit and prerequisite to be determined by the department. Summer, Fall, Winter, Spring.

Studies of minor problems in morphology, taxonomy and applied entomology, with particular reference to the preparation of the student for individual research.

Ent. 202. Research. Summer, Fall, Winter, Spring.

Required of graduate students majoring in Entomology. This course involves research on an approved project. A dissertation suitable for publication must be submitted at the conclusion of the studies as part of the requirements for an advanced degree.

Ent. 203. Insect Morphology (3-5). Three lectures, additional laboratory work and credit by special arrangement with the department. Winter.

Insect anatomy with special reference to function. Given in preparation for advanced work in physiology or research in morphology.

Ent. 205. Insect Ecology (3). Two lectures and one laboratory period a week. Winter. Prerequisite, consent of the department.

A study of the fundamental factors involved in the relationship of insects to their environment. Emphasis is placed on the insect as a dynamic organism adjusted to its surroundings.

FARM FORESTRY

For. 1. Introduction to Forestry (3). Two lectures; one laboratory. (Not offered 1944-45.) Prerequisites, Bot. 1, 2.

A general survey of the field of forestry. Principles of forestry applied to the establishment, care, and protection of stands of timber. Identification and distribution of commercially important trees.

For Advanced Undergraduates

For. 50. Farm Forestry (2). (Not offered 1944-45.) Prerequisite Bot. 1.

A study of the principles and practices involved in managing woodlands on the farm. The course covers briefly the identification of trees; forest protection; management, measurement, and utilization of forest crops; nursery practice; and tree planting.

FOREIGN LANGUAGES AND LITERATURES

At the beginning of each quarter a placement examination is given for all students who have had some foreign language and wish to do further work in that language. By this means the Department assigns each student to the suitable level of instruction.

Any advanced course listed in this catalog will be given upon application and sufficient demand.

Classical Languages

A. Greek

Greek 1, 2, 3. Elementary Greek (9).

Reading and translation of simple prose, with accompanying lectures on grammar.

Greek 5, 6, 7. Greek Authors (9). Prerequisite, Greek 1, 2, 3, or equivalent.

Reading of parts of Xenophon, Plato, and the New Testament.

B. Latin

Latin 1, 2, 3. Elementary Latin (9).

This course is intended to give a substantial knowledge of Latin grammar and syntax. Part of Caesar's Gallic War is read in the third quarter.

Latin 5, 6, 7. Intermediate Latin (9). Prerequisite, Latin 1, 2, 3, or two entrance units in Latin.

Readings from Cicero, Ovid, and Virgil.

For Advanced Undergraduates

Latin 51. Review of Latin Literature (3). Prerequisite, Latin 5, 6, 7, or equivalent.

A review of Latin literature by selected readings in Latin from the origins down to the time of the late Republic.

Latin 52. Review of Latin Literature (3). Prerequisite, Latin 51, or equivalent.

Review of literature continued. Age of Augustus and the Early Empire.

Latin 61. Livy's History of Rome (3). Prerequisite, Latin 5, 6, 7, or equivalent.

Latin 62. Odes of Horace (3). Prerequisite, Latin 5, 6, 7, or equivalent.

Latin 71. Intermediate Latin Composition (3). Prerequisite, Latin 1, 2, 3, or equivalent.

For Advanced Undergraduates and Graduates

Latin 121. Roman Prose Writers (3). Prerequisite, six quarter hours beyond Latin 5, 6, 7.

Essays of Cicero and Seneca.

Latin 122. Roman Satire (3). Prerequisite, as for Latin 121.

Satires of Horace and Juvenal.

Latin 131. The Historian Tacitus (3). Prerequisite, twelve quarter hours beyond Latin 5, 6, 7.

Readings in "Agricola" and "Germania."

Latin 132. Martial, Selected Epigrams (3). Prerequisite, as for Latin 131.

Latin 141. Lucretius, "De Rerum Natura" (3). Prerequisite, as for Latin 131.

Latin 152. Catullus (3). Prerequisite, as for Latin 131.

Latin 171. History of the Latin Language (3). Prerequisite, two years of Latin or special permission.

This course is of interest to majors in English or Romance Languages. Lectures will be suited to the needs of the class.

Latin 172. Medieval Latin (3). Prerequisite, Latin 62, or equivalent, or special permission.

Excerpts from various types of medieval texts will be read, with attention to the linguistic peculiarities of this period.

Courses Given in English

Classics 21. Latin and Greek in Current English Usage (3).

This course aims to show how Latin roots are used in English and to make for more accurate use of English vocabulary. It also supplies the basic knowledge involved in the comprehension and creation of scientific nomenclature.

Classics 22. Latin and Greek in Current English Usage (3).

A continuation of the course outlined above. The study of the Latin language elements is continued and that of the Greek is added.

MODERN LANGUAGES

A. Chinese

Chinese 1, 2, 3. Elementary Chinese (9).

Elements of pronunciation, writing, and translation.

Chinese 4. Elementary Conversation (1). Prerequisite, the grade of A or B in Chinese 1, 2.

Qualified students who are interested in Chinese should take this course in conjunction with Chinese 3.

B. French

French 1, 2, 3. Elementary French (9). Students who offer two units in French for entrance, but whose preparation is not adequate for second-year French, receive half credit for this course.

French 4. Elementary Conversation (1). Prerequisite, the grade of A or B in French 1, 2.

Qualified students who are interested in French should take this course in conjunction with French 3.

French 5, 6, 7. Intermediate Literary French (9). Prerequisite, French 1, 2, 3, or equivalent.

Second-year French for students interested in literature or related fields. Students who expect to major or minor in French are required, however, to take French 17 in place of the third quarter of this course.

French 8, 9, 10. Intermediate Conversation (2, 2, 2). Admission by consent of instructor.

Practical exercises in conversation, based on material dealing with French history, art, literature.

French 11, 12, 13. Intermediate Scientific French (9). Prerequisite, French 1, 2, 3, or equivalent.

Second-year French for students specializing in the sciences. Students who expect to major or minor in French, however, are required to take French 17 in place of the third quarter of this course.

French 17. Grammar Review (3). Prerequisite, French 6, French 12, or permission of instructor.

This course gives the same credit as do French 7 and French 13, and may be taken in place of these courses. Required of second-year French students who expect to major or minor in French.

An intensive review of the elements of French grammar; verb drills; composition.

For Advanced Undergraduates

French 51, 52, 53. The Development of the French Novel (3, 3, 3).

Introductory study of the history and growth of the novel in French literature. French 51 covers the XVIIth Century, French 52 the XVIIIth Century, French 53 the XIXth Century.

French 54, 55, 56. The Development of the French Drama (3, 3, 3).

Introductory study of the history and growth of the drama in French literature. French 54 covers the XVIIth Century, French 55 the XVIIIth Century, French 56 the XIXth Century.

French 57, 58, 59. The Development of the Short Story in French (3, 3, 3).

French 61, 62, 63. French Phonetics (3). Prerequisite, French 1, 2, 3.

French 71, 72, 73. Intermediate Grammar and Composition (9). Three lectures. Prerequisite, French 7, or equivalent.

French 75, 76, 77. Introduction to French Literature (3, 3, 3). Prerequisite, French 5, 6, 7, or French 11, 12, 13.

An elementary survey of the chief authors and movements in French literature.

French 80, 81, 82. Advanced Conversation (5, 5, 5). Prerequisite, consent of instructor.

Intensive daily drill in the spoken language.

French 99. Rapid Review of the History of French Literature (1).

Weekly lectures stressing the high points in the history of French literature, art, and music.

For Advanced Undergraduates and Graduates

A more intensive survey of modern French literature is offered by means of rotating advanced courses offered as required by the needs of majors and minors.

French 101. French Literature of the Sixteenth Century (3).

The beginning and development of the Renaissance in France.

French 104. French Prose and Poetry of the Seventeenth Century (3).

A study of the genres dominated by La Fontaine, Pascal, Boileau, and the "écrivains mondains".

French 105. The Theatre in France in the Seventeenth Century (3).

A study of the development of the classical tradition as exemplified by the work of Corneille, Racine and Molière. A continuation of French 104.

French 106. French Life and Thought in the Seventeenth Century (3).

Study of contemporary memoirs and letters. A continuation of French 104 and French 105.

French 107. French Literature of the Eighteenth Century (3).

A study of the drama, poetry and novels of the period.

French 108. French Literature of the Eighteenth Century (3).

The philosophical and scientific movement from Saint-Evremond and Bayle to the French Revolution.

French 110. French Poetry in the Nineteenth Century (3).

A study of the Romantic, Parnassian and Symbolist movements.

French 111. French Prose in the Nineteenth Centruy (3).

A study of the evolution of the major prose genres, beginning with the Romantic period. A continuation of French 110.

French 112. The Theatre in France in the Nineteenth Century (3).

A study of the significant dramatic writers beginning with the Romantic period. A continuation of French 110 and French 111.

French 113. French Literature of the Twentieth Century (3).

Novel in the twentieth century.

French 114. French Literature of the Twentieth Century (3).

Drama and poetry from Symbolism to the present time.

French 115. French Thought in the Twentieth Century (3).

A survey of the intellectual, religious and political problems of present-day France, with special emphasis on their relation to contemporary literature.

French 121, 122, 123. Advanced Composition (9). Prerequisite, the grade of C or above in French 71, 72, 73. This course is required of all students preparing to teach French.

Advanced exercises in translation from English to French; letter-writing and free composition.

(Attention is also called to **Comparative Literature 105, Romanticism in France.)**

C. German

German 1, 2, 3. Elementary German (9). Students who offer two units in German for entrance, but whose preparation is not adequate for second-year German, receive half credit for this course.

German 4. Elementary Conversation (1). Prerequisite, the grade of A or B in German 1, 2.

German 5, 6, 7. Intermediate Literary German (9). Prerequisite, German 1, 2, 3, or equivalent.

Reading of narrative prose, grammar review, and oral and written practice.

German 8, 9, 10. Intermediate Conversation (2, 2, 2). Admission by consent of instructor.

The object of this course is to help the student acquire the ability to speak and understand simple colloquial German.

German 11, 12, 13. Intermediate Scientific German (9). Prerequisite, German 1, 2, 3, or equivalent.

Reading of technical prose, with some grammar review.

German 14. Military German (3). Prerequisite, German 1, 2, 3, or equivalent.

Reading material: articles on the German army, navy, air force.

German 15, 16. Germany, a Geographical, Historical, Political Survey (3, 3).

Aims to acquaint the student with the general background of Germany, its geography, history, politics, government, institutions, mentality of the people, etc.

German 17. Grammar Review (3).

For students who enter with three or more units in German, but who are not prepared to take German 71.

For Advanced Undergraduates

German 51, 52, 53. Advanced German (3, 3, 3). Prerequisite, German 5, 6, 7, or equivalent.

Rapid reading of novels and short stories from recent German literature.

German 54, 55, 56. Advanced German (3, 3, 3).. Prerequisite, German 5, 6, 7, or equivalent.

Rapid reading of dramas from recent German literature.

German 61. German Phonetics (1). Prerequisite, German 1, 2, 3, or equivalent.

German 71, 72, 73. German Grammar and Composition (6). Prerequisite, German 5, 6, 7, or equivalent.

A thorough study of the more detailed points of German grammar with ample practice in composition work. This course is required of students preparing to teach German.

German 75, 76, 77. Introduction to German Literature (3, 3, 3). Prerequisite, German 5, 6, 7, or equivalent.

An elementary survey of the history of German literature.

German 80, 81, 82. Advanced Conversation (5, 5, 5). Prerequisite, consent of instructor.

Intensive daily drill in the spoken language.

German 99. Rapid Review of the History of German Literature (1).

Weekly lectures stressing the high points in the history of German literature, art, and music. Rapid review for majors.

For Advanced Undergraduates and Graduates

German 107, 108, 109. German Literature of the Eighteenth Century (3, 3, 3).

German 110, 111, 112. German Literature of the Nineteenth Century (3, 3, 3).

German 113, 114, 115. Contemporary German Literature (3, 3, 3).

(Attention is also called to Comparative Literature 106, **Romanticism in Germany,** and Comparative Literature 107, **The Faust Legend in English and German Literature.)**

D. Italian

Italian 1, 2, 3. Elementary Italian (9). Open to freshmen. Also recommended for advanced students in French and Spanish.

Italian 4. Elementary Conversation (1). Prerequisite, the grade of A or B in Italian 1, 2.

E. Portuguese

Portuguese 1, 2, 3. Elementary Portuguese (9).

Portuguese 4. Elementary Conversation (1). Prerequisite, the grade of A or B in Portuguese 1, 2.

F. Russian

Russian 1, 2, 3. Elementary Russian (9).

Russian 4. Elementary Conversation (1). Prerequisite, the grade of A or B in Russian 1, 2.

G. Spanish

Spanish 1, 2, 3. Elementary Spanish (9). Students who offer two units in Spanish for entrance, but whose preparation is not adequate for second-year Spanish, receive half credit for this course.

Spanish 4. Elementary Conversation (1). Prerequisite, the grade of A or B in Spanish 1, 2.

Spanish 5, 6, 7. Intermediate Spanish (9). Prerequisite, Spanish 1, 2, 3, or equivalent.

Spanish 8, 9, 10. Intermediate Conversation (2, 2, 2). Admission by consent of instructor. Qualified students who expect to take advanced work in Spanish literature should take this course in conjunction with Spanish 5, 6, 7.

Practical exercises in conversation based on material dealing with Spanish history, art, and music.

Spanish 17. Grammar Review (3). For students who enter with three or more units in Spanish, but who are not prepared to take Spanish 71.

For Advanced Undergraduates

Spanish 61. Spanish Phonetics (1). Prerequisite, Spanish 1, 2, 3, or equivalent.

Spanish 71, 72, 73. Intermediate Composition and Conversation (9). Prerequisite, Spanish 5, 6, 7, or equivalent.

Oral and written composition. This course is required of students preparing to teach Spanish.

Spanish 75, 76, 77. Introduction to Spanish Literature (3, 3, 3).

An elementary survey of Spanish literature.

Spanish 80, 81, 82. Advanced Conversation (5, 5, 5). Prerequisite, consent of instructor.

Intensive daily drill in the spoken language.

Spanish 99. Rapid Review of the History of Spanish Literature (1).

Weekly lectures stressing the high points in the history of Spanish literature, art and music. A rapid review for majors.

For Advanced Undergraduates and Graduates

Spanish 101. Epic and Ballad (3).

The legends and heroic matter of Mediaeval Spain.

Spanish 104. The Drama of the Golden Age (3).

Spanish 105. The Spanish Novel of the Golden Age (3).

Spanish 106. The Poetry of the Golden Age (3).

Spanish 107. The Spanish Mystics (3).

Spanish 108. Lope de Vega (3).

Spanish 109. Cervantes (3).

Spanish 110. The Poetry in the Nineteenth Century (3).

Spanish 111. The Novel in the Nineteenth Century (3).

Spanish 112. Drama in the Nineteenth Century (3).

Spanish 113. The Modern Novel (3).

Spanish 114. Modern Poetry (3).

Spanish 115. Modern Spanish Thought (3).

Essays and critical writings of the XXth Century. The Generation of 1898.

Spanish 116. Modern Drama (3).

Spanish 121, 122, 123. Advanced Composition (9). Prerequisite, Spanish 71, 72, 73, or the consent of the instructor.

Spanish 151, 152, 153. Latin-American Literature (3, 3, 3).

Spanish 151 deals with the novel, Spanish 152 with poetry, Spanish 153 with the essay.

GEOLOGY

Geol. 1. Geology (3). Fall. Prerequisite, Chem. 1, 3.

A study dealing primarily with the principles of dynamical and structural geology. Designed to give a general survey of the rocks and minerals composing the earth; the movement within it, and its surface features and the agents that form them.

Geol. 2. Engineering Geology (2). Fall. Required of sophomores in civil engineering.

The fundamentals of geology with engineering applications.

HISTORY

H. 1, 2, 3. A Survey of Western Civilization (3, 3, 3). Three hours a week. For freshmen and sophomores; open to upper classmen by special arrangement. It may be entered any quarter.

A general course covering the broad movements of European history which contributed to the formation of modern institutions. Recommended for all students who expect to major in history.

H. 4, 5, 6. History of England and Great Britain (3, 3, 3). Three hours a week. Fall, Winter, Spring. For freshmen and sophomores; open to upper classmen by special arrangement.

H. 7, 8, 9. American History (3, 3, 3). Fall, Winter, Spring, Summer. Freshmen may enter only if their curriculum specifically requires it.

For Graduates and Advanced Undergraduates

A. American History

H. 101. American Colonial Histroy (3). Fall. Prerequisites, H. 7, 8, 9, or the equivalent.

The settlement and development of colonial America to the middle of the eighteenth century.

H. 103. The American Revolution (3). Winter. Prerequisites, H. 7, 8, 9, or the equivalent.

The background and course of the American Revolution through the formation of the Constitution.

H. 105, 106, 107. Social and Economic History of the United States (3, 3, 3). (Not offered in 1944-45.) Prerequisites, H. 7, 8, 9, or the equivalent.

A synthesis of American life from the colonial period to the present.

H. 115. The Old South (3). Fall. Prerequisites, H. 7, 8, 9, or the equivalent.

A study of the institutional and cultural life of the ante-bellum South with particular reference to the background of the Civil War.

H. 116. The American Civil War (3). Winter. Prerequisites, H. 7, 8, 9, or the equivalent.

Military aspects; problems of the Confederacy; political, social, and economic effects of the war upon American society.

H. 117. Reconstruction and the New South (3). Spring. Prerequisites, H. 7, 8, 9, or the equivalent.

The problem of reconstruction in the North and South after the Civil War; evolution of the New South and problems of the present South.

H. 121, 122. History of the American Frontier (3, 3). Winter, Spring. Prerequisites, H. 7, 8, 9, or the equivalent.

A study of the influence of the westward movement in shaping American institutional development. First quarter, the trans-Alleghany West; second quarter, the trans-Mississippi West.

H. 125. The United States in the Twentieth Century (3). Fall. Prerequisites, H. 7, 8, 9, or the equivalent.

A study of the outstanding economic and social problems and of the cultural changes of the last fifty years.

H. 127, 128. Diplomatic History of the United States (3, 3). Spring, Summer. Prerequisites, H. 7, 8, 9, or the equivalent.

An historical study of the diplomatic negotiations and foreign relations of the United States. First quarter, from the Revolution to the Civil War; second quarter, from the Civil War to the present.

H. 129. The United States and World Affairs (3). Spring. Prerequisites, H, 7. 8, 9, or the equivalent.

A consideration of the changed position of the United States with reference to the rest of the world since 1917.

H. 133, 134. The History of American Ideas (3, 3). Fall, Winter, Spring, Summer. Prerequisites, H. 7, 8, 9, or the equivalent.

An intellectual history of the American people, embracing such topics as religious liberty, democracy and social ideas.

H. 135, 136, 137. Constitutional History of the United States (9). Three hours a week. (Not offered in 1944-45.) Prerequisites, H. 7, 8, 9, or the equivalent.

A study of the historical forces resulting in the formation of the Constitution, and of the development of American constitutionalism in theory and practice thereafter.

H. 141, 142. History of Maryland (3, 3). (Not offered in 1944-45.) Prerequisites, H. 7, 8, 9, or the equivalent.

First quarter, a survey of the political, social and economic history of colonial Maryland. Second quarter, Maryland's historical development and role as a state in the American Union.

H. 145, 146, 147. Latin-American History (3, 3, 3). Fall, Winter, Spring. Prerequisite, 9 hours of fundamental courses.

A survey of the history of Latin America from colonial origins to the present, covering political, cultural, economic, and social development, with special emphasis upon relations with the United States.

B. European History

H. 151, 152. History of the Ancient Orient and Greece (3, 3). (Not offered in 1944-45.)

First quarter, a survey of the ancient empires of Egypt and the Near East, with some attention to their economics, life and culture; second quarter, a similar treatment of Greek history and culture.

H. 153. History of Rome (3). (Not offered in 1944-45.)

A study of Roman civilization from the earliest beginnings through the Republic and down to the last centuries of the Empire.

H. 155, 156. Medieval Civilization (3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the permission of the instructor.

First quarter, from the fall of the Roman Empire to the Crusades; second quarter, from the eleventh to the thirteenth century.

H. 161, 162. The Foundations of Modern Culture (3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the permission of the instructor.

First quarter, the Renaissance and the Reformation; second quarter, the seventeenth and eighteenth centuries. The course will stress the cultural achievements in science, the arts, and literature during the different periods from 1250 to 1789.

H. 165, 166. Revolutionary and Napoleonic Europe (3, 3). Fall, Winter. Prerequisites, H. 1, 2, 3, or the equivalent.

First quarter, Revolutionary France and its influence on Europe, 1789-1795; second quarter, the Napoleonic regime and the balance of power, 1795-1815.

H. 171, 172, 173. Europe in the Nineteenth Century, 1815-1919 (3, 3, 3). Fall, Winter, Spring. Prerequisites, H. 1, 2, 3, or the equivalent.

A study of the political, economic, social and cultural development of Europe from the Congress of Vienna to the First World War.

H. 175, 176. Europe in the Twentieth Century (3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the equivalent.

A study of the political, economic, social and cultural development of Europe with special emphasis on the factors involved in the two World Wars.

H. 179, 180. Diplomatic History of Europe Since 1871 (3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the equivalent.

A study of European diplomacy, imperialism and power politics since the Franco-Prussian War.

H. 181, 182. History of Central Europe (3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the equivalent.

The history of Central Europe from 1600 to the present, with special emphasis on Germany and Austria.

H. 185, 186, 187. History of the British Empire (3, 3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the equivalent.

First quarter, the development of England's Mercantilist Empire and its fall in the war for American Independence (1783); second quarter, the rise of the Second British Empire and the solution of the problem of responsible self-government, 1783-1867; third quarter, the evolution of the British Empire into a Commonwealth of Nations, and the development and problem of the dependent Empire.

H. 191, 192. History of Russia (3, 3). (Not offered in 1944-45.) Prerequisites, H. 1, 2, 3, or the equivalent.

A history of Russia from the earliest times to the present day.

H. 193. History of the Near East (3). Summer. Prerequisites, H. 1, 2, 3, or the equivalent.

A study of the Balkans and of Turkey from earliest times to the present.

H. 195. The Far East (3). Summer.

A survey of institutional, cultural and political aspects of the history of China and Japan, and a consideration of present-day problems of the Pacific area.

H. 199. Proseminar in Historical Writing (3). Spring.

Discussions and term papers designed to acquaint the student with the methods and problems of research and presentation. The students will be encouraged to examine those phases of history in which they are most interested. Recommended to history majors.

For Graduates

H. 200. Research (3-6). Credit proportioned to the amount of work. (Arranged.)

H. 201. Seminar in American History (2, 2). (Arranged.)

H. 205, 206. Topics in American Economic and Social History (3, 3.) (Arranged.)

Readings and conferences on the critical and source materials explaining our social and economic evolution.

H. 211. The Colonial Period in American History (3). (Arranged.)

Readings and conferences designed to familiarize the student with some of the sources and literature of American Colonial History.

H. 215. The Old South (3). (Arranged.)

Readings and conferences designed to familiarize the student with some of the standard sources and the classical literature of the ante-bellum South.

H. 216. The American Civil War (3). (Arranged.)

Readings and conferences on the controversial literature of the Civil War. Attention is focused upon the conflicting interpretations and upon the social and economic impact of the war on American society. Opportunity is also given to read in the rich source material of this period.

H. 221. History of the West (3). (Arranged.)

Readings and conferences designed to give the student an acquaintance with some of the more important sources and some of the most significant literature of the advancing American frontier.

H. 233. Topics in American Intellectual History (3). (Arranged.)

Readings and conferences on selected phases of American thought, with emphasis on religious traditions, social and political theory, and the development of American ideas.

H. 250. Seminar in European History (2, 2). (Arranged.)

H. 255. Medieval Culture and Society (3). (Arranged.)

Readings and conferences designed to acquaint the student with the important literature and interpretations on such topics as feudalism, the medieval Church, schools and universities, Latin and vernacular literature, art and architecture.

H. 281. Topics in the History of Central Europe (3). Three periods a week. (Arranged.)

Readings and conferences in the history of Central Europe from Bismarck to the present, to acquaint the student with the leading primary and secondary sources. Special emphasis will be placed on the Bicmarckian and Hitlerian periods.

H. 285. Topics in the History of Modern England and Greater Britain (3). (Arranged.)

Readings and conferences on the documentary and literary materials dealing with the transformation of England and the growth and evolution of the British Empire since 1763.

H. 287. Historians and Historical Criticism (3). (Arranged.)

Readings and occasional lectures on the history of historical writing, the evolution of critical standards, the rise of auxiliary sciences, and the works of selected masters.

HOME ECONOMICS

Home Economics Lectures

H. E. 1. Home Economics Lectures (1)—Required of Home Economics freshmen. Fall.

Lectures, demonstrations, group and individual discussions on grooming and clothing budget for the college girl; personal adjustments; good study habits; social usage.

Textiles and Clothing

H. E. 10. Textiles (5)—Fall, Winter, Spring, Summer. Three lectures, two laboratories.

Study of textile fibers; standardization and labeling of textiles; collection and analysis of fabrics.

For Advanced Undergraduates and Graduates

H. E. 110, 111. Advanced Textiles (6)—Fall, Winter. One lecture, two laboratories. Prerequisite: H. E. 10, Chem. 31, 32, 33, 34.

Detailed study of physical and chemical properties of fibers; of standard testing methods for serviceability of fabrics; of textile finishes, color application, laundering, dry cleaning.

H. E. 112. Problems in Textiles (3)—Spring. One lecture, two laboratories. Prerequisite: H. E. 111.

Individual experimental problems in textiles.

H. E. 113. Consumer Problems in Textiles (3)—Fall, Summer. Two lectures, one laboratory. Prerequisite: H. E. 10 or consent of the instructor.

Evaluation, purchase and care of wearing apparel and household textiles; government specifications and regulations; field trips.

H. E. 20A. Clothing (3)—Fall, Winter, Spring, Summer. Three laboratories. Prerequisite: H. E. 10.

Wardrobe planning; interpretation and use of commercial patterns; making of garments involving difficult techniques of construction.

H. E. 20B.—Clothing (3)—Fall, Winter, Spring. Prerequisite: H. E. 10., or consent of the instructor.

Wardrobe planning; interpretation and use of commercial patterns; construction of simple garments.

H. E. 21. Clothing (3)—Winter, Spring, Summer. Three laboratories. Prerequisite: H. E. 20A or B.

Renovation; special problems in clothing construction.

For Advanced Undergraduates and Graduates

H. E. 120. Pattern Design (3)—Winter, Summer 1945. Three laboratories. Prerequisite: H. E. 20A or 20B.

Comparative study of commercial patterns; development and use of a foundation pattern; creation of designs in paper and cloth.

H. E. 121. Children's Clothing (2)—Fall, Summer 1944. Two laboratories Prerequisite: H. E. 20A or 20B.

Children's clothing from the standpoint of age, health, beauty, personality and economy.

H. E. 122. Draping (5)—Fall, Winter, Spring. Five laboratories. Prerequisite: H. E. 20A, H. E. 71, or equivalent.

Draping of garments in cloth on a dress form stressing style, design, and suitability to the individual.

H. E. 124. Tailoring (3)—Fall, Spring. Three laboratories. Prerequisite: H. E. 20A or 20B.

Construction of tailored garment requiring professional skill.

H. E. 125. Problems in Clothing (3)—Three lectures. Spring, Summer 1945. Prerequisite: Senior standing.

Physiological, psychological, artistic and economic aspects of family clothing; the business woman's wardrobe; individual demonstrations of clothing problems; reports on current literature in the clothing and allied fields.

Practical Art

H. E. 70. Design (3)—Fall, Winter, Spring, Summer. Three laboratories.

Art expression through the use of materials, such as opaque water color, wet clay, colored chalk, and lithograph crayon, which are conducive to free techniques. Elementary lettering, action figures, abstract design, and general composition study. Consideration of art as applied to daily living.

H. E. 71. Costume Design (3)—Fall, Winter, Spring, Summer. Three laboratories. Prerequisite: H. E. 70, or equivalent.

Clothing selection with relation to personality. Adaptation of changing fashions to the individual. Designing of costumes in mediums such as Conte and lithograph crayon, transparent and opaque water color, soft pencil, India ink, and three-dimensional materials. Survey of the fashion industry.

H. E. 72. Costume Illustration (3)—Fall, Summer. Three laboratories. Prerequisites: H. E. 70, H. E. 71, or equivalent.

Advanced techniques in rendering of fashion illustration.

H. E. 73. Simple Crafts (3)—Summer. Three laboratories.

Creative art expressed in clay modeling, plaster carving, metal working, paper mache modeling, wood burning, etc. Emphasis is laid upon inexpensive materials and tools and simple techniques, which can be pursued in the home.

H. E. 74. Survey of Art History (3)—Fall, Spring. Three lectures.

Study of historical evolution of furniture, domestic architecture, and costume. Illustrated lectures, assigned readings, making of picture notebook.

For Advanced Undergraduates and Graduates

H. E. 170, 171. Interior Design (6)—Fall and Winter, Winter and Spring. Three laboratories. Prerequisite: H. E. 70, H. E. 74.

Analysis of interiors as backgrounds for various personalities. Study of good and poor interiors. Trips to historic homes, a furniture factory, and retail house furnishing establishmens. Original floor plans and wall elevations drawn to scale and rendered in color.

H. E. 172. Advanced Interior Design (3)—Spring. Three laboratories. Prerequisites: H. E. 74, H. E. 170, 171.

Designing of rooms, including interior architecture, furniture, fabrics, accessories; scale drawing and color rendering in plan, elevation and perspective, or making of maquettes. Study of furniture manufacture and merchandising. Planning of exhibition rooms or houses when possible.

H. E. 174. Merchandise Display (3)—Fall, Winter, Spring, Summer. Three laboratories. Prerequisite: H. E. 70, or equivalent.

Practice in effective display of merchandise. Cooperation with retail establishments.

H. E. 175. Advanced Merchandise Display (3)—Fall, Winter, Spring, Summer. Three laboratories. Prerequisite: H. E. 174.

Advanced problems in the display merchandise.

H. E. 176. Advertising Layout and Store Coordination (3)—Fall. Three lectures. Prerequisite: H. E. 70, or equivalent.

Lettering, elementary figure sketching, and freehand perspective drawing applied to graphic advertising. Discussion of department and specialty store organization; lectures by retail executives from Baltimore and Washington.

H. E. 177. Store Experience (4)—Fall. 160 Clock hours, or 20 eight-hour days. Prerequisite: senior standing in Practical Art curriculum.

Selling, buying, advertising, or executive work, done under supervision in a specified department store.

H. E. 178. Radio in Retailing (3)—Fall. Three lectures. Prerequisites: Speech 1, 2, Eng. 1, 2, 3, junior standing.

Writing and production of promotional programs for the merchandising of wearing apparel and house furnishings. Collaboration with speech department staff and representatives of Washington and Baltimore broadcasting stations and retail stores.

H. E. 179. Upholstering and Slipcovering (3)—Summer. Three laboratories. Prerequisite: H. E. 170, 171.

Practice in upholstering. Students provide their own furniture and materials.

H. E. 185, 186. Individual Problems in Design (3, 3). Fall, Winter, Spring, Summer. Three lectures; by appointment. Prerequisites: H. E. 70, 71, 72, 74, 170, 171, 172 must precede or parallel this course.

Advanced design problems in the field of the student's major interest.

H. E. 196. Journalism in Home Economics (4)—Winter (Practical Art Students), Spring (other students). Two lectures, one laboratory. Prerequisites: Speech 1, 2, Eng. 1, 2, 3, junior standing.

Elements of journalism applied to newspaper, journal, and copy of particular interest to women.

H. E. 198. Graphic Design (3)—Fall. Three lectures. Prerequisites: H. E. 70, Eng. 1, 2, 3, junior standing.

A study of typography and its application.

HOME ECONOMICS EXTENSION

H. E. 190. Methods in Home Economics Extension (3)—Spring. Three lectures. Given under the direction of Venia M. Kellar and specialists. Prerequisite: Senior standing in the College of Home Economics.

HOME AND INSTITUTION MANAGEMENT

A. Home Management

H. E. 150, 151, 152. Management of the Home (9)—Fall, Winter, Spring, Summer. Three lectures.

The family and human relations; household organization and management; planning of time and money; housing; selection and conservation of equipment and furnishings.

H. E. 153. Practice in Management of the Home (3)—Fall, Winter, Spring, Summer. Arranged. Prerequisite: H. E. 150, 151, 152.

Six weeks experience in planning, guiding, directing and coordinating a household composed of a faculty member and a small group of students.

B. Institution Management

H. E. 160. Institution Organization and Management (3)—Fall. Two lectures, one laboratory. Prerequisites: H. E. 31, 32, 33, 150, 151, 152.

The organization and management of food service in hospitals, clubs, schools, cafeterias, and restaurants; management of room service in dormitories; organization of institution laundries.

H. E. 161. Institution Equipment and Food Purchasing (4)—Winter. Three lectures, one laboratory.

H. E. 162. Accounting and Food Control (3)—Spring. Two lectures, one laboratory.

H. E. 163. Institution Cookery (5)—Winter, Spring. Two lectures, three laboratories. Prerequisites: H. E. 31, 32, 33, 131, 135.

Application of principles of food preparation to large quantity cookery; study of standard technics; menu planning and costs; standardization of recipes; use of institutional equipment; practice in cafeteria counter service.

H. E. 164. Practice in Institution Management (3)—Fall, Winter, Spring, Summer. Arranged. Prerequisite: H. E. 161.

Practice work in one of the following: the University dining hall, tea room, hospital, cafeteria, or hotel. This must be done under direction for a specified length of time.

H. E. 165. The School Lunch (3)—Spring, Summer. Two lectures, one laboratory. Prerequisite: H. E. 31, 32, 33, 34, or 135.

The educational and nutritional aspects of the school lunch and its administration; equipment, finances and accounting; planning and preparation of menus.

FOODS AND NUTRITION

H. E. 30. Introductory Foods Study (5)—Fall. Two lectures, three laboratories. For students in other colleges and for majors in textiles and clothing and Practical Art.

H. E. 31, 32, 33. Foods (9)—Fall, Winter, Spring, Summer. One lecture, two laboratories. Prerequisite: Chem. 1, 3.

Composition, selection, and preparation of food, with a study of the scientific principles involved; analysis of recipes and study standard products.

H. E. 34. Elements of Nutrition (5)—Fall, Winter. Five lectures. For students registered in other colleges and for majors in Textiles and Clothing, and Practical Art.

For Advanced Undergraduates and Graduates

H. E. 130. Food Economics (2)—Winter. One lecture, one laboratory.

Sources of our food supply; buying food for the family.

H. E. 131. Meal Service (3)—Fall, Winter, Spring, Summer. One lecture, two laboratories. Prerequisite: H. E. 30 or 33.

Planning and serving meals for family groups in relation to nutritional needs and costs, includes simple entertaining.

H. E. 132. Demonstrations (3)—Winter Spring. Three laboratories. Prerequisites: H. E. 10, 20, 30, or 33.

Practice in demonstrations.

H. E. 133. Experimental Foods (5)—Winter, Summer 1945. Two lectures, three laboratories. Prerequisites: H. E. 31, 131.

A study of food preparation processes from the experimental viewpoint.

H. E. 134. Advanced Foods (5)—Spring. Two lectures, three laboratories. Prerequisite: H. E. 131.

Advanced study of manipulations of food materials.

H. E. 135. Nutrition (5)—Fall, Spring. Prerequisites: H. E. 33, Chem. 33, 34.

A scientific study of principles of human nutrition.

H. E. 136. Dietetics (5)—Fall, Winter. Three lectures, two laboratories. Prerequisite: H. E. 135.

A study of food selection for health, planning, and calculating dietaries for children and adults.

H. E. 137. Diet in Disease (5)—Winter. Five lectures. Prerequisite: H. E. 135.

Modifications of the principles of human nutrition to meet dietary needs of certain diseases.

H. E. 138. Child Nutrition (4)—Spring, Summer. Three lectures, one laboratory. Principles of human nutrition applied to growth and development of children and experience in nursery school.

For Graduates

H. E. 230. Readings in Nutrition (3)—Fall, Summer.

Reports and discussion of outstanding nutritional research and investigation.

H. E. 231. Seminar in Nutrition (3)—Spring, Summer.

Oral and written reports on current literature of nutrition.

H. E. 232. Advanced Experimental Foods (5)—Spring, Summer. Two lectures, three laboratories.

Includes experimental problems, special emphasis on use of Maryland products.

H. E. 233. Seminar in Food Preparation (3-5)—Spring, Summer.

Oral and written reports on current literature in food research.

H. E. 234. Research—Fall, Winter, Spring, Summer.

Credit to be determined by the amount and quality of the work done. May form basis of a thesis for an advanced degree.

H. E. 235. Nutrition—Spring, Summer.

Credit to be determined by the amount and quality of work done, Feeding experiments on laboratory animals.

HORTICULTURE

Hort. 1. General Horticulture (Vegetables) (3)—Fall. Two lectures and one laboratory period a week. Prerequisite, Botany 1.

A general basic course planned to give the student a background of methods and practices used in commercial vegetable production.

Hort. 2. General Horticulture (Fruits) (3)—Winter. Two lectures and one laboratory period a week. Prerequisite, Botany 1.

A general basic course planned to give the student a background of methods and practices used in the commercial production of fruit crops.

Hort. 3. General Horticulture (Ornamentals) (3)—Spring. Two lectures and one laboratory period a week. Prerequisite, Botany 1.

A course devoted to landscape development of the surburban home and farmstead and an introduction to floriculture and plant propagation.

Hort. 5, 6. Fruit Production (3, 3)—Fall, Winter, Spring. Two lectures, and one laboratory period a week.

A study of commercial varieties and the harvesting, grading, and storage of fruits. Principles and practices in fruit tree production.

Hort. 8. Vegetable Production (4)—Spring. Three lectures and one laboratory period a week. Prerequisites, Chem. 1, Bot. 1.

A study of the principles and practices of commercial vegetable production.

Hort. 10, 11, 12. Greenhouse Management (3, 3, 3)—Fall, Winter, Spring. Two lectures and one laboratory period a week.

A detailed study of greenhouse construction and management.

Hort. 14. Small Fruits (3-4)—Spring. Three lectures, one or 0 laboratory periods a week. Lectures may be taken without the laboratory.

A study of the principles and practices involved in the production of small fruits including grapes, strawberries, raspberries, blueberries, blackberries, and cranberries.

Hort. 16. Garden Flowers (3)—Spring. Two lectures and one laboratory period a week.

The various species of annuals, herbaceous perennials, bulbs, bedding plants, and roses and their cultural requirements.

Hort. 18, 19, 20. Commercial Floriculture (2, 2, 2)—Fall, Winter, Spring. One lecture and one laboratory period a week.

Growing and handling bench crops and potted plants, and the marketing of cut flowers.

Hort. 22. Landscape Gardening (3)—Fall.

The theory and general principles of landscape gardening and their application to private and public areas.

Hort. 23. Landscape Design (3)—Winter. One lecture and two laboratory periods a week. Prerequisite, Hort. 22.

A consideration of the principles of general landscape design supplemented by direct application in the drafting room.

Hort. 24, 25. Landscape Design (3, 3)—Spring, Fall. Three laboratory periods a week. Prerequisite, Hort. 23.

Advanced landscape design.

Hort. 26. Civic Art (3)—Winter. Two lectures and one laboratory period a week.

Principles of city planning and their application to village and rural improvements.

For Advanced Undergraduates

Hort. 55. Commercial Processing (4)—Fall. Three lectures and one laboratory period a week. Prerequisite, Chem. 1.

The fundamentals of canning, freezing, and dehydration of horticultural crops.

Hort. 56. Landscape Ornamentals and Floriculture (3)—Spring. Two lectures and one laboratory period a week.

A course dealing with the basic principles in the use of trees, shrubs, broad-leaved evergreens, evergreens, annual and perennial flowering plants in ornamental plantings.

Hort. 58. Elements of Camouflage (3)—Winter, Spring. Two lectures and one laboratory period a week.

The principles employed in the protective concealment of military and industrial installations from aerial observation and attack.

For Advanced Undergraduates and Graduates

Hort. 101, 102. Technology of Fruits (3, 3)—Fall, Winter. Prerequisite, Plant Phys. 101.

A critical analysis of research work in horticulture and applied work in plant physiology, chemistry, and botany.

Hort. 103, 104. Technology of Vegetables (3, 3)—Winter, Spring. Prerequisite, Plant Phys. 101.

For a description of these courses see the general statement under Hort. 101, 102.

Hort. 105. Technology of Ornamentals (3)—Winter. Prerequisite, Plant Phys. 101.

A study of the physiological plant processes as related to the growth flowering, and storage of floricultural and ornamental plants.

Hort. 106. World Fruits and Nuts (3)—Winter.

A study of the tropical and subtropical fruits and nuts of economic importance.

Hort. 107, 108, 109. Plant Materials (2, 2, 2)—Fall, Winter, Spring. One lecture and one laboratory period a week.

A field and laboratory study of trees, shrubs, and vines used in ornamental plantings.

Hort. 112. Canning Crops Technology (4)—Winter. Three lectures and one laboratory period a week. Prerequisites, Hort. 55 and Plant Phys. 101.

A course dealing with the more technical physico-chemical methods used in the study of the fundamentals or factors influencing the quality of raw products; physiological processes prior to and after blanching; and grade of processed product .

Hort. 114. Systematic Pomology (3)—Fall. Two lectures and one laboratory period a week.

A study of the origin, history, taxonomic relationships, and description of fruits.

Hort. 116. Systematic Olericulture (3)—Fall. Two lectures and one laboratory period a week.

A study of the classification and nomenclature of vegetable crops.

Hort. 118, 119. Seminar (1, 1)—Fall, Spring.

Oral presentation of the results of investigational work by reviewing recent scientific literature in the various phases of horticulture.

Hort. 122. Special Problems (2-4)—Fall, Winter, Spring. Credit according to work done.

For Graduates

Hort. 201, 202, 205. Experimental Pomology (3, 3, 3)—Fall, Winter, Spring. Prerequisite, Plant Phys. 101.

A systematic review of scientific knowledge and practical experience as applied to commercial practices in pomology.

Hort. 203, 204. Experimental Olericulture (3, 3)—Fall, Winter. Prerequisite, Plant Phys. 101.

A systematic review of scientific knowledge and practical experience as applied to commercial practices in olericulture.

Hort. 206. Horticultural Cyto-genetics (3)—Spring. Prerequisites, Zool. 120, Plant Phys. 101, Bot. 201, or equivalents.

A course dealing with the field of cyto-genetics in relation to horticulture.

Hort. 207. Methods of Horticultural Research (3)—Fall. Two lectures and one laboratory period a week.

A critical study of research methods which are or may be used in horticulture.

Hort. 208. Advanced Horticultural Research (2-12)—Fall, Winter, Spring, Summer. Credit given according to work done.

Hort. 209. Advanced Seminar (1-5)—Fall, Winter, Spring.

Oral reports with illustrative material are required on special topics or recent research publications in horticulture.

LIBRARY SCIENCE

L. S. 1. Library Methods (2)—Summer, Fall, Winter, Spring.

This course is intended to help students use libraries with greater facility and effectiveness. Instruction, given in the form of lectures and practical work, is designed to interpret the library and its resources to the student. The course considers the classification of books in libraries, the card catalogue, periodical literature and indexes. and certain essential reference books which will be found helpful throughout the college course and in later years.

MATHEMATICS

Math. 0. Basic Mathematics (0)—Summer, Fall, Winter, Spring. A problem course emphasizing the fundamental operations in arithmetic, algebra and geometry.

Math. 1. Introductory Algebra (0)—Summer, Fall, Winter Spring. Three hours a week. Prerequisite, one year of high school algebra. Open to students of engineering, and required of students who fail the qualifying examination in Math 15.

Fundamental operations, radicals, exponents, logarithms, quadratic equations, graphs, binomial theorem.

Math 2. Solid Geometry (0)—Summer, Fall, Winter, Spring. Three hours a week. Prerequisite, plane geometry.

Lines, planes, cylinders, the sphere, polyhedra.

Math. 7. Solid Geometry (3)—Fall. Three hours a week. Prerequisite, plane geometry. Open to students in the College of Education.

Lines, planes, cylinders, the sphere, geometry on the sphere, polyhedra.

Math. 10. Algebra (3)—Summer, Fall, Winter, Spring. Three hours or five hours a week. Prerequisite, one year of algebra. Students taking this course will register for five hours per week. At the end of two weeks students will continue to attend five hours or only three hours a week according as they fail or pass a qualifying examination.

Fundamental operations, factoring, linear equations, exponents, radicals, logarithms, quadratic equations, ratio, proportion and variation, binomial theorem.

Math. 11. Trigonometry (3)—Summer, Fall, Winter, Spring. Three hours a week. Prerequisite, Math. 10 or equivalent, or concurrent enrollment in Math. 10.

Trigonometric functions, identities, the radian and mil, graphs, addition formulas, solution of triangles.

Math. 12. Analytic Geometry (3)—Summer, Fall, Winter, Spring. Three hours a week. Prerequisite, Math. 10 and 11 or equivalent.

Rectangular coordinates, locus problems, the straight line and circle, conic sections, graphing, curve fitting.

Math. 14. Spherical Trigonometry and Navigation (3)—Fall, Spring. Three hours a week. Prerequisite, plane trigonometry.

Solution of spherical triangles with special emphasis on the mathematical principles underlying navigation.

Math. 15. College Algebra (5)—Summer, Fall, Winter, Spring. Five hours a week. Prerequisite, high school algebra completed. At the end of two weeks students failing a qualifying examination are required to drop this course and enroll in Math. 1.

Fundamental operations, factoring, linear equations, ratio and proportion, variation, exponents and radicals, logarithms, progressions, permutations, combinations, probability, determinants, theory of equations.

Math. 16. Plane and Spherical Trigonometry (5)—Summer, Fall, Winter, Spring. Five hours a week. Prerequisite, Math. 15 or equivalent.

Trigonometric functions, identities, the radian and mil, graphs, the addition formulas, solution of triangles, solution of spherical triangles.

Math. 17. Analytic Geometry (5)—Summer, Fall, Winter, Spring. Five hours a week. Prerequisite, Math. 15 and 16 or equivalent.

Rectangular coordinates, locus problems, the straight line and circle, graphs, transformation of coordinates, conic sections, polar coordinates, parametric equations, transcendental equations, solid analytic geometry.

Math. 18, 19. Pictorial Geometry (4)—Fall, Winter. Two hours a week. Open to students in the College of Education who elect mathematics as their major or minor.

The story of geometry, classical and modern, synthetic and analytic, presented by means of drawings made by the students themselves.

Math. 20, 21, 22. Calculus (15)—Summer, Fall, Winter, Spring. Five hours a week. Prerequisite, Math. 17 or equivalent.

Limits, derivatives, differentials, definite and indefinite integrals, partial derivatives, multiple integrals, infinite series, differential equations, geometrical and physical applications.

Math. 25. Elements of Mathematical Statistics (3)—Fall, Spring. Three hours a week. Prerequisite, one year of college mathematics.

A course in statistical methods covering the following topics: frequency distributions, averages and moments, measure of dispersion, the normal curve, curve fitting, correlation theory.

Math. 60, 61. Elementary Mathematics (4)—Summer, Fall. Two hours a week. Prerequisite, one year of college mathematics. Open to students in the College of Education who elect mathematics as their major or minor.

Plane geometry, trigonometry, number theory, algebra.

Math. 62, 63. College Mathematics (4)—Winter, Spring. Two hours a week. Prerequisite, two years of college mathematics. Open to students in the College of Education who elect mathematics as their major or minor.

A review of college mathematics, the objective being to integrate the material for the benefit of the prospective teacher.

Math. 64. Differential Equations for Engineers (5)—Summer, Fall, Winter, Spring. Five hours a week. Prerequisite, Math. 22 or equivalent. Required of all mechanical and electrical engineers.

Differential equations of the first and second orders with particular emphasis on their engineering applications, Fourier series.

Math. 65. Engineering Mathematics (3)—Not offered 1944-45. Three hours a week. Prerequisite, Math. 22 or equivalent.

Complex numbers, conformal mapping, Fourier series, linear differential equations of the first and second orders.

Math. 66. Applied Calculus for Chemists (3)—Not offered 1944-45. Three hours a week. Prerequisite, Math. 22 or equivalent.

The fundamental mathematical principles underlying problems of flow, thermodynamics, and physical chemistry.

Math. 70, 71, 72. Junior Tutorial (3)—Summer, Fall, Winter, Spring. One hour a week. Required of juniors majoring in mathematics.

Math. 80, 81, 82. Senior Tutorial (3)—Summer, Fall, Winter, Spring. One hour a week. Required of seniors majoring in mathematics.

A. Algebra

Math. 100, 101, 102. Higher Algebra (9)—Winter, Spring, Summer 1945. Three hours a week. Prerequisite, Math. 22 or equivalent.

Ratio, proportion and variation, determinants, mathematical induction, progressions, permutations and combinations, probability, binomial theorem, inequalities, infinite series, undetermined coefficients, partial fractions, summation of series, theory of equations.

Math. 103, 104. Introduction to Modern Algebra (6)—Not offered, 1944-45. Three hours a week. Prerequisite, Math. 22 or equivalent.

Number, groups, rings, fields, matrices.

Math. 200, 201, 202. Algebra (9)—Not offered 1944-45. Three hours a week. Prerequisite, Math. 100, 101, 102 or equivalent.

Linear dependence, matrices, quadratic forms, elementary divisors, groups, rings, fields, Galois theory.

Math. 250. Selected Topics in Algebra (3)—Three hours a week. Arranged.

B. Analysis

Math. 110, 111, 112. Advanced Calculus (9)—Winter, Spring, Summer, 1945. Three hours a week. Prerequisite, Math. 22 or equivalent.

Limits, continuous functions, differentiation and integration with application to mechanics, infinite series, Fourier series, functions of several variables, differential equations, with applications to mechanics and physics, multiple integrals, the theorems of Gauss and Stokes, the calculus of variations.

Math. 113, 114, 115. Differential Equations (9)—Spring, Summer, Fall 1944. Three hours a week. Prerequisite, Math. 22 or equivalent.

First and second order equations, successive approximations and existence theorems, systems of equations, the general linear equation, geometrical and physical applications, partial differential equations.

Math. 210, 211, 212. Functions of a Complex Variable (9)—Winter, Spring, Summer, 1945. Three hours a week. Prerequisite, Math. 110, 111, 112 or equivalent.

Complex numbers, infinite series, Cauchy-Riemann equations, conformal mapping, complex integral, the Cauchy theory, the Weierstrass theory, Riemann surfaces, algebraic functions, periodic and elliptic functions, the theorems of Weierstrass and Mittag-Leffler.

Math. 213, 214, 215. Functions of a Real Variable (9)—Spring. Summer, Fall 1944. Three hours a week. Prerequisite, Math. 110, 111, 112 or equivalent.

The real number system, point sets, the Heine-Borel theorem, continuous functions, derivatives, infinite series, uniform convergence, the Riemann integral, Jordan content and Lebesgue measure, the Lebesgue integral, Fourier series.

Math. 251. Selected Topics in Analysis (3)—Arranged. Three hours a week.

C. Geometry

Math. 120, 121. Advanced Analytic Geometry (6)—Spring, Summer 1944. Three hours a week. Prerequisite, Math. 22 or equivalent.

Linear and quadratic forms, conic sections and quadric surfaces.

Math. 123, 124, 125. Introduction to Projective Geometry (9)—Spring, Summer, Fall 1944. Three hours a week. Prerequisite Math. 22 or equivalent.

Elementary projective geometry largely from the analytic approach, projective transformations, cross ratio, harmonic division, projective coordinates, projective theory of conics, Laguerre's definition of angle.

Math. 126, 127. Introduction to Differential Geometry (6)—(Not offered 1944-45.) Three hours a week. Prerequisite, Math. 22 or equivalent.

The differential geometry of curves and surfaces with the use of vector and tensor methods, curvature and torsion, moving frames, curvilinear coordinates, the fundamental differential forms, covariant derivatives, intrinsic geometry, curves on a surface, dynamical applications.

Math. 220, 221. Differential Geometry (6)—(Not offered 1944-45.) Three hours a week. Prerequisite, Math. 126, 127 or equivalent.

Curves and surfaces, geometry in the large, the Gauss-Bonnet formula, ovaloids, surfaces of constant curvature, projective differential geometry.

Math. 223, 224. Topology (6)—Winter, Spring 1945. Three hours a week. Prerequisite, Math. 110, 111, 112 or equivalent.

Mathematics based on a system of axioms, abstract spaces, connectivity and separation properties, topological properties of Euclidean spaces, set theoretic and combinatorial methods, continuous transformations.

Math. 252. Selected Topics in Geometry and Topology (3)—Arranged. Three hours a week.

D. Applied Mathematics

Math. 130, 131, 132. Analytic Mechanics (9)—(Not offered 1944-45.) Three hours a week. Prerequisite, Math. 22 or equivalent.

Statics, kinematics, dynamics of a particle, elementary celestial mechanics, Lagrangian equations for dynamical systems of one, two and three degrees of freedom, Hamilton's principle, the Hamilton-Jacobi partial differential equation.

Math. 133, 134. Vector Analysis (6)—(Not offered 1944-45.) Three hours a week. Prerequisite, Math. 22 or equivalent.

Vector algebra, with applications to spherical trigonometry and solid geometry, vector fields of one, two and three parameters with applications to kinematics, surfaces, dynamics and potential theory.

Math. 135, 136. Probability (6)—(Not offered 1944-45.) Three hours a week. Prerequisite, Math. 22 or equivalent.

Combinatory analysis, total, compound and inverse probability, continuous distributions, theorems of Bernoulli and Laplace, applications to statistics and the theory of errors.

Math. 137, 138. Mathematical Statistics. (6)—(Not offered 1944-45.) Three hours a week. Prerequisite, Math. 22, 25 or equivalent.

The mathematical principles underlying modern statistical methods.

Math. 230, 231, 232. Applied Mathematics (9)—Spring, Summer, Fall 1944. Three hours a week. Prerequisite, Math. 110, 111, 112 or equivalent.

The subject material for this course will be chosen from one of the following fields: dynamics, elasticity, hydro-dynamics or the partial differential equations of mathematical physics.

Math. 233, 234. Tensor Analysis (6)—(Not offered 1944-45.) Three hours a week. Prerequisite Math. 126, 127 or equivalent.

Algebra and calculus of tensors, Riemann geometry and its generalizations, differential invariants, transformation groups, applications to mathematical physics, the theory of relativity.

Math. 253. Selected Topics in Applied Mathematics (3)—Arranged. Three hours a week.

Math. 240, 241. Seminar in the History of Mathematics (4)—Arranged. Open to first year graduate students.

This seminar aims at a triple objective: first, an integrating review of undergraduate mathematics; second, development in the student of a proper historical perspective and a critical attitude toward fundamental concepts; third, an interpretation of the mathematical masters of the past.

F. Colloquium and Research

Math. 260. Colloquium—Fall, Winter, Spring.

Math. 270. Research—Fall, Winter, Spring, Summer.

MILITARY SCIENCE AND TACTICS

Basic I Terms 1, 2, and 3 R. O. T. C. (3)—Every Quarter.

Two one hour periods of Infantry Drill and three one hour classroom periods. Subjects: Military Discipline, Customs and Courtesies; Interior Guard Duty; Organization of the Army; Rifle Marksmanship; Care of Clothing, Equipment, and Tent Pitching; Marches and Bivouacs; Defense Against Chemical Attack; Infantry Drill; Individual Security, Scouting, and Patrolling; Tactics of Small Units; Defense Against Air and Mechanized Attack; Field Fortifications; Night Operations; Map and Aerial Photograph Reading; Military Sanitation and Sex Hygiene; Safeguarding Military Information; Military Law.

Basic II Terms 1, 2, and 3 R. O. T. C. (3)—Every Quarter.

Two one hour periods of Infantry Drill and three one hour classroom periods. Subjects: Infantry Drill and Ceremonies; Tactical Training and Combat Organization; Rifle Marksmanship; Map and Aerial Photograph Reading; Administration; Mess Management; Methods of Speech; Application of Military Law.

M. I. 50 and M. I. 51. Advanced R. O. T. C.—Have been discontinued for the duration of the war.

MUSIC

Music 1. Music Appreciation (3)—Fall, Spring.

A study of all types of classical music with a view to developing the ability to listen and enjoy.

Music 2, 3. History of Music (1, 1)—Fall 2, Winter 3, Spring 2, Summer 3.

A course in the hostory of music covering the development of all forms of music from the Greeks to the present.

Music 4. Men's Glee Club (1)—Fall, Winter, Spring.

A total of eight credits may be earned.

Music 5. Women's Chorus (1)—Fall, Winter, Spring.

A total of eight credits may be earned.

Music 6. Orchestra (1)—Fall, Winter, Spring.

A total of eight credits may be earned.

Music 7, 8. Harmony (4)—Fall, Winter, Spring, Summer.

This course includes a study of major and minor scales, intervals, harmonic progressions, triades in root position and inversions and continuing through altered and mixed chords to modulation.

Music 9. Survey of Opera (3)—Winter, Summer.

The object of this course is to acquaint the student with the librettos, music and the composers of the standard opera.

Music 10. Band (1)—Fall, Winter, Spring.

A total of eight credits may be earned.

NATURAL AND HUMAN RESOURCES

N. H. R. 4. Regional Geography of the Continents (3)—Summer.

Classification of each continent into regions and description of the physical conditions and economic activities in each region; intended especially for teachers.

N. H. R. 61, 62, 63. Economic Geography (9)—Fall, Winter, Spring. Prerequisite Econ. 1, 2, 3, or equivalent; primarily for majors in geography.

An analysis from world point of view of productive occupations.

For Advanced Undergraduates and Graduates

N. H. R. 100. Physical Resources of the United States and Canada (3)—Fall.

The climate, land forms, soils and minerals. Two or three all day field trips are required.

N. H. R. 101. Land Utilization and Agricultural Geography, United States and Canada (3)—Winter.

Trends, by regions, in the use of land for crops, pasture and forest, also trends in size of farms and systems of farming. One or more field trips.

N. H. R. 102. The Geography of Manufacturing in the United States and Canada (3)—Spring.

The physical and economic factors which are associated with the location of manufacturing industries. One or more field trips.

Soc. 105. The Peoples of the United States and Canada (3)—Summer, Fall.

This fourth course in the series is offered by the Department of Sociology, which see for description.

N. H. R. 110. Middle America (3)—Fall.

Regional geography of Mexico, Central America and the islands of the Caribbean; an analysis of the physical and human resources.

N. H. R. 111. South America (3)—Winter.

Regional geography of the South American republics; an analysis of the physical and human resources.

N. H. R. 112. Recent Economic Trends in Latin America (3)—Spring.

An analysis of the improvements and expansion in grazing and farming, increased exploitation of mineral resources and industrialization.

N. H. R. 120, 121. Economic Geography of Europe (6)—Spring, Summer.

Physical resources, agricultural and industrial development; major economic regions and trade relations between regions and countries.

N. H. R. 122. Economic Geography of Africa (3)—Fall.

Physical resources and the existing stages of economic development economic potentialities.

Soc. 108. Population Problems of Europe and Africa (3)—Winter.

This fourth course in the series is offered by the Department of Sociology, which see for description.

For Graduates

N. H. R. 203. Advanced Physiography (3)—Fall.

A comparative study of major types of land forms, including genesis and economic significance.

N. H. R. 204. Advanced Climatology (3)—Winter.

A study of the climates of the world and associated economic activities.

Soils 103. Soil Geography (3)—Spring.

Offered in the Department of Agronomy and is recommended as the third in this series of courses in applied science.

A. E. 212, 213. Land Utilization and Agricultural Production (3, 2)—Fall, Winter.

This course, given by a member of the geographic staff, is offered in the Department of Agriculltture Economics which see for description.

A. E. 214. Consumption of Farm Products (3)—Spring.

This course, given by a member of the geographic staff, is offered in the Department of Agriculture Economics, which see for description.

N. H. R. 221. Seminar in Regional Geography (3, 3, 3)—Fall, Winter, Spring.

N. H. R. 222. Research Work.

The preparation of the "Economic Atlas of the World", a joint project of the University of Maryland, and the United States Department of Agriculture, provides facilities for graduate students to study under the guidance of experts in government departments, particularly in the Department of Agriculture, as well as in the University. It also provides a vehicle of publication for part or all of such research work. The sections of the Atlas in preparation during 1944-45 are wheat, rice, land utilization and population.

PHILOSOPHY

Phil. 1. Fundamentals of Philosophy (3)—Summer, Fall, Spring. Required course for premedical students. Open to others by special permission.

Problems pertaining to the study of man, presented with a constant regard for the needs of prospective students of medicine.

Phil. 2. Ethics (3)—Spring. Open to freshmen only by special permission.

An introductory course in philosophy, stressing its function in daily life, in education, in society, and in statecraft.

Phil. 11, 12. The Occidental Tradition (6)—Fall, Spring. Open to sophomores and upper-classmen who attained a 2.5 average in the previous quarter. Open to others only by special permission of their Dean and of the Department of Philosophy. By special permission, a student who has had one course in philosophy may register and get credit for either of the two quarters separately.

An introductory survey of the history of ideas in the Occident. First quarter: Ancient and medieval thought. Second quarter: Modern thought. The purpose of the course is to give students the conceptual means by which to integrate their collegiate growth, and to train them in the method of such integration.

For Advanced Undergraduates

Phil. 51. Metaphysics (3)—Fall, Spring. Prerequisite, one course in philosophy. May be taken simultaneously with the second quarter of Phil. 11, 12.

A course in philosophical thinking, designed for students desiring a clearer conception of basic reality, and for the needs of prospective teachers and theologians.

For Advanced Undergraduates and Graduates

Phil. 181, 182, 183, 184. Proseminar in Philosophy (3)—Summer, Fall, Spring. Two-hour seminar session, one hour tutorial. Or three lectures. Open to undergraduates only by special permission of the Department of Philosophy, and to graduates only after consultation with the Head of the Department of Philosophy.

The philosophical proseminar is designed for specially qualified undergraduates who have had the necessary preliminary work, and for graduate students desiring the help of philosophy in the study of their respective fields. The content of the course will be chosen so as to serve the needs of the group of students enrolled.

Phil. 191, 192. Reading in Philosophy (2, 2)—Summer, Fall, Spring. Individual library work, and tutorials. Prerequisite, three courses in philosophy, and the permission of the Department of Philosophy.

Individual work for especially qualified advanced students under supervision and with tutorial advice. Regular written reports and essays.

PHYSICAL EDUCATION FOR MEN

P. E. 30. History and Principles of Physical Education (5)—Fall.

Designed to give an overview of the history, principles, aims, and objectives of physical education from primitive to modern times.

P. E. 31, 33, 35. Physical Education Leadership (1)—Fall, Winter, Spring.

The basic elements of physical education leadership are studied; routine procedures involved in handling large groups in physical activities are discussed. The student is given experience in assisting in the required physical education program.

P. E. 40. Health (3)—Winter.

A personal hygiene course given to physical education majors with special emphasis on hygiene to be taught at high school and grade school level.

P. E. 50. Health (3)—Spring.

Community hygiene—a study of the causative factors of various diseases, means of transmission, and prevention of the same with a study of modern health methods.

P. E. 1 - 12. Physical Activities (1)—each quarter. Fall, Winter, Spring. Required of all men students.

An orientation course with a wide sampling of activities; emphasis on physical fitness. Remedial activities for those designated by the Student Health Service by arrangement.

P. E. 60. Theory and Practice of Gymnastics (3)—Fall. Prerequisite, P. E. 30.

Application of the science of physics is made to the bodily movements in man's every day life as well as to the more exacting motor skills of tumbling and gymnastics. Emphasis on methods of teaching gymnastics as well as student's skill in execution.

P. E. 41, 43, 45. Varsity Game Skills (2, (2), (3)—Prerequisite, P. E. 30.

Study and practice of the fundamental skills of interscholastic sports. Emphasis on technique of the skills and methods of teaching. P. E. 41—(2) Fall. Football and soccer, or crosscountry. P. E. 43—(2) Winter. Basketball and boxing. P. E. 45 (3) Spring. Baseball, track, and lacrosse.

P. E. 51. Mass Games Programs (2)—Winter. Prerequisites, P. E. 30, and P. E. 31, 33, 35.

A study of mass games for the various age and grade levels. Playground activities, recess periods, stunts, and public demonstrations are included.

P. E. 53. Organization of Intramurals (3)—Winter, Spring. Prerequisites, P. E. 30, P. E. 31, 33, 35.

Methods of organizing and administering an intramural sports program at the various school levels will be offered. Type of tournaments, leagues, awards, scoring systems, the projection and motivation of programs, and the handling of student leader personnel will be considered.

P. E. 100. Individual Game Skills (3)—Winter, Spring.

The technique of the "carry over" sports skills of handball, badminton,

tennis, golf, archery, etc., are studied and practiced with emphasis on methods for instructing these activities. Rules, strategies, practice schedules and social techniques will be emphasized.

P. E. 141, 143, 145. Varsity Team Organization—Prerequisites, P. E. 30, P. E. 41, 43, 45.

This course presents the theories of team play of the inter-school competitive games. Staff organization, practice schedules, systems of offense and defense, team coordination, strategies, problems of team morale, etc., will be emphasized. P. E. 141—(2) Fall. Football and soccer. P. E. 143—(2) Winter. Basketball and boxing, or swimming. P. E.—(3) Spring. Baseball, track, and lacrosse.

P. E. 131, 133, 135. Advanced Leadership (1)—Each quarter. Prerequisites, P. E. 31, 33, 35, P. E. 30.

Experience in working in the various phases of the required physical education and inter-mural sports activities under staff supervision. Includes officiating, testing, records.

P. E. 161. Youth Organizations (3)—Spring. Prerequisite, P. E. 30.

The various types of youth organizations. such as the Boy Scouts, Y.M.C.A., Boys Clubs, etc., will be covered with consideration for their aims, objectives, and basic principles. A study of types of summer camps, their organization, programs, and educational objectives will be given special emphasis.

P. E. 120. Mental Hygiene and Physical Education (3)—Prerequisites—Psych. 80, P. E. 30. Fall.

Emphasis is placed on the adjustment of instructional methods to the individual's emotional and social needs, and the creation of an atmosphere conducive to learning. Practical application of the laws of learning to the teaching of motor skills is discussed.

P. E. 171. Coordination and Administration of Physical Education. (3)—Spring. Prerequisite—P. E. 30.

Emphasis on the need for and methods of coordination of required physical education, intramurals, and inter-school athletic departments. The professional responsibilities of the physical education instructor as a part of the broad educational system will be emphasized. Problems of scheduling, of public relations, athletic eligibility, care of equipment, buildings and fields, finance, etc. are included.

P. E. 181. Training and Conditioning (2)—Fall, Winter. Prerequisites—P. E. 40 and P. E. 110.

Methods of prevention and treatment of injuries in sports are studied. Study and practice of methods of massage, taping, bandaging, along with training room regulation.

P. E. 160. Community and Industrial Recreation (3)—Spring.

This course offers a comparative study of the various types of community and industrial recreation programs. Planning and projection to fit local needs are emphasized.

PHYSICAL EDUCATION FOR WOMEN

Physical Activities (1)—Each quarter. Required of all women students entering the University on or after October, 1942.

Class activities may be elected from the following: soccer, speedball, hockey, volleyball, softball, basketball, tennis, swimming, archery, fencing, badminton, rhythmic fundamentals, modern dance, body mechanics, tumbling, physical fitness. Each student is required to take one quarter of the following, preferably during the first four quarters: rhythmic fundamentals, individual sport, team sport, physical fitness.

P. E. 32*. History of Dance (5)—Spring. Prerequisites—P. E. 52, 54, 56; P. E. 72, 74, 76.

Designed to give an overview of the development of dance from primitive to contemporary times. Students have experience in planning dances for specific historic periods. Students interested in drama and pageantry will find this course of value.

P. E. 42. Hygiene I (2)—Required of all freshmen women.

A course designed to acquaint the women students with individual behavior in relation to health.

P. E. 44. Hygiene II (2)—Required of all freshmen women.

A course concerned with the health of people as a group, and with the community, governmental and social organizations and activities which attempt to better the environmental factors of the community.

P. E. 46. Hygine III (2)—Prerequisites—P. E. 42, 44.

A course designed to consider more fully the physiological functions of the body in health and disease.

P. E. 52, 54, 56. Dance Techniques (1)—Each quarter.

A basic course which includes movement techniques of Modern Dance and a foundation in the principles of dance composition. Two periods per week.

P. E. 62, 64, 66. Techniques of Sport Skills (2)—Each quarter.

Theory and practice in the techniques and the teaching of sports. Hockey, soccer, basketball, badminton, track. Three periods per week.

P. E. 72, 74, 76. Dance Techniques (1)—Each quarter.

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*Open to men and women.

A continuation of P. E. 52, 54, 56. More advanced movements of the Modern Dance techniques are studied. Students have the opportunity to create and participate in simple group dances. Two periods per week.

P. E. 82, 84, 86. Technique of Sport Skills (2)—Each quarter.

A continuation of P. E. 62, 64, 66. Speedball, basketball, volleyball, softball, archery, tennis. Three periods per week.

P. E. 102, 104, 106. Technique of Sport Skills (1)—Each quarter.

A continuation of P. E. 82, 84, 86. Golf, fencing, swimming, bowling. Two periods per week.

P. E. 108. Recreational Activities (1)—Fall. Theory and practice in the techniques and the teaching of recreational games. Two periods per week.

P. E. 116. Organization and Administration of Physical Education (3)—Fall. Prerequisite—P. E. 30.

A study of current practice in curriculum building, organization of personnel, programs, intramurals and sports days. Administration of activities, equipment and facilities.

P. E. 122. Tumbling and Apparatus (2)—Winter.

A study of the teaching and techniques of marching, tumbling, stunts, calesthenics and apparatus. Three periods per week.

P. E. 124, 126, 128. Coaching and Officiating (2)—Each quarter. Prerequisites—P. E. 62, 64, 66; P. E. 82, 84, 86; P. E. 102, 104, 106.

Theory in coaching and officiating sports for women. Practice in the intramural programs of the University and in the schools in Washington, D. C. and Maryland. Opportunity for National Officials Ratings. Two lectures, two practice periods per week.

P. E. 132, 134, 136. Dance composition (1)—Each quarter. Prerequisites—P. E. 52, 54, 56,; P. E. 72, 74, 76.

This course is a practical laboratory in dance composition. Opportunity is provided to create and produce dances and to participate in group productions. Two periods per week.

P. E. 142, 144, 146. Methods in Dance (1)—Each quarter. Prerequisites—P. E. 52, 54, 56; P. E. 72, 74, 76.

This course is planned to assist students to develop procedures of teaching dance. The physical abilities and interests of various age levels are considered. Students have actual experience in teaching dance techniques, and in planning dance festivals related to the school or community interests. Two periods per week.

P. E. 148. Teaching Health (3)—Spring. Prerequisites—P. E. 42, 44, 46 or equivalent.

A study of materials and methods in health instruction and health supervision. Three periods per week.

PHYSICAL EDUCATION COURSES OPEN TO BOTH MEN AND WOMEN

P. E. 80. Kinesiology (5)—Spring. Prerequisite—Zool. 14, 15, Zool. 53.

The study and analysis of human motion conforming to the law of mechanics and principles of physiology and anatomy.

P. E. 140. Therapeutics (5)—Winter. Prerequisites—P. E. 80; Zool. 55.

A study of common structural abnormalities, corrective exercises and massage. Causes, prevention and correction of postural defects. Includes testing methods. Theory and Practice.

P. E. 150. Recreational Dance (1)—Winter, Spring.

This course includes American square and country dances, folk and tap dancing. It is planned to be of value to men and women interested in the social life of the school and community. Two periods per week.

P. E. 110. First Aid and Accident Prevention (5)

A study of safety in the home, on highways and streets, and in the school. Standard and Advanced Red Cross course in First Aid.

PHYSICS

Phys. 1, 2. General Physics (10)—Fall and Winter, Spring and Summer.

Dynamics, Heat and Sound first quarter. Light, Magnetism and Electricity second quarter. Two lectures, two recitations and one laboratory period a week. Required of students in premedical and predental curricula. Prerequisite, Math. 10 and 11 or 15 and 17. Laboratory fee $4.00 per quarter.

Phys. 3A. General Physics: Dynamics (5)—Every quarter. Four lectures; one laboratory.

Required of all students in the engineering curricula and of those with chemistry, mathematics and physics majors. Prerequisite, Math. 15, 16, 17. Math. 20 is to be taken concurrently. Laboratory fee $4.00 per quarter.

Phys. 4A. General Physics: Sound, Heat and Light (5)—Alternate quarters. Four lectures; one laboratory.

Required of all students in the engineering curricula and of those with chemistry, mathematics and physics majors. Prerequisite, Phys. 3A. Math. 21 is to be taken currently. Laboratory fee $4.00 per quarter.

Phys. 5A. General Physics: Magnetism and Electricity (5)—Alternate quarters. Four lectures; one laboratory.

Required of all students in the engineering curricula and of those with chemistry, mathematics and physics majors. Prerequisite, Phys. 3A. Math. 21 is to be taken concurrently if Phys. 5A is taken before Phys. 4A. Laboratory fee $4.00 per quarter.

Phys. 6, 7, 8. Introductory Physics (9)—Fall, Winter, Spring.

Dynamics, first quarter; Sound, Heat and Light, second quarter; Magnetism and Electricity, third quarter. Two lectures and experimental demonstrations, and one recitation period a week. This course does not satisfy the requirements of the professional schools. Prerequisites, Math. 0 or successful passing of the qualifying examination in elementary mathematics. Demonstration fee $2.00 per quarter.

For Advanced Undergraduates and Graduates

Phys. 104. Advanced Experiments (3)—Not offered 1944-45. One lecture, two laboratory periods a week. Prerequisites, Phys. 4A and 5A. Laboratory fee $8.00 per quarter.

Phys. 105, 106, 107. Theoretical Mechanics (6)—Fall, Winter, Spring quarters. Three lectures a week. Prerequisites, Phys. 4A and 5A and Math. 20.

Phys. 108. Optics (5)—Spring, repeated every third quarter. Three lectures, two laboratory periods a week. Prerequisites, Phys. 4A and 5A Math. 20. Laboratory fee $8.00 per quarter.

Phys. 109, 110. Electricity (10)—Spring, Summer. Two lectures, two laboratory periods a week. Prerequisites, Phys. 4A and 5A and Math. 20. Laboratory fee $8.00 per quarter.

Phys. 111. Sound (5)—Winter, repeated every third quarter. Three lectures and two laboratory periods a week. Prerequisites, Phys. 4A and 5A and Math. 20. Laboratory fee $8.00 per quarter.

Phys. 112, 113, 114. Electron Physics (9)—Not offered 1944-45. Two lectures, one laboratory period a week. Prerequisites, Phys. 4A and 5A and Math. 20. Laboratory fee $4.00 per quarter.

Phys. 115. Heat (5)—Fall, repeated every third quarter. Three lectures, two laboratory periods a week. Prerequisites, Phys. 4A and 5A and Math. 20. Laboratory fee $8.00 per quarter.

Phys. 117, 118. Applied Machanics (6)—Fall, Winter. Three lectures a week. Prerequisites, Phys. 4A and 5A.

Phys. 119, 120, 121. High Frequency Phenomena (9)—(Not offered, 1944-45.) Two lectures, one laboratory period a week. Prerequisites, Phys. 4A and 5A and Math. 20. Laboratory fee $4.00 per quarter.

For Graduates

Phys. 201, 202, 203. Dynamics (9)—Three lectures a week.

Phys. 203, 205. Electrodynamics (4)—(Not given, 1944-45.)

Phys. 206, 207. Physical Optics (4)—Two lectures a week.

Phys. 208, 209, 210. Thermodynamics (6)—(Not given 1944-45.)

Phys. 211, 212, 213. Statistical Mechanics and the Kinetic Theory of Gases (6)—(Not given, 1944-45.)

Phys. 214, 215, 216. Quantum Mechanics (9)—(Not given, 1944-45.)

Phys. 217, 218. Atomic Structure (4)—(Not given, 1944-45.)

Phys. 219, 220. Molecular Spectra (4)—Two lectures a week.

Phys. 221, 222, 223. X-rays and Crystal Structure (9)—(Not given, 1944-45.)

Phys. 225, 226, 227. Modern Physics (9) (Not given, 1944-45.)

Phys. 224. Application of X-ray and Electron Diffraction Methods (4)—Winter, Spring. Two laboratory periods a week. Laboratory fee $8.00 per quarter.

Phys. 228, 229, 230. Seminar (1)—Fall, Winter, Spring.

Phys. 250. Research—Credit according to work done.

POLITICAL SCIENCE

Pol. Sci. 1. American National Government (3)

A study of the organization and functions of the national government of the United States.

Pol. Sci. 4. State and Local Government (3)—Prerequisite, Pol. Sci. 1.

A study of the organization and functions of state and local government in the United States, with special emphasis upon the government of Maryland.

Pol. Sci. 7. Comparative Government (2)—Prerequisite, Pol. Sci. 1.

A comparative study of the governments of Great Britain, France and Switzerland.

Pol. Sci. 8. Comparative Government (2)—Prerequisite, Pol. Sci. 1.

A comparative study of the dictatorial governments of Europe, with special emphasis upon Italy, Germany, and the U. S. S. R.

Pol. Sci. 9. Comparative Government (2)—Prerequisite, Pol. Sci. 1.

A study of Latin American Governments with special emphasis on Argentina, Brazil and Chile.

Pol. Sci. 10. Comparative Government (2)—Prerequisite, Pol. Sci. 1.

A study of Far Eastern governments with special emphasis on China and Japan.

For Advanced Undergraduates

Pol. Sci. 54. Problems of World Politics (3)—Prerequisite, Pol. Sci. 1 or consent of instructor.

The course deals with governmental problems of an international character, such as causes of war, problems of neutrality, propaganda, etc. Students are required to report on readings from current literature.

Pol. Sci. 71. Political Parties and Public Opinion (3)—Prerequisite, Pol. Sci. 1.

A descriptive and critical examination of the party process in government; nominations and elections, party expenditures, political leadership, the management and conditioning of public opinion.

For Advanced Undergraduates and Graduates

Pol. Sci. 102. International Law (3)—Prerequisite, Pol. Sci. 1.

A study of the principles governing international intercourse in time of peace and war, as illustrated in texts and cases.

Pol. Sci. 105. Recent Far Eastern Politics (3)—Prerequisite, Pol. Sci. 10 or consent of instructor.

The background and interpretation of recent political events in the Far East and their influence on world politics.

Pol. Sci. 124. Legislatures and Legislation (3)—Prerequisite, Pol. Sci. 4.

A comprehensive study of the legislative process, bicameralism, the committee system and the lobby, with special emphasis upon the legislature of Maryland. The course includes a visit to Washington to observe Congress at work.

Pol. Sci. 131. Constitutional Law (3)—Prerequisite, Pol. Sci. 4.

A systematic inquiry into the general principles of the American constitutional system.

Pol. Sci. 141. History of Political Theory (3)—Prerequisite, Pol. Sci. 4 or consent of instructor.

A survey of the principal political theories set forth in the works of writers from Plato to Bentham.

Pol. Sci. 142. Recent Political Theory (3)—Prerequisite, Pol. Sci. 4 or consent of instructor.

A study of recent political ideas, with special emphasis upon theories of socialism, communism, fascism, etc.

Pol. Sci. 144. American Political Theory (3)—Prerequisite, Pol. Sci 4 or consent of instructor.

A study of the writings of the principal American Political theorists from the colonial period to the present.

For Graduates

Pol. Sci. 201, 202. Seminar in International Organization (2, 2)

A study of the forms and functions of various international organizations.

Pol. Sci. 251. Bibliography of Political Science (2)

This course is intended to acquaint the student with the literature of the various fields of political science and to instruct him in the use of government documents.

Pol. Sci. 261. Research in Political Science (2, 6)—Credit according to work accomplished.

Pol. Sci. 299. Thesis, (3, 6)—Arranged.

POULTRY HUSBANDRY

P. H. 1. Poultry Production (5)—Fall. Three lectures and two laboratories a week.

This is a general course designed to acquaint the student with modern methods of poultry husbandry. Study of breeds, breed selection, modern breeding theory and methods, culling practice, and principles of incubation and brooding are discussed.

P. H. 2. Poultry Management (4)—Winter. Three lectures and one laboratory a week.

A study of modern methods of pullet rearing, housing, yarding, pasture management, broiler production, caponizing, sanitation and disease prevention, management for egg production, and marketing of poultry products.

For Advanced Undergraduates

P. H. 50. Poultry Biology (3)—Summer, Spring. Two lectures and one laboratory a week. Prerequisites, P. H. 1, or equivalent.

The elementary anatomy of the fowl, selection for egg and meat production, and for breed standards are studied. Judging teams for intercollegiate competitions are selected from members of this class.

P. H. 51. Poultry Genetics (3)—Summer, Winter. Prerequisites, P. H. 1 or 50, Zool. 104.

The inheritance of morphological and physiological characters of poultry are presented. Inheritance of factors related to egg and meat production and quality are stressed.

P. H. 52. Poultry Nutrition (3)—Fall. Two lectures and one laboratory a week.

The nutritive requirements of poultry and the nutrients which meet those requirements are presented. Feed cost of poultry production is emphasized.

Poultry Hygiene, see Veterinary Science, V. S. 57.

P. H. 56. Poultry Physiology (3)—Spring. Two lectures and one laboratory a week. Prerequisite, P. H. 1.

The physiology of development and incubation of the embryo, especially physiological pathology of the embryo in relation to hatchability, is pre-

sented. Physiology of growth and the influence of environmental factors on growth and development are considered.

P. H. 58. Commercial Poultry Management (3)—Spring. Two lectures and one laboratory a week. Prerequisite, ten hours of poultry husbandry, including P. H. 1, 2.

A symposium on finance, investment, plant layout, specialization, purchase of supplies, management problems in baby chick, egg, broiler, and turkey production, foremanship, advertising, selling, by-products, production and financial records.

For Advanced Undergraduates and Graduates

P. H. 104. Poultry Marketing Problems (3)—Fall. Two lectures and one laboratory a week.

Live and dressed poultry grades, poultry marketing channels, relation of transportation and distribution to quality, methods and costs of marketing live and dressed poultry, dressing, drawing, eviscerating and preparing poultry for the table.

P. H. 105. Egg Marketing Problems (3)—Winter. Two lectures and one laboratory a week.

Exterior and interior egg quality factors, wholesale and retail grades of eggs, egg marketing channels, relation of transportation and distribution to quality, methods and costs of marketing eggs, candling and preparing eggs for the table.

Avian Anatomy, see Veterinary Science, V. S. 108.

Preservation of Poultry Products, see Bacteriology, F. Tech. 108.

P. H. 107. Poultry Industrial and Economic Problems (3)—Fall. Three lectures and one laboratory a week.

Relation of poultry to agriculture as a whole and its economic importance. Consumer prejudices and preferences, production, transportation, storage, and distribution problems are discussed. Trends in the industry, surpluses and their utilization, poultry by-products, and disease problems, are presented. (Staff)

P. H. 108—Special Poultry Problems (1-2)—Fall, Winter, Spring. One or two lectures a week.

For Senior poultry students. The student will be assigned special problems in the field of poultry for individual study and report.

For Graduates

P. H. 201. Advanced Poultry Genetics (3)—Spring. Prerequisite, P. H. 51 or equivalent.

This course serves as a foundation for research in poultry genetics. Linkage, crossing-over, inheritance of sex, the expression of genes in development, inheritance of resistance to disease, and the influence of the environment on the expression of genetic capacities are considered.

P. H. 202. Advanced Poultry Nutrition (3)—Spring. Two lectures and one laboratory period a week. Prerequisite, P. H. 52 or equivalent.

Deficiency diseases of poultry are considered intensively, especially vitamin, mineral, and protein deficiencies. Synthetic diets, metabolism, and the physiology of digestion, growth curves and their significance, and feed efficiency in growth and egg production are studied.

P. H. 203. Physiology of Reproduction of Poultry (3)—Fall. Two lectures and one laboratory period a week. Prerequisite, P. H. 56 or its equivalent.

The role of the endocrines in reproduction, especially with respect to egg production, is considered. Fertility, sexual maturity, broodiness, molting, egg formation, ovulation, deposition of egg envelopes, and the physiology of oviposition are studied.

P. H. 204. Seminar (1)—Fall, Winter, Spring.

Reports of current researches by staff members, graduate students, and guest speakers are presented.

P. H. 205. Poultry Literature (1-4)—Fall, Winter, Spring.

Readings on individual topics are assigned. Oral and written reports required. Methods of analysis and presentation of scientific material are taught.

P. H. 206. Research—Summer, Fall, Winter, Spring. Credit in accordance with work done.

Practical and fundamental research with poultry may be conducted under the supervision of staff members toward the requirements for the degrees of M. S. and Ph. D.

PSYCHOLOGY

Psychological Testing Bureau. The staff of the Department of Psychology maintains a bureau of vocational and educational guidance on the basis of adequately standardized psychological tests and personal counseling. The services of the bureau are available without charge to students.

Psych. A. Psychology of Adjustment (3)—Fall, Summer. Open to freshmen.

A consideration of typical problems, educational, social, vocational, confronting the college student, and psychological principles of adjustment.

Psych. 1. Introduction to Psychology (3)—Fall, Winter, Spring, Summer. Open to second quarter freshmen.

A general introduction to typical problems upon which psychologists are at work. Review of experimental investigations of the more fundamental phases of human behavior.

Psych. 4. Psychology for Students of Commerce (3)—(Not offered, 1944-45.)

Topics in applied psychology which relate to practical problems in business and industry viewed from the standpoint of controlled observation.

Psych. 14. Applied Psychology (3)—Fall, Winter, Spring. Prerequisite, Psych. 1.

A general introduction to the application of psychological principles in the field of medicine, law, criminology, education, public opinion, and propaganda.

Psych. 15. Social Psychology (3)—Spring, Summer. Prerequisite, Psych. 1.

A psychological study of human behavior in social situations; experimental studies of the influence of other persons, of social conflicts and individual adjustment, of the psychology of social institutions and of current social movements.

Psych. 16. Psychology of Business (3)—Fall, Spring. Prerequisite, Psych. 1.

Application of controlled observation to practical psychological problems in business and industry, including industrial selection, methods of production, advertising, selling, and market research.

Psych. 17. Mental Hygiene (3)—Fall, Winter, Spring, Summer. Prerequisite, Psych. 1. Two lectures, one clinic.

The more common deviations of personality; typical methods of adjustment.

Psych. 18. Child Psychology (3)—Winter, Summer. Prerequisite, Psych. 1 and one other course in psychology.

Experimental analysis of child behavior; motor, intellectual and emotional development, social behavior, parent-child relationships, and problems of the growing personality.

Psych. 19. Psychology of Individual Differences (3)—Summer, Fall. Prerequisite, Psych. 1 and one other course in psychology.

The scientific methodology underlying the study of psychological differences among people, including a basic understanding of statistical concepts and interpretations.

Psych. 29. Techniques of Investigation in Psychology (3)—Winter. Prerequisite, Psych. 19.

A consideration of quantitative methods in psychology, the design of experiments, methods of obtaining data and in treating these results for interpretation.

For Advanced Undergraduates

Psych. 80. Educational Psychology (5)—Fall, Winter, Spring, Summer.

A study of basic psychological problems encountered in education. Measurements and significance of individual differences, learning, motivation, emotions, personality.

Psych. 90. Independent Study in Psychology (1-3)—Fall, Winter, Spring, Summer.

Special reading and report assignments on an individualized basis.

For Advanced Undergraduates and Graduates

Psych. 118. Psychology of Adolescence (3)—Spring. Prerequisite, Psych. 18.

Psychological aspects of development during the adolescent period with emphasis on mental, emotional, and physical problems.

Psych. 140. Psychological Problems in Market Research (3)—(Not offered, 1944-45.) Prerequisite, Psych. 19.

Use of methods of controlled observation in determining public reactions to merchandise, and in measuring the psychological influences at work in particular markets.

Psych. 141. Psychology in Advertising and Selling (3)—(Not offered, 1944-45.) Prerequisite, Psych. 19.

Experimental and statistical studies of psychological aspects of advertising.

Psych. 147. Psychological Problems in Aviation (3)—(Not offered, 1944-45.) Prerequisite, Psych. 29.

Study of researches dealing with human response in conditions met during flight.

Psych. 149. Legal Psychology (3)—(Not offered, 1944-45.) Prerequisite, Psych. 17.

Interpretation of researches pertaining to accuracy of observation and of testimony, psychological aids in determination of guilt and treatment of the offender.

Psych. 150. Advanced Social Psychology (3)—Fall. Prerequisite, Psych. 15.

A systematic analysis of motivation, learning, and culture as related to the development of attitudes.

Psych. 155. Psychology of Personality (3)—Winter, Spring. Prerequisite, Psych. 15, or permission of Instructor.

A systematic survey of various approaches to the study of personality.

Psych. 156. Pro-seminar in Advanced Personality (2)—Prerequisite, Psych. 155, or permission of Instructor.

Psych. 157. Psychological Aspects of the Post War Situation (3)—Fall. Prerequisite, Psych. 15, or permission of Instructor.

An analytical approach to social psychological problems of special significance in the post-war world.

Psych. 159. Psychology of Propaganda (3)—Winter. Prerequisite, Psych. 15, or permission of Instructor.

Principles of effective propaganda as related to public opinion, and psychological warfare.

Psych. 160. Psychology of Personnel (3)—Fall. Prerequisite, Psych. 19, or permission of Instructor.

Psychological problems in the management of personnel in modern business and industry and the armed services. A consideration of psychological techniques in employee selection and classification, measures of ability, interview procedures, and in personnel counseling.

Psych. 161. Advanced Psychology of Personnel (3)—Winter. Prerequisite, Psych. 19, or permission of Instructor.

A continuation of Psych. 160, with emphasis on methods of developing and maintaining personnel efficiency and morale; problems of training, rating methods, motivation, etc.

Psych. 165. Industrial Psychology (3)—Spring. Prerequisite, Psych. 16.

Controlled observation applied to psychological problems in industrial production, including psychological effects of conditions and methods of work.

Psych. 170. Abnormal Psychology (3)—Winter. Prerequisite, Psych. 17. Two lectures, one clinic.

The nature, occurrence, and causes of psychological abnormality with emphasis on the clinical rather than theoretical aspects.

Psych. 172. Psychological Tests and Measurements (5)—Winter, Summer. Prerequisite, Psych. 29.

Critical survey of psychological tests used in vocational orientation and in industry with emphasis on methods by which such tests are validated; practice in the use of tests and the interpretation of test data.

Psych. 174. Advanced Psychological Testing (5)—Fall, Winter. Prerequisite, Psych. 172.

Instruction and practice in giving individual psychological tests, with emphasis on the Binet intelligence test; a study of the contribution of such tests to educational, vocational and clinical guidance.

Psych. 178. Vocational Orientation (3)—(Not offered, 1944-45.) Prerequisite, Psych. 172.

Psychological methods and results for occupational classification, and for worker selection, classification, and individual orientation.

Psych. 179. Detection and Treatment of Defects in Reading (3)—(Not offered, 1944-45.) Permission of Instructor.

A survey of the psychological problems involved in the discovery and treatment of reading defects at the college level.

Psych. 180. Advanced Educational Psychology (3)—(Not offered, 1944-45.) Prerequisite, Psych. 80.

An advanced course for teachers and prospective teachers. Systematic approach to advanced problems in educational psychology based upon experimental contributions.

Psych. 190. Psychology of Learning (3)—Winter. Prerequisite, Psych. 29.

A consideration of the principles of human learning, and their application to various problems: habits, skills, phobias, traits, etc., as they relate to education, business, and social relationships.

Psych. 192. Psychology of Early Man (3)—Spring. Prerequisite, Psych. 15, or permission of Instructor.

A study of cultural and anthropological origins and continuities in man from Pithecanthropus to the historic period; interpretation of the artifacts and customs in the light of the mental processess involved in their evolution. Periodic observation trips to the Museum of National History in Washington.

Psych. 194. History of Psychology (3)—Spring. Prerequisite, 9 hours of psychology.

A survey of the historical antecedents of modern psychology with special reference to German, French, British and early American contributions to the formation of the science of psychology.

Psych. 195. Minor Problems in Psychology (2-3)—Fall, Winter, Spring, Summer.

Conduct of original research under the supervision of some member of the staff. Satisfactory completion of this project may lead to publication in one of the standard psychological journals.

Psych. 199. Proseminar: Contemporary Problems in Psychology—(Not offered, 1944-45.)

For Graduates

Psych. 200. Research in Psychology (3)—Fall, Winter, Spring, Summer.

Psych. 240. Seminar in Current Psychotechnological Problems (3)—(Not offered, 1944-45.)

An advanced course for students pursuing major graduate studies. A systematic analysis of recent contributions in selected psychotechnological fields.

Psych. 245. Advanced Psychological Problems in Market Research (3)—(Not offered, 1944-45.)

Graduate study of the specialized problems and techniques employed by the psychologist in market research.

Psych. 257, 258. Seminar in Psychology of Morale in Wartime (3, 3)—Fall, Winter.

A study of the problems arising in wartime conditions including reactions to privations, hostile attacks, family disruption, and war psychoses.

Psych. 260. Seminar in Personnel Psychology (2)—Spring.

Psych. 275, 276, 277, 278. Participation in Testing Clinic (2-4)—Fall, Winter, Spring, Summer.

Actual practice in the administration of tests of aptitude, interest, and achievement, and interpretation of test data in the course of routine operation of the testing bureau.

Psych. 272. Development and Validation of Psychological Tests (3)—(Not offered, 1944-45.)

Methods for evaluating criteria and for the analysis and combination of test and predictor items.

Psych. 274. Field Work in Clinical Psychology of the Abnormal (3-5)—Spring.

Supervised training in the field of clinical psychology and in testing of the abnormal person. Field work will be done at St. Elizabeth's Hospital or other authorized institutions. Enrollment limited.

Psych. 279. Occupational Psychology (3)—(Not offered, 1944-45.)

Experimental development and use of the vocational counseling interview, aptitude tests, and related techniques for the occupational orientation of youth.

Psych. 280. Seminar in Educational Psychology (3)—(Not offered, 1944-45.)

Psych. 285. Seminar in Clinical Psychology for Teachers (3)—Not offered, 1944-45.)

A systematic consideration of a clinical procedure in treating student problems of the teacher.

Psych. 290. Problems in Experimental Design in Psychology (2)—Spring.

Application of advanced research techniques to specific fields in psychology with practice in their use.

PUBLIC ADMINISTRATION

For Advanced Undergraduates and Graduates

P. A. 110. Principles of Public Administration (3)—Winter. Prerequisite, Pol. Sci. 4 and Econ. 33.

A functional study of public administration in the United States with special emphasis upon the application of the principles of organization and operation in the administration of the various divisions of government.

P. A. 111. Public Personnel Administration (3)—Spring. Prerequisite, P. A. 110 and Econ. 160.

A study of civil service practices in the United States with particular reference to the organization of the personnel agency, the classification and compensation plans, the selection of employees and supervision of governmental personnel.

P. A. 114. Public Budgeting (3)—(Not offered, 1944-45.) Prerequisite, B. A. 22 and Econ. 33.

A study of budgetary administration in the United States, including systems of financial control and accountability, the settlement of claims, centralized purchasing and the reporting of financial operations.

P. A. 124. Governmental Accounting (4)—Winter. Prerequisite, B. A. 124.

The content of this course covers the scope and functions of governmental accounting. It considers the principles generally applicable to all forms and types of governmental bodies and a basic procedure adaptable to all governments. It deals with governmental accounting as a distinct field and develops and presents the system, taking full account of the conditions governing the agencies and operations carried on by government.

P. A. 126. Government and Social Security (3)—Spring. Prerequisite, Pol. Sci. 4, Econ. 33.

An analysis of the Federal Social Security Act with special emphasis upon the background, purposes, administration, and deficiencies. Attention will be given also to employment assurance and relief agencies and policies, and to the efforts of European countries and the 48 states to provide a greater measure of security.

P. A. 130. International Economic Policies and Relations (4)—Fall. Prerequisite, Econ. 33 or 37. Econ. 131 recommended.

This course surveys and analyzes the basic economic, social and political factors that influence governments in the determination of their economic policies and practices in their relationship with other nations.

P. A. 137. Economic Planning and Postwar Problems (4)—Winter. Prerequisite, Econ. 33 or 37. Econ. 131 recommended.

An analysis of the theory and practice of economic planning in the United States and other countries, and an investigation of the relation of economic planning to postwar economic problems and the stabilization of economic enterprise.

P. A. 140. Public Finance and Taxation (4)—Fall. Prerequisite, Econ 33 or 37.

A study of government finance and fiscal policy which deals with the nature of public expenditures, sources of revenue, the tax system, and budgeting. Special emphasis on the role of fiscal policy in relation to business enterprise.

P. A. 141. International Finance and Exchange (4)—Spring. Prerequisite, Econ. 140, Econ. 141 recommended.

This course considers the theory and practice of international finance and exchange. The increased importance of public authority in foreign trade, international policies, and finance is given due emphasis.

P. A. 161. Recent Labor Legislation and Court Decisions (4)—Winter. Prerequisite, Econ. 160. B. A. 160 recommended.

A study of society's efforts through legislation to improve labor conditions. State and federal laws and court decisions affecting wages, hours, working conditions, immigration, convict labor, union activities, industrial disputes, collective bargaining, and economic security.

P. A. 170. Transportation I, Regulation of Transportation Services (4)—Fall. Prerequisite, Econ. 33 or 37.

This course is designed for students of Transportation, Public Administration, and General Business. It covers the world practices in the regulation and control of transportation facilities.

P. A. 180. Government and Business (4)—Fall, Spring. Prerequisite, Econ. 33 or 37. Senior standing.

The reasons for and the methods of avoidance, escape, and abuse of competition as a regulating force in business. Social control as a substitute for, or as a modification of, preservation of competition. Law as an instrument of social control through administrative law and tribunals. The constitutional aspects of social control.

P. A. 184. Public Utilities (4)—Spring. Prerequisite, Econ. 33 or 37 and senior standing.

This course comprises an analysis of the economic, social, and political status of the public utility industry. The following topics are among those studied during the semester, regulation and management with attention given to the economic conditions of production and sale of utility services, legal and social nature, valuation, depreciation, rate of return,, ratemaking, financing and special problems.

For Graduates

P. A. 201. Seminar in International Organization (3)—Arranged.

A study of the forms and functions of various international organizations.

P. A. 213. Problems of Public Administration (3)—Arranged.

Reports on topics assigned for individual research in the field of national and state administration.

P. A. 214. Problems of Public Personnel Administration (3)

Reports on topics assigned for individual research in the field of public personnel administration.

P. A. 235. Seminar in International Economic Relations (3)—Arranged.

A study of selected problems in International Economic Relations.

P. A. 240. Research in Governmental Fiscal Policies and Practices (3)—Arranged.

Individual research under faculty guidance of special problems in the field of government finance and taxation.

P. A. 280. Seminar in Business and Government Relationships—Arranged.

A study of selected problems in the relationship of government to business.

P. A. 284. Seminar in Public Utilities (3)—Prerequisite, P. A. 184 and consent of instructor.

Study and research in particular problems of public utility management and regulation.

P. A. 299. Thesis (3-6 hours)—Arranged.

SECRETARIAL TRAINING

S. T. 1, 2. Principles of Typewriting I, II—No Credit. Fall, Winter, Spring and Summer. Three laboratory hours a week. Laboratory fee $5.00.

The goal of this course is the attainment of the ability to operate the typewriter continuously with reasonable speed and accuracy by the use of the "touch" system.

S. T. 10, 11. Advanced Typewriting I, II (1, 1)—Fall, Winter, Spring, Summer. Three laboratory hours a week. Prerequisite S. T. 2 or consent of instructor. Laboratory fee $5.00.

The advanced techniques of typewriting, including business forms, rough drafts, manuscript writing, tabulation, and legal documents.

***S. T. 12, 13, 14. Shorthand Principles I, II, III (9)**—Fall, Winter, Spring. (Second sequence for the school year will begin in Spring 1945.)

Theory of Gregg Shorthand: Emphasis placed upon reading and dictation.

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*S. T. 1, 2, 10 must be taken concurrently with this sequence unless the student has had the equivalent. Credit will be withheld for S. T. 12 and 13 until the satisfactory completion of S. T. 14.

†S. T. 16, 17, 18. **Advanced Shorthand I, II, III (3, 3, 3)—Fall,** Winter, Spring. Prerequisite, S. T. 10 and 14 and/or consent of instructor. (Second sequence for the school year will begin in Spring, 1945.)

Advanced principles and phrases of shorthand; dictation covering vocabularies of representative businesses; development of skill in transcription.

S. T. 20. Interpretation of Business Records (3)—Fall, Spring. Open to students having had no previous accounting courses in college. No credit granted to accounting majors.

Particular attention is given to the structure and methods of interpreting financial statements.

S. T. 111. Office Training (3)—Winter, Summer. Six laboratory periods per week. Prerequisite, S. T. 16 or consent of instructor. Laboratory fee $5.00.

This course is designed to give training in the use of modern office devices, and in the standard methods of filing.

S. T. 118. Business Communications (4)—Spring. Prerequisite, junior standing. Secretarial training *not* a prerequisite.

The systems of communications used in modern business; techniques of communication forms, administrative memoranda, order, bulletin, digest, reports; communication problems in production, marketing, personnel administration, and public relations.

S. T. 119. Conference and Court Reporting (5)—Winter, Summer. Prerequisite, S. T. 18 or qualifying examination.

Special emphasis is placed upon developing reporting skills and upon medical, legal, business, and governmental terms.

SOCIOLOGY

Soc. 1. Contemporary Social Problems (3)—Fall, Spring.

This course attempts to develop a method of thinking about modern societies. Through background and analysis it offers an orientation to current social issues; isolates some major tendencies in present-day social structure; and traces their import for types of human nature and for several problems faced by democratic societies in crises and during periods of reorganization.

Soc. 3. Introduction to Sociology (3)—Fall, Spring. Open to freshmen with consent of instructor.

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† Students who have taken shorthand in high school may register for the appropriate course in college shorthand for which they demonstrate satisfactory proficiency. This proficiency will be determined by the instructor prior to registration. Credit will be given only for the work done in residence.

An analysis of society and of basic social processes; characteristics of collective behavior; typical social organizations; the role of culture in the development of personality; social products; social interaction; social change.

Soc. 5. Comparative Sociology (3)—Winter, Summer.

Comparative analysis of primitive and civilized societies. World distribution of culture and migrations. Leading traits of peoples of the south seas, China, Japan, India, Latin America and Southeast Asia. Significance of findings for the general study of man.

Courses Primarily for Juniors and Seniors

Soc. 51. Post-War Problems of Social Organization (3)—(Not offered, 1944-45.) Prerequisite, consent of instructor.

A study of organizational changes in basic institutions required for successful adjustment to conditions likely to prevail at the close of the present war.

Soc. 52. Community Organization (3)—Summer, Winter. Prerequisite, Soc. 3 or consent of instructor.

An analysis of the community and its component social groups.

Soc. 61. Marriage and the Family (3)—Summer, Winter. Prerequisite, Soc. 3 or consent of instructor.

The family in modern western society, with particular reference to the American family. War and the family.

Soc. 71. Social Pathology (3)—(Not offered, 1944-45.) Prerequisite, Soc. 3 or consent of instructor.

A study of maladjustments which represents deviations from generally accepted social norms.

Soc. 72. Criminology (3)—Summer, Winter. Prerequisite, Soc. 3 or consent of instructor.

The concept of criminal behavior. Statistical and case study approaches to the phenomena of crime. Etiology of crime: a survey of theories attempting a causative explanation of criminal behavior. Typologies of criminal acts and offenders. Methods of correction. Prevention of crime.

Soc. 81. Introduction to Social Work (3)—Fall. Prerequisite, consent of instructor.

A general introduction to social case work and the administration of public and private welfare agencies.

For Advanced Undergraduates and Graduates

Soc. 101. Social Stratification (3)—Summer, Winter. Prerequisite, Soc. 3 or consent of instructor.

Deals with classes, status groups, caste systems, slavery, various types of elites, and vertical mobility. Fashion and style. A theory of stratification, social movements, symbol manipulations, and hierarchies of power and their import for personal and official roles, and for the distribution of prestige.

Soc. 103. Rural Sociology (3)—Summer. Prerequisite, consent of instructor.

The structure and functions of rural communities.

Soc. 104. Urban Sociology (3)—Winter.

The origin and growth of cities; composition and characteristics of city populations; the social ecology of the city; the planning and control of urban development.

Soc. 105. Population Problems (3)—Summer, Fall. Prerequisite, Soc. 3 or consent of instructor.

Population, composition and growth in the United States and Canada. Trends in fertility and mortality, migration, qualitative population problems.

Soc. 106. Regional Sociology (3)—Winter. Prerequisite, Soc. 3 or consent of instructor.

The meaning and implications of regionalism; types of regions in the United States: metropolitan, cultural, and administrative regions. Regional planning.

Soc. 107. Ethnic Minority Groups (3)—Summer. Prerequisite, Soc. 3 or consent of instructor.

Basic processes in the relations of ethnic groups. Immigrant groups and the Negro in the United States. Ethnic minorities in Europe and the problems they present. A discussion of proposals for the solution of these problems in the light of past experiences and desiderata for the future.

Soc. 108. World Population Problems (3)—Winter. Prerequisite, Soc. 105 or consent of instructor.

Population, distribution, growth and migration in Europe and Africa. Cultural, ethnic and political aspects.

Soc. 109. World Survey of Rural Organization (3)—(Not offered, 1944-45.) Prerequisite, Soc. 103 or consent of instructor.

A comparative study of rural social organization in selected contemporary cultures of Europe, Asia, Africa, and the Americas.

Soc. 110. Sociology of the Professions (3)—Fall, Spring. Prerequisite, Soc. 1 or 3 or consent of instructor.

Structure and function of divisions of labor; their relations to technology; shifting occupational compositions of modern industrial societies; the positions of selected professions in the social, economic, and political orders; the concept of career; the distribution of skills in American society.

Effects of occupations on personality. Occupational ideologies and organizations, professional associations and ethics.

Soc. 112. Sociology of Communication (3)—Summer, Winter. Prerequisite, Soc. 1 or 3 or consent of instructor.

A study of channels of communication, the personnel operating them, their changing content, and their social and psychological effects upon various nations and strata. Governmental and private control of communicational media. Technological changes in communication during the twentieth century. Types of listening groups, readerships, film audiences, and world communication centers.

Soc. 120. Community Disorganization (3)—(Not offered, 1944-45.) Prerequisite, Soc. 52 or consent of instructor.

A study of pathological conditions in community life resulting from the impact of external forces (war, depression, technological changes, etc.) and from internal deterioration or inadequacy.

Soc. 121. Community Welfare Planning (3)—(Not offered, 1944-45.) Prerequisite Soc. 120 or consent of instructor.

An evaluative study of programs designed to aid communities in coping with problems affecting their welfare and of the agencies proposed as the means of implementing such programs.

Soc. 123. Public Welfare Services (3)—(Not offered, 1944-45.) Prerequisite, Soc. 71 and 81, or consent of instructor.

A comprehensive study of the social services maintained by federal, state, and local governments in the United States.

Soc. 124. Public Welfare Administration (3)—(Not offered, 1944-45.) Prerequisite Soc. 123 or consent of instructor.

A comparative study of the organization and functioning of public welfare departments in states, countries, and cities of the United States.

Soc. 125. Sociology of War (3)—Fall. Prerequisite, consent of instructor.

The concept and typologies of war. Hypothesis concerning factors operative in bringing about wars. The influence of war on society. The military class: its role in war and its influence on social structure and processes. Technology and war. The modern concept of total war.

Soc. 126. Juvenile Delinquency (3)—Fall, Spring. Prerequisite, Soc. 72 or consent of instructor.

Juvenile delinquency in relation to the general problem of crime. Analysis of factors responsible for juvenile delinquency. Prevention and treatment.

Soc. 127. Community Programs of Crime Control (3)—Fall. Prerequisite, Soc. 72 or consent of instructor.

This course is designed to acquaint students with programs for preventing crime and delinquency through mobilization of the community's own resources. City, small town, and rural situations are analyzed. Special attention is given to problems in Maryland.

Soc. 128. Institutional Treatment of Criminals and Delinquents (3)—Spring. Prerequisite, Soc. 72 or consent of instructor.

An intensive study of the functions and organization of penal and correctional institutions.

Soc. 130. Recent Social Thought (3)—Fall, Spring. Prerequisite, Soc. 1 or 3 or consent of instructor.

A general survey and critical study of leading schools of sociological thought.

Soc. 135. Sociology of Law (3)—Spring. Prerequisite, Soc. 3 or consent of instructor.

Law as a form of social control. Interrelation between legal and other conduct norms as to their content, sanctions, and methods of securing conformity. Law as an integral part of the culture of the group. Factors and processes operative in the formation of legal norms. Legal norms as determinants of human behavior.

Soc. 136. Sociology of Religion (3)—Spring. Prerequisite, Soc. 3 or consent of instructor.

Varieties and sources of religious experience. Religious institutions and the role of religion in social life.

Soc. 140. Design of Investigation in Sociology (3)—Fall. Prerequisite, Soc. 3 or consent of instructor.

A critical study of the rationale, both implicit and explicit, underlying the concepts, procedure, and methods employed by a number of oustanding sociological investigations.

Soc. 141. Introduction to Social Research and Statistics (3)—Summer, Spring. Prerequisite, Soc. 3 or consent of instructor.

Quantification and interpretation of statistical materials in sociological literature. Techniques of computing such measures as central tendency, dispersion, correlation, significant differences. Sampling theory, graphic presentation, and factor analysis.

Soc. 142. Statistical Problems in Social Analysis (3)—Fall. Prerequisite, consent of instructor.

Exercises in the application and interpretation of more advanced statistical techniques in sociological investigation.

Soc. 150. Field Practice in Social Work (3)—(Not offered, 1944-45.) Prerequisite, Soc. 81 or consent of instructor. Enrollment restricted to available opportunities.

Supervised field work of various types, suited to the needs of the individual student.

For Graduates

Soc. 200. Seminar in Methodology (3)—Fall, Spring.

A study of fundamental methodological problems in sociology.

Soc. 201. Seminar in Systematic Sociology (3)—(Not offered, 1944-45.)

Soc. 202. Sociological Theory (3)—Fall.

An examination of the works of European and American theorists. Special attention will be given to Max Weber, Simmel, Horney, Mannheim, Tonnies, Lasswell, Durkheim, and G. H. Mead.

Soc. 203. Sociology of Knowledge (3)—Winter.

Social bases of ideologies and mentalities; a sociological theory of language, mind and types of intellectual change. Bias and objectivity. Positions of intellectual, technical, and literary elites; periodicals and their publics. Thought and action; social conditions of constraint and freedom of thought. The place of science in western civilization. Studies of selected ideologies.

Soc. 204. Social Organization (3)—(Not offered, 1944-45.)

An intensive study of selected problems pertaining to the structure and organization of basic social institutions.

Soc. 205. Community Organization (3)—(Not offered, 1944-45.)

Criteria of community organization and disorganization. Classroom and field studies will be made of the composition, structure, and functioning of selected communities.

Soc. 206. Comparative Sociology (3)—Summer.

Studies in the social formation and selection of types of personality in the frameworks of primitive and historical societies as compared with contemporary American society.

Soc. 207. Rural-Urban Sociology (3)—(Not offered, 1944-45.)

An intensive comparative study of rural and urban societies.

Soc. 210. Special Problems of Population (3)—(Not offered, 1944-45.)

An intensive study of selected problems in the fields of population.

Soc. 211. Advanced Regional Sociology (3)—(Not offered, 1944-45.)

A comparative analysis of regional trends in the United States and various foreign countries.

Soc. 215. Seminar in Sociology of the Professions (3)—Spring.

Advanced and more detailed consideration of topics dealt with in Soc. 101 and 110 with emphasis upon theoretical relevance, available materials, and designs of research projects.

Soc. 216. Sociology of the Family (3)—Summer.

A study of selected recent researches in the sociology of the family.

Soc. 217. Seminar in the Sociology of Law (3)—Spring.

An intensive study of factors and processes operative in the formation of law.

Soc. 218. Sociological Problems of Leadership (3)—(Not offered, 1944-45.)

An analysis of the leader-follower relationship.

Soc. 221. Advanced Criminology (3)—Fall.

An intensive study of selected problems in criminological research.

Soc. 222. Recent Criminological Theories (3)—Winter.

A survey of recent developments in the field of theoretical criminology, with a view to providing a deeper insight into the complex of problems facing the modern criminologist.

Soc. 223. Juvenile Delinquency (3)—Spring.

Theories of juvenile delinquency. Methods of treatment of juvenile delinquents with particular reference to the United States. An intensive study will be undertaken of one or more selected problems in the field.

Soc. 250. Research in Sociology (credit apportioned to work accomplished)—Summer, Fall, Winter, Spring.

Individual research projects involving either field work or analysis of compiled data.

SPEECH

Speech 1, 2. Public Speaking (4)—Fall, Winter, Spring, Summer. Required of all students. Prerequisite for advanced speech courses.

The preparation and delivery of short original speeches.

Speech Clinic—No credit—Fall, Winter, Spring, Summer.

Remedial work in minor speech defect. Hours arranged.

Speech 3. Fundamentals of Speech (3)—Fall.

Study in the bases and mechanics of speech.

Speech 4. Voice and Diction (3)—Fall, Winter, Spring, Summer. Required of students in the College of Education.

Emphasis upon the improvement of voice, articulation and phonation.

Speech 5, 6. Advanced Public Speaking (2, 2)—Fall, Winter, Spring, Summer.

Advanced work on basis of Speech 1-2. Special emphasis is placed upon the speaking situations the students will face in their respective vocations.

Speech 7. Oral Technical English (2)—Fall, Winter, Spring. Limited to sophomore engineering students.

The preparation and delivery of speeches, reports, etc. on technical and general subjects.

Speech 8. Advanced Oral Technical English (2)—Winter, Spring. Limited to junior engineering students.

Continuation of Speech 7. Emphasis upon engineering projects that fall within student's own experience.

Speech 9. Advanced Oral Technical English (2)—Fall, Spring.

Limited to senior engineering students. Special speech projects. Work not confined to classroom.

Speech 10. Group Discussion (2)—Fall.

A study of the principles, methods, and types of discussion, and their application in the discussion of contemporary problems.

Speech 11, 12. Debate (2, 2)—(Not offered, 1944-45.)

A study of the principles of argument, analysis, evidence, reasoning, fallacies, briefing, and delivery, together with their application in public speech.

Speech 13. Oral Interpretation (3)—Fall, Winter, Spring.

The oral interpretation of literature and the practical training of students in the art of reading.

Speech 14, 15. Stagecraft (3, 3)—(Not given, 1944-45.) Two lectures and one laboratory period a week.

Stage design and lighting.

Speech 101. Introduction to Radio (3)—Fall, Spring. Two lectures and one laboratory period a week. Laboratory fee, $2.00.

The development, scope, and influence of American broadcasting.

Speech 102. Radio Program Production (3)—Winter. One lecture and two laboratory periods a week. Prerequisite, Speech 101 or consent of instructor. Laboratory fee, $2.00.

The production of radio dramatizations and other types of programs.

Speech 103, 104. Speech Composition (6)—(Not given, 1944-45.)

A study of rhetorical principles and models of speech composition in conjunction with the preparation and presentation of specific forms of public address.

Speech 105. Speech Pathology (3)—Fall.

The causes, nature, symptoms, and treatment of common speech disorders.

Speech 106. Speech Clinic (3)—Winter. Prerequisite, Speech 105.

A course dealing with the various methods of correction plus actual work in the clinic.

Speech 107. Advanced Oral Interpretation (3)—Spring. Prerequisite, Speech 13.

Emphasis upon the longer reading. Program planning.

Speech 108. Teacher Problems in Speech (3)—Summer. For teachers only.

Every-day speech problems that confront the teacher.

Speech 109. Seminar in Speech (3)—Fall. Required of speech majors.

Present day speech research.

VETERINARY SCIENCE

For Advanced Undergraduates and Graduates

V. S. 101.—Comparative Anatomy and Physiology (5)—Summer, Winter.

Normal structure of the domesticated animals; relationship of structure to physiological activities.

V. S. 102. Animal Hygiene (5)—Fall, Summer.

Nature of disease; treatment, prevention and control; common diseases of farm animals.

V. S. 107. Poultry Hygiene (4)—Fall, Spring. Three lectures and one laboratory period a week. Prerequisite, Bact. 1; P. H. 106 F.

Virus, bacterial and protozoan diseases; parasitic diseases; prevention, control, and eradication.

V. S. 108. Avian Anatomy (4)—Summer, Winter. Three lectures and one laboratory period a week. Prerequisite, Zool. 1s.

Gross and microscopic structure; physiological processes; dissection and demonstrations.

For Graduates

V. S. 201. Animal Disease Problems (2-8)—Fall, Winter, Spring, Summer. Credit depending upon work done. Prerequisite, Veterinary degree or consent of staff.

Laboratory and field work by assignment.

V. S. 202. Animal Disease Research (2-8)—Fall, Winter, Spring, Summer. Credit depending upon work done. Prerequisite, Veterinary degree or consent of staff.

Studies of practical disease phases.

ZOOLOGY

Zool. 1. General Zoology (5)—Fall, Winter, Summer. Three lecture and two laboratory periods a week.

This course, which is cultural and practical in its aim, deals with the basic principles of animal life. Typical invertebrates and a mammalian form are studied. Laboratory fee, $5.00.

Zool. 2, 3. Fundamentals of Zoology (10)—Fall and Winter; Spring and Summer.

A thorough study of the anatomy, classification, and life history of representative animals. During the first quarter, emphasis is placed on invertebrate forms and during the second quarter upon vertebrate forms including the frog.

This course satisfies the freshman premedical requirements in general biology. Freshmen who intend to choose zoology as a major should register for this course. Either quarter may be taken first. Laboratory fee, $5.00 per quarter.

Zool. 4. Introductory Zoology (3)—Spring. Two lectures; one demonstration.

A course for students desiring a general knowledge of the principles underlying the growth, development, and behavior of animals, including man. Laboratory fee, $3.00.

Zool. 5. Comparative Vertebrate Morphology (5)—Fall, Spring. Three lectures; two laboratories. Prerequisite, one course of zoology.

A comparative study of selected organ systems in certain vertebrate groups. Required of students whose major is zoology, and of premedical students. Laboratory fee, $5.00.

Zool. 6. Economic Zoology (3)—Winter. Three lectures. Prerequisite, one course in Zoology.

The content of this course centers around the problems of preservation, conservation, control, and development of economic wild life, with special reference to Maryland. The lectures are supplemented by assigned readings and reports.

Zool. 7. Field Zoology (3)—Spring. Prerequisites, one course in Zoology and one in Botany.

This course consists in collecting and studying both land and aquatic forms of nearby woods, fields, and streams, with emphasis on the higher invertebrates and certain vertebrates, their breeding habits, environment, and modes of living.

Intended for teachers of Biology, and also for those who have a special interest in nature study and outdoor life .

Zool. 8. Invertebrate Morphology (5)—Winter. Three lectures; two laboratories. Required of students whose major is Zoology.

This course consists in a study of the structure and relationships of selected invertebrate groups. Laboratory fee, $5.00.

Zool. 12. Histological Technique (3)—Summer, Winter. One lecture and two laboratories a week.

The preparation of animal tissues for microscopical examination. Laboratory fee, $5.00.

Zool. 14, 15. Human Anatomy and Physiology (10)—Fall and Winter; Spring and Summer. Three lectures and two laboratories a week.

Prerequisite, one course in Zoology. Required of students whose major is Physical Education, and of those preparing to teach general science or biology. Either quarter may be taken first.

For students who desire a general knowledge of human anatomy and physiology. Emphasis is placed upon the physiology of digestion, circulation, respiration, and reproduction. Laboratory fee, $5.00 per quarter.

Zool. 16. Human Physiology (5)—Summer, Spring. Not open to freshmen. Three lectures and two laboratories a week.

An elementary course in physiology. Laboratory fee, $5.00.

Zool. 20. Vertebrate Embryology (5)—Winter, Summer. Three lectures and two laboratories a week. Prerequisite, one course in zoology. Required of students whose major is zoology and of premedical students.

The development of the chick to the end of the fourth day and early mammalian embryology. Laboratory fee, $5.00.

For Advanced Undergraduates

Zool. 53. Physiology of Exercise (2)—Fall. One lecture and one laboratory a week.

A detailed consideration of the mechanism of muscular contraction; the integration by means of the nervous sytem. Required of all juniors in metabolic, circulatory, and the respiratory responses in exercise; and their Physical Education.

Zool. 55. Development of the Human Body (2)—Spring. Two lectures a week.

A study of the main factors affecting the growth and development of the child with especial emphasis on normal development.

Zool. 75, 76. Journal Club (2)—Fall, Winter, Spring and Summer. One lecture a week.

Reviews, reports, and discussions of current literature. Required of all students whose major is zoology.

For Advanced Undergraduates and Graduates

Zool. 101. Mammalian Anatomy (3)—Spring. Three laboratories a week. Registration limited. Permission of the instructor must be obtained before registration. Recommended for premedical students, and those whose major is zoology.

A course in the dissection of the cat or other mammal. By special permission of the instructor, a vertebrate other than the cat may be used for study. Laboratory fee, $5.00.

Zool. 102, 103. General Animal Physiology (8)—Fall and Winter; Spring and Summer.

Prerequisites, one year of chemistry and one course in vertebrate anatomy. Registration limited to twelve, and permission of instructor must be obtained before registration. Either quarter may be taken first. Both quarters must be completed before credit is granted.

The first quarter work deals with the fundamentals of cellular and general physiology. The second quarter is devoted to an application of these principles to the higher animals. Laboratory fee, $5.00 each quarter.

Zool. 104. Genetics (3)—Fall, Winter. Three lectures a week.

Required of students intending to take advance courses in plant and animal breeding, and also of zoology majors.

Zool. 105. Aquiculture (3)—Summer, Fall. Two lectures and one laboratory a week. Prerequisite, one course in zoology.

The course deals with the practices employed in rearing aquatic animals and the properties of natural waters which render them suitable for environmental purposes. Laboratory fee, $5.00.

Zool. 108. Animal Histology (3)—Fall, Spring. One lecture and two laboratories a week. Prerequisite, one course in zoology.

A microscopical study of tissues and organs selected from representative vertebrates, but with particular reference to the mammal. Laboratory fee $5.00.

Zool. 120. Advanced Genetics (3)—Winter. Two lectures and one laboratory a week. Prerequisite, Zool. 104.

A consideration of salivary chromosomes, the nature of the gene, chromosome irregularities, polyploidy, and mutations. Breeding experiments with Drosophila and small mammals will be conducted. Laboratory fee, $5.00.

Zool. 121. Principles of Animal Ecology (3)—Summer, Spring. Two lectures and one laboratory a week. Prerequisite, one course in zoology.

Animals are studied in relation to their natural surroundings. Biological, physical, and chemical factors of the environment which affect the growth, behavior, habits and distribution of animals are stressed in lecture and laboratory. Laboratory fee, $5.00.

For Graduates

Zool. 200. Marine Zoology (5)—Fall. Three lectures and two laboratories a week.

Problems in salt water animal life of the higher phyla. Laboratory fee, $5.00.

Zool. 201. Microscopical Anatomy (5)—Winter. Three lectures and two laboratories a week.

A detailed study of the morphology and activity of cells composing animal tissues, with specific reference to the vertebrates. Laboratory work includes the preparation of tissues for microscopic examination. Laboratory fee, $5.00.

Zool. 203. Advanced Embryology (5)—Spring. Three lectures and two laboratories a week.

Mechanics of fertilization and growth. A review of the important contributions in the field of experimental embryology. Laboratory fee, $5.00.

Zool. 204. Advanced Animal Physiology (5)—Winter. Three lectures and two laboratories a week.

The principles of general and cellular physiology as found in animal life. Laboratory fee, $5.00.

Zool. 205. Hydrobiology (5)—Fall. Three lectures and two laboratories a week.

A study of the biological, chemical, and physical factors which determine the growth, distribution, and productivity of microscopic and near microscopic organisms in marine and freshwater environments with special reference to the Chesapeake Bay region. Laboratory fee, $5.00.

Zool. 206. Research (Credit to be arranged.)—Fall, Winter, Spring and Summer. Laboratory fee, $5.00 each quarter.

Zool. 207. Zoological Seminar (1)—Fall, Winter, Spring, Summer. One lecture a week.

SECTION IV
Resident Instruction at Baltimore

SCHOOL OF DENTISTRY

J. BEN ROBINSON, Dean
KATHARINE TOOMEY, Administrative Assistant

The Faculty Council

MYRON S. AISENBERG, D.D.S., F.A.C.D.
GEORGE M. ANDERSON, D.D.S., F.A.C.D.
BRICE M. DORSEY, D.D.S., F.A.C.D.
GRAYSON W. GAVER, D.D.S., F.A.C.D.
WILLIAM E. HAHN, D.D.S., A.B., M.S.
BURT B. IDE, D.D.S., F.A.C.D.
HARRY B. MCCARTHY, D.D.S., F.A.C.D.
ERNEST B. NUTTALL, D.D.S.
J. BEN ROBINSON, D.D.S., D. Sc.

Building

The School of Dentistry is located at the northwest corner of Lombard and Greene Streets, adjoining the University Hospital. The building occupied by the Dental School provides approximately fifty thousand square feet of floor space, is fireproof, splendidly lighted and ventilated, and is ideally arranged for efficient use. It contains a sufficient number of large lecture rooms, classrooms, a library and reading room, science laboratories, technic laboratories, clinic rooms, and locker rooms. It is furnished with new equipment throughout.

Library

The Dental School is fortunate in having one of the best equipped and organized dental libraries among the dental schools of the country.

Course of Instruction

The Baltimore College of Dental Surgery, Dental School, University of Maryland, offers a four-year course in dentistry devoted to instruction in the medical sciences, the dental sciences, and clinical practice.

Requirements for Admission to the School of Dentistry

Applicants for admission must present evidence of having successfully completed two years of work in an accredited college of arts and sciences based upon the completion of a four-year high-school course. No applicant will be considered who has not completed all requirements for advancement to the junior year in the arts and sciences college from which he applies. His scholastic attainments shall be of such quality as to ensure a high quality of achievement in the dental course.

Requirements for Matriculation and Enrollment

In the selection of students to begin the study of dentistry the School considers particularly a candidate's proved ability in secondary education and his successful completion of prescribed courses in predental collegiate training. The requirements for admission and the academic regulations of the College of Arts and Sciences, University of Maryland, are strictly adhered to by the School of Dentistry.

Fees and Expenses

A complete schedule of all fees and other expenses will be found in the separate Catalogue of the School of Dentistry, a copy of which may be obtained from Dean, School of Dentistry, University of Maryland, Lombard and Greene Streets, Baltimore-1, Maryland.

Advice to Predental Students

Students registered in the Predental Curriculum should secure a copy of the latest catalogue of the School of Dentistry early in their first year in college, in order to acquaint themselves with the requirements for admission.

THE SCHOOL OF LAW

ROGER HOWELL, Dean,

GERTRUDE M. ANDERTON, Secretary to Dean.

The School of Law is a member of the Association of American Law Schools and is on the list of approved schools of the Section on Legal Education of the American Bar Association.

Building

The Law School Building is located at the corner of Redwood and Greene Streets, Baltimore. In addition to providing classrooms and offices for the Law faculty, it contains a large auditorium, practice-court room, students' lounge and locker rooms, and the law library, the latter containing a collection of over 18,000 carefully selected text-books, English and American reports, leading legal periodicals, digests, and standard encyclopedias.

Organization

The School has two divisions, the Day School and the Evening School. The same curriculum is offered in each school, and the standards of work and graduation requirements are the same. The normal Day School course covers a period of three years of thirty weeks each, exclusive of holidays. The class sessions are held during the day, chiefly in the morning hours. The normal Evening School course covers a period of four years of thirty-four weeks each. exclusive of holidays. The class sessions are held on Monday, Wednesday, and Friday evenings of each week from 6:30 to 9:40 p.m. This plan leaves the alternate evenings for study and preparation by the student.

Accelerated Program

During the War emergency, the Law School will operate on a three semester basis, with a summer term added to the regular school year. The normal period required for completion of the course in either the Day School or the Evening School may be shortened by as much as one year through attendance during two summer semesters, but such acceleration is optional. Entering students may enroll at the beginning of any semester.

Requirements for Admission

The requirements for admission are those of the Association of American Law Schools. Applicants for admission as candidates for a degree are required to produce evidence of the completion of at least one-half the work acceptable for a Bachelor's degree granted on the basis of a four-year period of study by the State University of the State in which the pre-law work is taken or other standard college or university in such State. Not more than ten per cent of the credit presented for admission may include credit earned in non-theory courses in military science, hygiene, domestic arts, physical education, vocal or instrumental music, or other courses

without intellectual content of substantial value. Such prelegal work must have been done in residence, and must have been passed with a scholastic average at least equal to the average required for graduation in the institution attended.

Combined Programs of Study Leading to the Degree of Bachelor of Arts of Bachelor of Science and Bachelor of Laws

The University offers combined programs in liberal arts or business administration and law, leading to the degrees of Bachelor of Arts or Bachelor of Science and Bachelor of Laws. Students enrolled in such combined programs spend their first three years in the College of Arts and Sciences or the College of Business and Public Administration at College Park. For the fourth year they register in the School of Law, and upon the successful completion of the work of the first year in the Day School, or the equivalent work of the Evening School, are awarded the degree of Bachelor of Arts or Bachelor of Science. The degree of Bachelor of Laws is awarded upon the successful completion of the work prescribed for graduation in the School of Law.

Further Information

For further details as to entrance, fees, curriculum, or other information, see the special catalog of the school. A copy may be had by writing the Dean, School of Law, Redwood and Greene Streets, Baltimore-1, Maryland.

SCHOOL OF MEDICINE

ROBERT U. PATTERSON, *Dean*

History

The school of Medicine of the University of Maryland, organized in 1807, is one of the oldest foundations for medical education in America, ranking fifth in point of age among the medical colleges of the United States. In the school building at Lombard and Greene Streets in Baltimore was founded one of the first medical libraries and the first medical college library in the United States.

Clinical Facilities

The original University Hospital, property of the University, is the oldest institution for the care of the sick in Maryland. It was opened in September, 1823, and at that time consisted of four wards, one of which was reserved for eye patients.

Besides its own hospital, the School of Medicine has control of the clinical facilities of the Mercy Hospital, in which thousands of patients annually are treated.

Advice to Pre-Medical Students

Students registered in the Pre-Medical Curriculum should secure a copy of the latest catalog of the School of Medicine early in their first year in college in order to acquaint themselves with the requirements for admission.

Applications for admission should be submitted well in advance of the date when the student desires to enter the School of Medicine, and will be accepted by the Committee on Admissions any time after the beginning of the academic year just preceding the academic year in which the student expects to enter. Selections for the Freshman Class are usually completed about six months in advance of the date of actual enrollment.

Accelerated Program

In cooperation with the National war effort, the medical course of the School of Medicine at the present time consists of four full academic sessions completed in three calendar years. This practice will be followed until further notice.

The minimum requirements at the present time are two academic years (60 semester or 90 quarter hours) of credits exclusive of physical education and military science, acquired at or acceptable to an approved college of arts and sciences. These requirements include minimum credits in basic subjects.

For Further Information

For details concerning requirements of the School of Medicine write to the Committee of Admissions, School of Medicine, University of Maryland, Lombard and Greene Streets, Baltimore 1, Maryland.

SCHOOL OF NURSING

IVY B. CLIFFORD, *Director and Superintendent of Nurses*

The University of Maryland School for Nurses was established in the year 1889. Since that time it has been an integral part of the University of Maryland. The school is non-sectarian, the only religious services being morning prayers.

The new University of Maryland Hospital is a general hospital, containing 435 beds and 50 bassinets. It is equipped to give young women a thorough course of instruction and practice in all phases of nursing.

Programs Offered

The School of Nursing offers a program of study to two groups: (a) those who desire to complete their work in approximately thirty-six months; (b) those desiring to take a five-year combined academic study and special training in nursing. Those who complete the latter course successfully may receive the degree of Bachelor of Science as well as a diploma in nursing.

Because of the changes that have been made, and may have to be made from time to time as a result of the war effort, candidates for nursing education should write to the Superintendent of Nurses, University Hospital, Redwood and Greene Streets, Baltimore 1, Maryland, for information concerning admission to the course in the University Hospital.

SCHOOL OF PHARMACY

A. G. DUMEZ, *Dean*
MISS B. OLIVE COLE, *Secretary of Faculty*

Faculty Council

A. G. DUMEZ, Ph.G., B.S., M.S., Ph.D.
E. F. KELLY, Phar.D., Sc.D.
WALTER H. HARTUNG, B.A., Ph.D.
CLIFFORD W. CHAPMAN, B.A., M.Sc., Ph.D.
J. CARLTON WOLF, B.Sc., Phar.D.
B. OLIVE COLE, Phar.D., LL.B.
H. E. WICH, Phar.D.
THOMAS C. GRUBB, A.B., Ph.D.
A. W. RICHESON, B.S., A.M., Ph.D.

History

The School of Pharmacy began its existence as the Maryland College of Pharmacy. The latter was organized in 1841, and operated as an independent institution until 1904, when it amalgamated with the group of professional schools in Baltimore then known as the University of Maryland. It became a department of the present University when the old University of Maryland was merged with the Maryland State College in 1920.

Location

The School of Pharmacy is located at 32 South Greene Street, in close proximity to the Schools of Medicine, Law, and Dentistry.

Recognition

This school is accredited by the American Council on Pharmaceutical Education and holds membership in the American Association of Colleges of Pharmacy. The school is registered in the New York Department of Education, and its diploma is recognized in all states.

Requirements for Admission

The requirements for admission are those prescribed by the American Council on Pharmaceutical Education and the American Association of Colleges of Pharmacy. They are the same as the requirements for admission to the College of Arts and Sciences. (See page 71.) Applications for admission must be approved, not only by the Director of Admissions, but also by the Committee on Admissions of the Faculty Council of the School of Pharmacy.

Admission With Advanced Standing

A student who presents credit for work done in a school of pharmacy accredited by the American Council on Pharmaceutical Education will re-

ceive credit for the courses which correspond in length and content to those prescribed for the first three years of the curriculum and be admitted with advanced standing, provided he presents an official transcript of his record and a proper certificate of honorable dismissal.

Credit for general educational subjects will be given to a student presenting evidence of having completed work in an accredited academic institution equal in value to that outlined in this catalog.

A transferring student in either case must satisfy the preliminary educational requirements.

Special Students

Applicants who are at least twenty-one years of age, and who have not completed the usual preparatory course, may be admitted to such courses as they seem fitted to take. Special students are ineligible to matriculate for a degree until entrance requirements have been satisfied.

Unclassified Students

Applicants who meet entrance requirements but who do not wish to pursue a program of study leading to a degree are eligible for admission to pursue courses for which they have met prerequisites.

Matriculation and Registration

The matriculation ticket must be procured from the office of the School of Pharmacy, and must be taken out before one enters classes. After matriculation, all students are required to register at the office of the Director of Admissions.

Expenses

	Maryland Residents	Non-Residents
Tuition fee, per quarter	$80.00	$85.00
Laboratory and breakage fee, per quarter	20.00	20.00
Other fees (payable only once):		
Matriculation fee (payable on first registion)	10.00	10.00
Diploma fee (payable at beginning of final quarter of Senior Year)	15.00	15.00

Further Information

The School of Pharmacy publishes annually a separate catalog, and a copy of this, or any further information desired, may be obtained from Dean, School of Pharmacy, University of Maryland, Baltimore, Maryland.

UNIVERSITY HOSPITAL

ROBERT U. PATTERSON, *Superintendent and Dean of the Medical School*

Location and History

The University Hospital, located at Redwood and Greene Streets in Baltimore, adjacent to the Medical school group, was first opened as the hospital of the University of Maryland, Medical School, in 1823. Originally containing four wards, it was increased through additions from time to time until about 1875 when, with the addition of the Greene Street wing, it reached the capacity of approximately 250 beds, continuing this number of beds until 1934, when the present new hospital building was opened which now provides 435 beds, plus 50 bassinettes. In addition to furnishing the clinical facilities for the students of the University of Maryland School of Medicine, the hospital offers to residents of the State of Maryland the facilities of a modern General Hospital.

Present Facilities

During the fiscal year which ended June 30, 1943, there were admitted to the University Hospital 12,253 patients who were furnished a total of 166,241 days of patient care. During this period 2080 babies were born in the hospital. During the same period there were registered in the Out-Patient Department of the Hospital (Emergency Department and general dispensaries) 17,010 patients never previously served who, during the year, made a total of 76,649 visits to the Out-Patient Department. The Accident Room of the Hospital rendered emergency care to approximately 18,000 patients for the year 1943.

The externe service delivered 1063 mothers at home. A total of 22,323 visits were made to these homes by the doctors, nurses and senior students of this service.

The patients admitted to the hospital during the past year represented residents of every county in the State of Maryland; 20 States of the United States and the District of Columbia, and seamen of 9 foreign registrations.

COLLEGE OF EDUCATION, BALTIMORE DIVISION

GLEN D. BROWN, *Director*

Location

Offices of the Baltimore Division of the College of Education are located on the second floor of the Administration Building on the University Campus, Lombard and Greene Streets.

Courses Available

Because approximately one-half of the State's population and its largest school district are in the City of Baltimore, the University of Maryland operates the Baltimore Division of the College of Education primarily for the training of teachers in service and those preparing to teach. Originally the Division's work was exclusively in the field of Industrial Education, but with increasing demands the scope of instruction gradually has been enlarged until now it includes many phases of education for teachers.

Instructional Staff

The Baltimore Division is fortunate in having two teaching staffs on which to call: the regular faculty of the University in the College of Arts and Sciences, the College of Education, and the Baltimore professional schools; and a special faculty of Industrial Education specialists drawn largely from the Baltimore Public Schools. It is the policy of the University to use in all of its Divisions, including the Baltimore and the extension courses of the College of Education, in so far as possible, instructors who are regular members of its day school staff. When members of that staff are unavailable, the University calls on outside instructors.

Although the Baltimore Division is primarily an instructional division for teachers, the full time staff stands ready to give service to all individuals and agencies that need its help. It is particularly anxious to assist adult groups with special problems of leadership training, and to cooperate with industrial and business organizations in their personnel training programs. The growing importance of the instruction given in the Baltimore Division is evidenced by the fact that steadily increasing demands are being made upon it.

For Futher Information

For a special catalog listing the course offerings of the Baltimore Division of the College of Education write to the Director at the above-noted address.

SECTION V

Agricultural Extension, Research and Regulatory Agencies

EXTENSION SERVICE

Administrative Staff

College Park

THOMAS BADDELEY SYMONS, M.S., D.Agr., Dean, College of Agriculture, Director.
EDWARD INGRAM OSWALD, B.S., Professor, Assistant Director.
VENIA MERIE KELLAR, B.S., Professor, Assistant Director.
ERNEST NEAL CORY, Ph.D., Professor, Extension Entomology, State Entomologist, Assistant Director.
ADDISON HOGAN SNYDER, B.S., Professor, Editor.
PAUL EDWIN NYSTROM, M.S., Professor, County Agent Leader.
DOROTHY EMERSON, Professor, Girls' Club Leader.
FLORENCE HARRIETT MASON, B.S., Professor, Extension Home Furnishing, District Agent.
KATHERINE GRACE CONNOLLY, Administrative Assistant.
MYLO SNAVELY DOWNEY, B.S., Professor, Boys' Club Leader.

Subject Matter Specialists

GEORGE JENVEY ABRAMS, M.S., Assistant Professor, Extension Apiculture.
ARTHUR MONTRAVILLE AHALT, M.S., Assistant Professor, Extension Agricultural Education.
FLOYD JAY ARNOLD, M.S., Professor, Extension Dairy Husbandry.
WALTER RAYMOND BALLARD, B.S., Associate Professor, Extension Vegetable and Landscape Gardening.
RONALD BAMFORD, Ph.D., Professor, Extension Plant Pathology.
WALTER CROTHERS BEAVEN, Ph.B., Extension Marketing.
URAL GUY BEE, M.S., Associate Professor, Extension Animal Husbandry.
RAY WILFORD CARPENTER, A.B., LL.B., Professor, Extension Agricultural Engineering, State Drainage Engineer.
JOHN JULIAN CHISOLM II, B.S., Instructor, Extension Entomology.
JOHN COTTON, B.S., Assistant Professor, Extension Soil Erosion.
CARROLL EASTBURN COX, Ph.D., Instructor, Extension Plant Pathology.
HARRY WILLIAM DENGLER, B.S., Associate Professor, Extension Forestry.
SAMUEL HENRY DEVAULT, Ph.D., Professor, Extension Agricultural Economics.

RANDOLPH SAMPSON FORRESTER, Assistant in Extension Marketing.

CASTILLO GRAHAM, Ph.D., Assistant Professor, Extension Entomology.

ARTHUR BRYAN HAMILTON, M.S., Associate Professor, Extension Farm Management.

WILLIAM EDGAR HARRISON, Assistant, Extension Marketing.

RUSSELL CHENEY HAWES, M.S., Professor, Extension Marketing.

HERMAN AULL HUNTER, M.S., Associate Professor, Extension Canning Crops.

GEORGE HYATT, JR., M.S., Associate Professor, Extension Dairy Husbandry.

WALTER FULTON JEFFERS, Ph.D., Instructor, Extension Plant Pathology.

ROBERT ANDREW JEHLE, Ph.D., Professor, Extension Plant Pathology, State Pathologist.

MORLEY ALLAN JULL, Ph.D., Professor, Extension Poultry Husbandry.

WILLIAM BECK KEMP, Ph.D., Professor, Extension Agronomy.

ALBERT VICTOR KREWATCH, M.S., E.E., Associate Professor, Extension Rural Electrification.

ALBIN OWINGS KUHN, M.S., Assistant Professor, Extension Agronomy.

GEORGE SHEALY LANGFORD, Ph.D., Associate Professor, Extension Entomology.

FREDERICK HAROLD LEINBACH, Ph.D., Professor, Extension Animal Husbandry.

JOHN WINFIELD MAGRUDER, M.S., Associate Professor, Extension Agronomy.

CHARLES HAROLD MAHONEY, Ph.D., Professor, Extension Horticulture, Olericulture.

ARTHUR F. MARTIN, B.S., Assistant Professor, Marketing.

MARGARET MCPHEETERS, M.S., Associate Professor, Extension Nutrition.

DEVOE MEADE, Ph.D., Professor, Extension Animal Husbandry.

CHARLES PERCIVAL MERRICK, B.S., Assistant Professor, Extension Drainage Engineering.

MARTIN HAMMOND MUMA, Ph.D., Instructor, Extension Entomology.

MILTON ANDREW PETTY, Ph.D., Instructor, Extension Plant Pathology.

ROBERT EMMETT PHILLIPS, Ph.D., Associate Professor, Extension Poultry.

WALTER BENJAMIN POSEY, M.S., Associate Professor, Extension Tobacco.

WADE HAMPTON RICE, B.S., Associate Professor, Extension Poultry Husbandry.

ALBERT LEE SCHRADER, Ph.D., Professor, Extension Pomology.

HELEN SHELBY, M.S., Associate Professor, Extension Clothing.

MARK MERCER SHOEMAKER, A.B., M.L.D., Associate Professor, Extension Landscape Gardening.

ROYLE PRICE THOMAS, Ph.D., Professor, Extension Soils.

ARTHUR SEARLE THURSTON, M.S., Professor, Extension Landscape Gardening.

JOSEPH MCNAUGHTON VIAL, B.S., Professor, Extension Animal Husbandry.

ALBERT FRANK VIERHELLER, M.S., Associate Professor, Extension Horticulture.

EDGAR PERKINS WALLS, Ph.D., Professor, Extension Canning Crops.

JOHN WILLIAM WESSELS, A.B., Assistant Professor, Extension Marketing.

County Agents (Field)

County	*Name*	*Headquarters*
Allegany	RALPH FRANK MCHENRY, B.S., Associate Professor,	Cumberland
Anne Arundel	STANLEY EVERETT DAY, B.S., Associate Professor,	Annapolis
Baltimore	HORACE BENNETT DERRICK, B.S., Associate Professor,	Towson
Calvert	JOHN BOOME MORSELL, B.S., Associate Professor,	Prince Frederick
Caroline	GEORGE WATSON CLENDANIEL, B.S., Associate Professor,	Denton
Carroll	LANDON CRAWFORD BURNS, B.S., Associate Professor,	Westminster
Cecil	JAMES ZENUS MILLER, B.S., Associate Professor	Elkton
Charles	PAUL DENNIS BROWN, B.S., Associate Professor	LaPlata
Dorchester	*WILLIAM RUSSELL MCKNIGHT, B.S., Associate Professor,	Cambridge
	HARRY WESLEY BEGGS, B.S., Associate Professor,	Cambridge
Frederick	HENRY REESE SHOEMAKER, B.S., M.A., Associate Professor	Frederick
Garrett	JOHN HURLEY CARTER, B.S., Associate Professor	Oakland
Harford	HENRY MORRISON CARROLL, B.S., Associate Professor,	Bel Air
Howard	WARREN GRAHAM MYERS, B.S., Associate Professor,	Ellicott City
Kent	JAMES DUNHAM MCVEAN, B.S., Associate Professor,	Chestertown

*On military leave.

Montgomery .... OTTO WATSON ANDERSON, M.S., Associate Professor, Rockville
Prince Georges.. PERCY ELLSWORTH CLARK, B.S., Associate Professor, Upper Marlboro
Queen Annes.... JAMES WALTER EBY, B.S., Assistant Professor, Centerville
St. Marys..... JOSEPH JULIUS JOHNSON, Assistant Professor, Leonardtown
Somerset ..... CLARENCE ZEIGLER KELLER, B.S., Associate Professor, Princess Anne
Talbot ..... RUDOLPH STOCKDALE BROWN, B.S., Associate Professor, Easton
Washington .... MARK KERMIT MILLER, B.S., Associate Professor, Hagerstown
Wicomico ..... JAMES PAUL BROWN, B.S., Associate Professor..Salisbury
Worcester ..... ROBERT THORNTON GRANT, B.S., Associate Professor, Snow Hill

Assistant County Agents

Allegany and Garrett ..... JOSEPH MATTHEW STEGER, B.S., Instructor...Cumberland
Baltimore ..... JOHN WHEELER ENSOR, B.S., Instructor.....Towson
Harford .....*WALTER SHERARD WILSON, B.S., Instructor.....Bel Air
Kent ..... RICHARD SPENCER SUTTON, B.S., Instructor.....Bel Air
Montgomery ....*STANLEY BURR SUTTON, Instructor.....Chestertown
Queen Annes....†RUFUS BACHER KING, A.B., Instructor.....Rockville
Washington .... ROSCOE NEWTON WHIPP, B.S., Instructor.....Rockville
CHARLES REYNOLDS RATHELL, Instructor.....Centerville
DANIEL VERNON HOLTER, B.S., Instructor....Hagerstown

Local Agents—Negro Work

Southern Maryland ..... MARTIN GREEN BAILEY, B.S., Instructor....Seat Pleasant
JAMES RUFUS TAYLOR, B.S., Instructor.....Seat Pleasant
Eastern Shore... LOUIS HENDERSON MARTIN, Instructor.....Princess Anne

County Home Demonstration Agents (Field)

County	*Name*	*Headquarters*
Allegany	MAUDE ALBERTA BEAN, Associate Professor..	Cumberland
Anne Arundel...	MIRIAM F. PARMENTER, B.S., Assistant Professor,	Annapolis
Baltimore	ANNA TRENTHAM, B.S., Associate Professor.....	Towson
Calvert	FLORENCE E. BUCHANAN, B.S., Assistant Professor,	Prince Frederick

*On military leave. †Part time.

Caroline ..... BESSIE MARGUERITE SPAFFORD, B.S., Associate Professor, Denton
Carroll ..... JUSTINA C. CROSBY, B.S., Assistant Professor, Westminster
Cecil ..... HELEN IRENE SMITH, B.A., Associate Professor, Elkton
Charles ..... MARY GRAHAM, Associate Professor.....La Plata
Dorchester ..... HATTIE ESTELLA BROOKS, A.B., Associate Professor, Cambridge
Frederick ..... JESSE MURRAY HAMMERLY, B.S., M.A., Associate Professor.....Frederick
Garrett ..... MRS. MILDRED BARTON HOFFMAN, A.B., Assistant Professor.....Oakland
Harford ..... CATHARINE MAURICE, B.S., Associate Professor...Bel Air
Howard ..... MILDRED JANE FLANAGAN, B.S., Assistant Professor, Ellicott City
Kent ..... HELEN NICKERSON SCHELLINGER, Associate Professor, Chestertown
Montgomery .... EDYTHE MARGARET TURNER, B.S., Associate Professor, Rockville
Prince Georges .. ETHEL MARY REGAN, B.S., Associate Professor, Hyattsville
Queen Annes.... MARIANNA LEE LONG, B.A., Assistant Professor, Centerville
St. Marys..... ETHEL JOY, A.B., Associate Professor.....Leonardtown
Somerset ..... HILDA TOPFER, B.S., Associate Professor...Princess Anne
Talbot ..... MARGARET SMITH, B.S., Associate Professor.....Easton
Washington .... ARDATH ELLEN MARTIN, B.S., Associate Professor, Hagerstown
Wicomico ..... HELEN FLORENCE WILLERTON, B.S., Assistant Professor, Salisbury
Worcester ..... LUCY JANE WALTER, Associate Professor.....Snow Hill

Assistant County Home Demonstration Agents

Allegany ..... MARGARET THOMSON LOAR, B.S., Instructor...Cumberland

Local Home Demonstration Agents—Negro Work

Southern Maryland ..... ETHEL LAWRENCE BIANCHI, B.S., Instructor, Seat Pleasant
Southern Maryland ..... EVELYN VIVIAN KENT, B.S., Instructor.....Seat Pleasant
Eastern Shore... MRS. OMEGA MOORE JONES, A.B., Instructor, Princess Anne

EXTENSION SERVICE

T. B. SYMONS, *Director*
KATHERINE CONNOLLY, *Administrative Assistant*
ELSIE G. LINKOUS, *Secretary to Director*

Cooperative Extension work in agriculture and home economics, established by State and Federal Laws in 1914, is designed to assist farmers and their families in the problems of agriculture and rural homes. Most of the work is carried on in the local communities, on the farms and in the homes throughout the State. It is conducted under a Memorandum of Understanding between the Extension Service of the University of Maryland and the U. S. Department of Agriculture.

The Federal Government, the State and the Counties contribute to the support of the Extension Service in Maryland. There is a County Extension Service in each county, with a County Agent and Home Demonstration Agent in charge, and assistants where funds permit and the work requires. Backed by a staff of Specialists at the University, these Agents are in close contact with rural people and their problems. There are tremendous demands for expansion at present, as a result of the war. In addition to direct responsibility for recruiting and placing workers in the emergency farm labor program, the Extension Service is charged with the educational phases of all programs and measures affecting rural people, including increased food production and preservation and many other wartime measures.

Practically every phase of agriculture and rural home life comes within the scope of extension work. The Extension Service teaches largely by demonstrations and carries the scientific and economic results of the Experiment Station and Department of Agriculture to rural people in ways that they understand and use.

In Maryland, the Extension Service works in close association with all rural organizations. It assists especially in promoting better marketing of farm products and encourages the marketing of home supplies by rural women. Work with rural women is one of the most extensive phases of extension education, including both the practical problems of the home and the cultural, economic, and community activities in which present-day women are engaging.

In addition to work with adults, thousands of boys and girls are developed as leaders and given practical education through the 4-H Clubs. Through their diversified activities, the boys and girls are given a valuable type of instruction and training and afforded an opportunity to develop self-confidence, perseverance, and citizenship.

Extension Short Course

The Extension Service arranges and conducts short courses in various lines, most of which are held at the University. Some of these courses

have been held regularly over a period of years and others are added as the need and demand develop. Wartime conditions have made it necessary to suspend them for a time, but they will be resumed when conditions permit. Others will be added as needs arise.

Rural Women's Short Course

In response to requests of rural women for special training in a variety of subjects, the Rural Women's Short Course was inaugurated in 1922. Attendance at the course, extending for one week, has grown steadily, reaching more than one thousand women at the last session. It is given about the second week in June.

Canners' Short Course

Some fifteen years ago there developed a demand by canners of the State for a Short Course designed especially to aid them in the fundamentals of their industry. Such a course was arranged, usually the third week in February, and has been well attended.

Nurserymen's Short Course

A few years ago the organized nurserymen of the State requested a short course covering problems of their business. The lectures and demonstrations reflect advanced technique in production of nursery stock and control of insect pests and diseases. Instruction is given by the Departments of Horticulture, Entomology, and Plant Pathology.

Greenkeepers' Short Course

The annual Greenkeepers' Course was inaugurated to meet requests of golf course managers for assistance in the problems incident to maintaining grass generally and golf greens in particular. The course is usually given in February and attracts registrants from out of the State as well as from Maryland.

Florists' Short Course

In the latter part of March or early in April each year a special short course is given for florists. It usually extends two days, with a special evening feature held in the Coliseum for display of flower decorations and a style revue.

Boys' and Girls' Club Week

Members and leaders of boys' and girls' 4-H Clubs come to the University for a week each year, usually the latter part of August. Class work and demonstrations are given by specialists, and a broad program of education, inspiration and recreation is provided.

AGRICULTURAL EXPERIMENT STATION STAFF

WILLIAM BECK KEMP, Ph.D.....*Acting Director*

Agricultural Economics

SAMUEL HENRY DEVAULT, Ph.D.,
Professor and Head, Agricultural Economics
WILLIAM PAUL WALKER, M.S.,
Associate Professor, Agricultural Economics
ARTHUR BRYAN HAMILTON, M.S.,
Associate Professor, Agricultural Economics
ARTHUR MONTRAVILLE AHALT, M.S.,
Associate Professor, Agricultural Economics
EMIL S. TROELSON, Ph.D.....Associate Professor, Agricultural Economics

Agricultural Engineering

RAY WILFORD CARPENTER, A.B., LL.B.,
Professor and Head, Agricultural Engineering, State Drainage Engineer
GEORGE JOHN BURKHARDT, M.S.,
Associate Professor, Agricultural Engineering

Agronomy

WILLIAM BECK KEMP, Ph.D.....Professor and Head, Agronomy
RUSSELL GROVE ROTHGEB, Ph.D.....Associate Professor, Agronomy
ROYLE PRICE THOMAS, Ph.D.....Professor, Soils
HOWARD BARR WINANT, M.S.....Assistant Professor, Soils
GEORGE FRANCIS MADIGAN, Ph.D.....Assistant Professor, Soils
ALBIN OWINGS KUHN, M.S.....Assistant Professor, Agronomy
STANLEY PHILLIPS STABLER, B.S.....Associate Agronomist
JOHN WINFIELD MAGRUDER, M.S.....Associate Professor, Agronomy
WALTER BENJAMIN POSEY, M.S.....Associate Professor, Tobacco
KENTON CHARLES REYNOLDS, B.S.....Assistant in Soils
MIYE YAMASAKI, B.S.....Assistant in Soils
CONRAD LIDEN, B.S.....Assistant Agronomist

Agronomy—Seed Inspection

FORREST SHEPPERSON HOLMES, M.S.....Chief Seed Inspector
OLIVE MARIAN KELK.....Assistant Seed Analyst

Animal Husbandry

FREDERICK HAROLD LEINBACH, Ph.D.,
Professor and Head, Animal Husbandry
DEVOE MEADE, Ph.D.....Professor, Animal Husbandry

Animal Pathology

HAROLD MOON DEVOLT, M.S., D.V.M.....Associate Professor, Pathology
LEO JOSEPH POELMA, M.S., D.V.M.....Associate Professor, Pathology
MELVIN M. RABSTEIN, V.M.D.....Instructor and Assistant Pathologist
CORNELIA M. COTTON, Ph.D.....Cooperative Agent

Bacteriology

LAWRENCE HENRY JAMES, Ph.D.....Professor and Head, Bacteriology

Botany, Plant Physiology and Pathology

CHARLES ORVILLE APPLEMAN, Ph.D.,
Professor and Head, Botany and Plant Physiology
RONALD BAMFORD, Ph.D.....Professor, Botany
ROBERT ANDREW JEHLE, Ph.D.,
Professor, Plant Pathology, State Pathologist
RUSSELL GUY BROWN, Ph.D.....Assistant Professor, Botany
HAROLD FULTON JEFFERS, Ph.D.....Assistant Professor, Plant Pathology
CARROLL EASTBURN COX, Ph.D.....Instructor, Plant Pathology
MILTON ANDREW PETTY, Ph.D.....Instructor, Plant Pathology

Dairy Husbandry

LANE A. MOORE, Ph.D.....Professor, Dairy Husbandry
MYRON HERBERT BERRY, M.S.....Associate Professor, Dairy Husbandry

Entomology

ERNEST NEAL CORY, Ph.D.,
Professor and Head, Entomology, State Entomologist
LEWIS POLSTER DITMAN, Ph.D.....Assistant Professor, Entomology
GEORGE JENVEY ABRAM, M.S.....Assistant Professor, Apiculture

Horticulture

CHARLES HAROLD MAHONEY, Ph.D.....Professor and Head, Olericulture
ALBERT LEE SCHRADER, Ph.D.....Professor, Pomology

EDGAR PERKINS WALLS, Ph.D.....Professor, Canning Crops
IRVIN CHARLES HAUT, Ph.D.....Associate Professor, Pomology
HERMAN AULL HUNTER, M.S.....Associate Professor, Canning Crops
HERMAN TODD, B.S.....Assistant in Horticulture
LELAND E. SCOTT, M.S.....Associate Professor, Pomology
JAMES E. HAWES, B.S.....Assistant in Horticulture
AGNES LOUISE MARKS, M.S.....Instructor and Research Assistant

Poultry

MORLEY ALLAN JULL, Ph.D.....Professor and Head, Poultry Husbandry
GEORGE DEWITT QUIGLEY, M.S....Associate Professor, Poultry Husbandry
ROBERT EMMETT PHILLIPS, Ph.D..Associate Professor, Poultry Husbandry
MARY JUHN, Ph.D.....Instructor, Poultry Husbandry

THE AGRICULTURAL EXPERIMENT STATION

W. B. KEMP, *Acting Director.*

ISABEL A. BLACKHALL, *Secretary to Director.*

The Agricultural Experiment Stations are for agriculture what the research laboratories are for large corporations. Great corporations pool huge sums of money to finance their operations and can afford to use a percentage of their income for research. Thus the General Electric Company has its "House of Magic" in Schenectady, New York, the DuPont Company has its famous research laboratories, and many other corporations are conducting research. Agriculture is made up of six million small individual businesses, and there is not sufficient capital, or sufficient income so that any one of these businesses can conduct research. Yet the problems which face a biological business such as farming, are as numerous and perplexing as the problems of any business. Certainly our production of food and fibre would be much more costly if it were not for the research results that have been obtained by the Agricultural Experiment Stations.

These stations are for the most part joint Federal and State undertakings. While a number of states had already established experiment stations prior to any Federal action, the passage of the Hatch Act in 1887, which made available a grant in aid to each state for the purpose of establishing an agricultural experiment station, gave a great impetus to the development of research work in agriculture. This work was further encouraged by the passage of the Adams Act in 1906, the Purnell Act in 1925, and the Bankhead-Jones Act in 1935.

The work of the Maryland Agricultural Experiment Station which is supported by these Acts and by State appropriations centers at College Park. On the University campus are to be found laboratories for studying insects and diseases, soil fertility problems, botanical problems, and others. This is also the location of the livestock and dairy barns with their experimental herds. About eight miles from the campus at College Park, near Beltsville, is located the Plant Research Farm of about 500 acres, devoted to work connected with soil fertility, plant breeding and general horticultural problems. Near Ridgely, Maryland, is a farm of approximately 50 acres owned by the Station, at which the problems of canning crops' growers on the Eastern Shore, are studied. There is also an experimental farm at Upper Marlboro, which is operated cooperatively by the Federal Government and the Maryland Agricultural Experiment Station, and which is given over exclusively to the problems of tobacco growing and curing. There is also a number of acres rented near Pocomoke on the Eastern Shore, used for testing new varieties of potatoes. This work is checked and other varieties used, on farms in Garrett County, Maryland. Near Ellicott City there is a farm of 234 acres which is devoted to livestock problems. These various locations give a chance to conduct experiments under the conditions which exist where the results will be put into practice. This, of course, is very important in making results reliable and quickly usable.

The Station, in general, exists as the "trouble-shooter" for Maryland farmers. When Maryland farmers have a problem, the first agency to attempt to meet this problem is the Agricultural Experiment Station. The solution of many difficult problems in the past has given the Maryland Agricultural Experiment Station an excellent standing among the farmers of the State.

LIVE STOCK SANITARY SERVICE STAFF

College Park, Maryland

ARTHUR LOUIS BRUECKNER, B.S., V.M.D., Professor of Veterinary Science and Animal Pathology, Acting Director.

LEO JOSEPH POELMA, D.V.M., M.S., Associate Professor of Animal Pathology.

HAROLD MOON DEVOLT, D.V.M., M.S., Associate Professor of Animal Pathology.

CLYDE LARAYNE EVERSON, D.V.M., Assistant Professor of Veterinary Science, Veterinary Inspector.

CHARLES ROBERT DAVIS, D.V.M., M.S., Assistant Professor of Veterinary Science.

GEORGE CHARLES POPPENSIEK, V.M.D., Assistant Professor of Veterinary Science.

HAROLD FRANCIS BURTON, V.M.D., Assistant Professor of Animal Pathology.
MATTHEW ALAN TROY, D.V.M., Assistant Professor of Animal Pathology.
GEORGE EDWIN DANIEL, Ph.D., Assistant Professor of Animal Pathology (Parasitology).
MELVIN MOSES RABSTEIN, V.M.D., Cooperative Agent, Bureau of Animal Industry.
CORNELIA M. COTTON, Ph.D., Cooperative Agent, Bureau of Animal Industry.
LETHA K. ANDERVONT, (Mrs. H. B.), A.B., Technician.

LIVE STOCK SANITARY SERVICE

A. L. BRUECKNER, *Acting Director.*
KATHERINE CONLON, *Secretary*

Executive Offices:
816 Fidelity Building
Baltimore 1, Maryland

Main Laboratory:
College Park
Maryland

The Live Stock Sanitary Service is charged by State laws to protect the health of the live stock and poultry of the State. The general procedure is along two lines, prevention of the introduction of diseases into Maryland and control and eradication of diseases present within the State. Coupled with these functions are the most important considerations of the human health as influenced by animal diseases. Close cooperation is maintained with officials of the State and County Health Departments in this regard.

To prevent the introduction of diseases with imported animals, appropriate regulations are promulgated, setting forth the conditions under which animals may be brought into the State. These interstate regulations are sent to sanitary officials in all states and to the Federal Government for guidance. Cooperation with other states in their efforts along the same lines is freely extended.

Disease control within the State is conducted under specific programs, where such are possible, and under general programs in other diseases. A force of field men, located in a number of the counties, takes care of this work. Satisfactory diagnosis of diseases is essential for the proper operation of control and eradication. The main laboratory is at College Park, with branches at Baltimore, Centreville, and Salisbury. The type of work conducted in these several locations depends to a large extent upon the nature of the live stock industry, but each furnishes facilities of value to the whole program.

Research studies into various disease conditions of live stock and poultry are conducted mainly at College Park, but some investigations are made at the branch laboratories. Studies in the laboratories are expanded into the field when sufficient progress has been made to justify field trials. The results of such projects are used for guidance in plans for control and eradication of disease.

BRANCH LABORATORY AND FIELD STAFF

IRVIN M. MOULTHROP, D.V.M., Assistant Professor of Veterinary Science, in charge, Salisbury Laboratory.
J. WALTER HASTINGS, JR., V.M.D., Assistant Professor of Veterinary Science, in charge, Centreville Laboratory.
WILLIAM B. COUGHLAN, V.M.D., Assistant Professor of Veterinary Science, in charge, Baltimore Laboratory.
ROBERT B. SHILLINGER, D.V.M., Assistant Professor of Animal Pathology, Salisbury Laboratory.
JAMES W. CROWL, D.V.M., Assistant Professor and Veterinary Inspector, Centreville.
HORACE B. WOOD, D.V.M., Assistant Professor and Veterinary Inspector, Hagerstown.
CLARENCE J. GIBBS, D.V.M., Assistant Professor and Veterinary Inspector, Upper Marlboro.
J. WALTER HASTINGS, SR., V.M.D., Assistant Professor and Veterinary Inspector, Cambridge.
CHARLES R. LOCKWOOD, D.V.M., Assistant Professor and Veterinary Inspector, Towson.
MAHLON H. TROUT, D.V.M., Assistant Professor and Veterinary Inspector, Salisbury.
CARLOS S. WILBANKS, D.V.M., Assistant Professor and Veterinary Inspector, Rockville.
WILSON M. REYNOLDS, D.V.M., Veterinary Inspector, Oakland.

MARYLAND STATE DEPARTMENT OF MARKETS

Agricultural Building, College Park, Maryland

S. B. SHAW, *Chief.*
W. C. BEAVEN, *Marketing Specialist and Chief Inspector.*
A. F. MARTIN, *Assistant Marketing Specialist in Charge of Egg, Dressed Poultry, Butter and Cheese Inspections.*
J. W. WESSELLS, *Assistant Marketing Specialist and Inspector.*
R. S. FORRESTER, *Assistant in Marketing and Egg Inspector.*
————, *Assistant Marketing Specialist and Inspector.*

The State Board of Agriculture of Maryland has by resolutions:

1. Adopted September 25, 1925, authorized the State Department of Markets of the Extension Service of the University of Maryland, to execute as agent of said Board the powers relating to the marketing of farm products, live stock and live stock products heretofore conferred upon the Board by law.

2. Adopted September 25, 1925, authorized the Department of Markets to execute as its agent the general powers of the Board relating to the inspection and regulation of Weights and Measures used in the sale and purchase of agricultural products.

3. Adopted February 1, 1928, authorized the Department of Markets to exercise the powers of said Board in the enforcement of the Maryland Apple Grading Law.

By law, the Department is the agency for the State Board of Agriculture in the enforcement of the following laws: (1) Cantaloupe Maturity Law, (2) Poultry Sale and Transportation Law, (3) Trade-Mark Law covering all fruits and vegetables, fresh or processed, (4) Grading Law covering fresh fruits and vegetables, (5) Inspection Law covering inspection and certification of fruits and vegetables, and (6) Fresh Egg Law.

The Department of Markets is the cooperating agency under joint memorandums of agreement with the Food Distribution Administration for the inspection and certification of fruits, vegetables, live and dressed poultry, eggs, butter, cheese, canning crops; and the preparation and release of Market News reports.

In 1939 the State Department of Health deputized certain of the personnel of the Department of Markets to act as agents of the State Department of Health in preventing the sale or shipment of fruit containing excessive spray residue.

The Department of Markets issues final inspection and certification for the Seed Certification Board on Irish and sweet potatoes and tomato seed stock. In cooperation with the F. D. A. maintains daily Market News Service in Baltimore on fresh fruits, vegetables, dressed poulry and eggs, also seasonal daily reports at Pocomoke on strawberries and Irish potatoes; and acts as agent for the F. D. A. in carrying out all purchasing programs for fruits and vegetables, including all details in connection therewith.

The headquarters of the State Department of Markets is at the University of Maryland, College Park, Maryland. Field offices are located in Baltimore, Hancock, Hagerstown, Salisbury and Pocomoke.

STATE HORTICLTURAL DEPARTMENT

College Park, Maryland

T. B. SYMONS, *Director of Extension Service.*
E. N. CORY, *Assistant Director of Extension Service, State, Entomologist.*
R. A. JEHLE, *State Plant Pathologist.*

The State Horticultural Law was enacted in 1898. It provides for inspection of all nurseries and suppression of injurious insects and diseases affecting plants of all kinds. The work of the department is conducted in close association with the departments of Entomology and Plant Pathology of the University. The regulatory work is conducted under authority

of the law creating the department as well as the State Board of Agriculture. For administrative purposes, the department is placed under the Extension Service of the University because of the close association of the work.

Work in this field is designed to control insects and plant diseases and to protect the public in the purchase of products of nurserymen and florists. A considerable part of the time of the staff is occupied by inspection of orchards, crops, nurseries, greenhouses, and floral establishments. Cooperation with the Federal Government in the inspection and certification of materials that come under quarantine regulations is another major function of the department. The department also enforces the provisions of the Apiary Law, including inspection of apiaries. All activities pertaining to control of insects is conducted under the direction of Dr. E. N. Cory, State Entomologist and Assistant Director of Extension.

Activities of the department in the field of plant disease control are under direction of Dr. R. A. Jehle, State Plant Pathologist. This service includes control and eradication of diseases of strawberries and other small fruits, diseases of apples, peaches, etc., inspection and certification of potatoes and sweet potatoes for seed, control of white pine blister rust, Dutch elm disease, etc.

INSPECTION AND REGULATORY SERVICE

Chemistry Building, College Park, Maryland
Feeds, Fertilizers, Agricultural Liming Materials, Insecticides and Fungicides

L. E. BOPST, *State Chemist.*
*W. C. SUPPLEE, *Chemist.*
H. R. WALLS, *Chemist and Micro-Analyst.*
A. B. HEAGY, *Chemist.*
R. E. BAUMGARDNER, *Chemist.*
*T. J. WEISS, *Chemist.*
J. E. SCHUELER, *Chemist.*
*T. H. LEWIS, IV, *Chemist.*
*R. G. FUERST, *Chemist.*
*M. RUBIN, *Chemist.*
E. C. DONALDSON, *Chemist.*
W. J. FOOTEN, *Inspector.*
E. M. ZENTZ, *Inspector.*
F. G. BAGGS, *Clerk.*
M. E. HIGH, *Laboratory Technician.*

The State Inspection and Regulatory Service is assigned the responsibility of enforcing the State Feed, Fertilizer, Agricultural Liming Material and Agricultural Insecticide and Fungicide laws. These laws are designed to

*Entered the armed forces.

regulate the manufacture and sale of all products coming within their jurisdiction and to prohibit their distribution if misbranded or adulterated. It also conducts investigations arising in connection with its law enforcement activities.

The work necessary in enforcing the four laws may be divided into five general classifications. They are: first, the registration of these agricultural commodities under specific brand names and guarantees of quality, which must be shown at all times upon bags in which the commodities are distributed in the State; second, the collection of samples, which is handled by two inspectors who are constantly traveling the State; third, the chemical and physical examination of these samples to substantiate the accuracy of label representation; fourth, the publication of the results of tests which are made—these publications are available to all and furnish current information at a time when it will be most valuable to prospective purchasers; fifth, the prosecution of those parties found responsible for flagrant violations.

It is the policy of the Department to examine gratuitously, samples which may be forwarded by buyers and which represent materials coming within the jurisdiction of the laws enforced. As a rule, the results of tests on these samples do not furnish a basis for court action, or are the results published in the bulletins. However, individual reports are mailed to the sender and the manufacturer involved. Many purchasers of agricultural commodities take advantage of this service and thereby are assured that the products they buy are entirely as represented.

The laws enforced should be considered constructive rather than destructive. It is true the Legislature primarily delegated law enforcing or police power. However, it has always been the desire and intention of this organization to carry on a scientific constructive control in order that the sale of quality materials may be promoted. The Department depends primarily upon educational means and the direct cooperation of the industries for successful enforcement. In those cases where such methods fail, there is no other alternative but to resort to the courts for appropriate action. As a result of the operation of this inspection service, buyers of agricultural commodities may make their purchases with every confidence of obtaining value received for money spent.

SEED INSPECTION SERVICE

Horticultural Building, College Park, Maryland

F. S. HOLMES, *Inspector.*
ELLEN P. EMACK, *Analyst.*
OLIVE M. KELK, *Analyst.*
J. T. MULLADY, *Analyst.*

The Seed Inspection Service, a division of the Agricultural Experiment Station, administers the State seed law; inspects seeds sold throughout the State; collects seed samples for laboratory examination; reports the results of these examinations to the parties concerned; publishes summaries of these reports which show the relative reliability of the label information supplied by wholesale seedsmen; cleans and treats tobacco seed intended for planting in the State; makes analyses, tests, and examinations of seed samples submitted to the Laboratory; and advises seed users regarding the economic and intelligent use of seeds. The Service also cooperates with the Agricultural Marketing Service of the United States Department of Agriculture in the enforcement of the Federal Seed Act in Maryland.

Two and a half million dollars worth of seeds are planted annually in Maryland. Perhaps twenty-five percent of the field seeds and ninety percent of the vegetable seeds planted in the State pass through trade channels and are thus subject to the seed law. The work of the Seed Inspection Service is not restricted to the enforcement of the seed law, however, for State citizens may submit seed samples to the Laboratory for analysis, test, or examination. Specific information regarding suitability for planting purposes of lots of seeds is thus made available to individuals without charge. The growth of this service has been steady since the establishment of the Laboratory in 1912. In 1913 only slightly over a hundred samples were submitted to the Laboratory; in 1941 the number was over thirty-five hundred. Few Maryland home-owners, city or country, are not directly interested in seeds for planting in flower-bed, lawn, garden, or field.

DAIRY PLANT INSPECTION SERVICE

Dairy Building, College Park, Maryland

The Maryland Dairy Inspection Law became effective June 1, 1935. The purpose of this law is to insure producers who sell milk and cream on the basis of butterfat test or weight that the tests and weights of such milk and cream will be correctly made, and likewise to insure the dealers who purchase such products that their agents or testers shall correctly weigh and test the milk and cream; also, to insure that tests made for official inspections or for public record will be correctly made.

The present service is based on Article 43 of the annotated code of Maryland, Chapter 403 of the Laws of Maryland, 1941.

The dairy department of the Agricultural Experiment Station is charged with the administration of the Dairy Inspection Law. It is the policy in administration of the law to use the service as a means of education to promote the mutual interests of dairy producers, dealers and manufacturers. The aim has been to aid all interests concerned and not to impose burdens.

A total of 125 plants were issued licenses in the different classifications for 1943. They were as follows: 16 milk plants in Class A (0-500 lbs. production); 30 plants in Class B (500-2,000 lbs. production); 67 plants in Class C (2,000-40,000 lbs. production); and 12 plants in Class D (over

40,000 lbs. of milk daily). Licenses were issued to 206 testers and 89 weighers and samplers.

Since the Dairy Inspection law has been in operation the dairy industry in the State has, as a whole, been benefited. All plants purchasing milk and cream from producers under the provisions of the Act are operating on a more nearly equal basis. Much has been done toward eliminating unfair competition and it is now recognized by the dairy industry that proper methods of weighing and sampling and testing milk and cream are essential to fair trade practices. The checking of scales for accuracy, the maintenance of proper weigh tanks, and the proper methods of sampling and testing have helped to avoid losses to either the dealer or producer. The licensing of employees to weigh, sample and test milk and cream assures both the producer and dealer that the men engaged in such work are competent.

The calibration of glassware used for the Babcock Test and the calibration of weights has resulted in culling out many pieces of inaccurate equipment. This has resulted in eliminating errors from this source, both in purchasing products and in plant control work.

Fees for Dairy Plants Purchasing Milk or Cream

Class A—For purchasing or handling not exceeding an equivalent of 500 pounds of milk daily. Annual fee $1.00.

Class B—For purchasing or handling more than an equivalent of 500 pounds but not exceeding 2,000 pounds of milk daily. Annual fee $5.00.

Class C—For purchasing or handling more than an equivalent of 2,000 pounds but not exceeding 40,000 pounds of milk daily. Annual fee $10.00.

Class D—For purchasing or handling the equivalent of more than 40,000 pounds of milk daily. Annual fee $25.00.

Fees for testing glassware and weights for accuracy	$ .05
Fee for weigher's and sampler's examination	1.00
Weigher's and sampler's license fee	2.00
Fee for Babcock tester's examination	1.50
Babcock tester's license fee	3.00

STATE DEPARTMENT OF DRAINAGE

College Park, Maryland

RAY W. CARPENTER, *State Drainage Engineer.*

The State Department of Drainage was established in 1937. Its duties are to promote and encourage the drainage of agricultural lands in the State, to correlate the activities of the local drainage organizations in the State and to cooperate with State and Federal agencies in the interest of a permanent program of improved drainage.

This department administers funds appropriated by the State in 1939 for drainage of lands in Wicomico and Worcester Counties.

Affiliated Agencies on the University of Maryland Campus at College Park

The following Federal, State and private agencies are located on the College Park campus but are *not* under the direction of the Board of Regents of the University of Maryland or the Maryland State Board of Agriculture:

FEDERAL AGENCIES

Eastern Experiment Station, Bureau of Mines, U. S. Department of the Interior.

Fish and Wildlife Service, U. S. Department of the Interior.

Water Resources Branch, U. S. Geological Survey, U. S. Department of the Interior.

Agricultural Adjustment Administration, U. S. Department of Agriculture.

Maryland Crop Reporting Service, Bureau of Agricultural Economics, U. S. Department of Agriculture.

Maryland Headquarters of Agricultural Planning Field Service, Bureau of Agricultural Economics, U. S. Department of Agriculture.

Soil Conservation Service, U. S. Department of Agriculture.

STATE AGENCY

Bureau of Control Surveys and Maps, Department of Public Works, State of Maryland.

PRIVATE AGENCIES

National Sand and Gravel Association Research Foundation.

Aviation Division, American Society of Mechanical Engineers.

SECTION VI
Records and Statistics

DEGREES, HONORS, 1941-1942 AND 1942-1943

SUMMARY OF ENROLLMENT, 1942-1943 AND 1943-1944

DEGREES CONFERRED, 1941-1942
(All degrees conferred at Commencement, May 30, 1942, except as noted)

HONORARY DEGREES

Doctor of Letters
Fulton John Sheen

Doctor of Engineering
Forrest Eugene Ricketts

Doctor of Laws
Horace Edgar Flack

HONORARY CERTIFICATES IN AGRICULTURE

Walter Edward Burall — Martha Emily Hopkins

THE GRADUATE SCHOOL

Doctor of Philosophy

Harry Davis Anspon
Willis Harford Baldwin
William Henry Brittingham
Aurelius Franklin Chapman
Gordon Frederick Dittmar
Theodore Thomas Dittrich
Felix Frederick Ehrich
Carroll Pross Foster
Albert Barney Godfrey
Wilson Clark Grant
Samuel Grober
George Philip Hager
Alfred Damon Hoadley
Robert Edwin Jones
Carl Williams Kelley
Amihud Kramer
Paul Charles Marth
Bernard Patrick McNamara
Helen Broughall Metcalf
J. Victor Monke
Selmer Wilfred Peterson
Elwood Clifton Pierce
August Raspet
Maurice Monroe Rath
Lisette Riggs
Max Rubin
Vladimir G. Shutak
Richard Corley Tollefson
Phillip Jerome Wingate
John Paul Wintermoyer

Master of Arts

Margaret Brereton
William Druz
Marian Grace Eyler
Addie James Howard
David Spergin Jenkins
James Buckner Massey, Jr.
Floyd Alfred Myrick
Russell Bradley Rice
S. Samuel Selsky
Florence Louise Spicknall
Viola Buhrow Stargel
Wilton Roy Todd
Wilma Louise Watkins

Master of Science

George Stanley Abshier
Fred Frank Bartel
Jessica Trussell Biddle
Franklin Anderson Bolth
James Franklin Brownell
Hilde Marie Christensen
Joseph William Cotter
Lewis Eugene Cronin
Thomas Joseph Davies
Virginia Elizabeth Davis
Herbert William Everhart
Ellen Hepburn Gray
Ralph Curtis Hammer
W. J. Haney
Richard K. Lynt, Jr.
Marvin Richard McClung
John Stephen Nowotarski
James Burton Outhouse
Betty Runner
Robert Simonoff
Wilson Levering Smith, Jr.
Robert Nielsen Stewart
Richard Edward Tiller
Arthur Woodward Warner, Jr.
Martin N. Winbury
Frederick Bernhard Winkler

Master of Education

Katherine B. Baroniak
Jack Stealton Bierly
George Francis Carrington
Judith V. Cólon-Yordán
Marie Denecke
Catherine Mehegan Doyle
W. L. Edwards
William Cacy Feddeman
Inez Ellen Flanagan
Ruth Bell Hall
Clarabeth Joy Holt
William John Hucksoll
Raquel M. Landron
Henry Franklin Lehr
Rebekah Liebman
Edward LeRoy Longley
Bessie Arterburn Rich
Mary Emily Margaret Smith
Phyllis Larue Kemp Sommerfield
Edward Guy Stapleton
Carrie Orilla Sutton
Dorothy Oliver Young

COLLEGE OF AGRICULTURE

Bachelor of Science

Frank Lawrence Bentz, Jr.
William Wilson Boyer
Melvin James Bradley
Donald James Brauner
James Edgar Bryan, Jr.
John Daniel Cooley, Jr.
Joseph Crane Cox
William Winston Day
Rudolph Graham Degen
Marshall Hardcastle Downes
Harold Preston Dunster, Jr.
Robert Hobart Edwards

James Daniel Eisenberger
Howard Edward Elliott, Jr.
Matthew Franklin Ellmore
Chester Gaitley Ernst
Paul Allen Finney
Thomas Crawford Galbreath
William Burroughs Groome
Joseph Lane Gude
Edward Wright Harcum
Robert William Heslop
J. Boone Jarrell, Jr.
Richard Lloyd Jenkins, Jr.
Joseph Woodrow Jones
Charles Richard Jubb, Jr.
Elmer Cecil Keller
Roland Edwin King
Harold Paul Klahold
*Gordon Leroy Kluge
Conrad H. Liden
Mehrl Foye Mayne
William Alan McGregor, Jr.
Robert Hicks McKay
George Gibson Meredith
Sheldon Michaels
William Ward Miles
Merl D. Myers
David Edward Northam
James Grafton Osborn
Mary Roberts Patrick
Carlton Harvey Porter
*Karl Frederick Reiblich
Frank Sam Reid
Donald Bondy Rose
Mary Frances Ryon
*John Manns Schilling
Jacob Calvin Siegrist
Charles Harold Smelser, Jr.
Ernest Edward Smith
Verlin William Smith
John Jones Smoot
Marvin Bernard Solomon
Clifford Vernon Sparrow, Jr.
Robert Edward Stalcup
Leslie Wayne Teller, Jr.
*George Britton Vogt
Hugh McKelden Walton
Maurice Clagett Ward
John Schell Wehrle
Mordecai Gist Welling
Roscoe Newton Whipp

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

*Charles Burke Allen
Carl W. Bacharach
Esther Ethel Balton
Katherine Ellen Barker
Barbara Louise Bartlett
Harry Griffith Baugher
Randa E. Beener
John Francis Benecke
Henry Doterer Blair, Jr.
Phyllis Juanita Booher
*Frank C. Borenstein
Foster Boyd
Margaret Brooke
Helen Adele Bruns
Doris Beryl Bryant
*Richard Werber Case
Ruth Elizabeth Catling
Elizabeth Ruth Chamberlin
Samuel Cohen
Milton Steward Cole
George Robert Cook
Clayton Sherwood Dann
Elizabeth Jane Dennis
*Charles Raimond Dorr
Charlotte Eisele
Helen Thomas England
Elizabeth Leila Eves
Yolanda Lucille Farina
Hariette Esther Feldman
Maxwell Boone Fleek

* Degree conferred August 1, 1941.

*Jonathan Frederick Gehman
Carmela A. Glenn
Muriel Gordon
Walter Kingsley Grigg, Jr.
Jerome Winston Grollman
Doris Ellen Groves
Doris Lorraine Hampshire
William Jules Handley
Lucile Anne Hanlon
James William Hardey, Jr.
*Marian Wilson Harvey
Charles LeRoy Hein
Lillian Dorothy Hendrickson
Adelheid Marie Hermann
Kathleen Hope Hevener
Anne Ghantt Hoen
Jane Carter Howard
Erma Kathryn Hughes
Harry Marshall Hutson
Wilson Gillis Ingraham
Irving Jacobs
Helen Alice James
Wilbur Thompson Jefferys
Stuart Lesser Kadison
Celeste Hale Karlstad
Marie L. L. Kennedy
Walter Joseph Kerwin, Jr.
Nancy Ridgeway King
Carolyn Lacey
Richard Hyatt Lansdale, Jr.
Betty Stansbury Lynch
Rosalie Thornton Lyon
Valentine Machen
Cecil Roscoe Martin
Klovia Elizabeth McKennon
Anne Cary McKinley
Joan Marie Moon
Julian George Murphy
Walter Lee Neal
Eugene Charles Ochsenreiter, Jr.
Eileen Marguerite O'Neil
Elmire Pearson
*Henry Ralph Pearson
Katherine Perkins
Marjorie H. Pinschmidt
Dorothy Podolsky
Marvin Morris Polikoff
*Bettie Virginia Porter
Roy Stuart Ramsey, Jr.
Hennie Froma Rand
Edna Blanche Rayburn
Beverly Jean Reinstedt
Albert Ritzenberg
Ann Elizabeth Ryon
Alan Louis Sagner
Janet Lucille Scott
Martha Holland Shelton
David Laurence Sheridan
Orville Cresap Shirey
Charles Francis Simms
Annarose Catherine Sleeth
Theodore John Stell
Bette Roslyn Stone
Frances Isabel Stotler
Alice Louise Stribling
Janet Eileen Stubbee
Richard Craig Sullivan
Morton Field Taylor
Norma Louise Thompson
Rose Marie Udell
Adrian Herman van Huizen
Josephine Wilma Weare
†Robert A. Wiggins
Sarah Jemima Yates

COLLEGE OF ARTS AND SCIENCES

Bachelor of Science

Dorothy Anne Aiello
Benjamin Amsterdam
Grace Elizabeth Angleberger
Stewart Lee Baker, Jr.
Ruth Workman Baldwin
Emilie Margaret Ballard

* Degree conferred August 1, 1941.
†Honors in English.

David Fowler Bell, Jr.
Arturo Benavent, Jr.
Mary Lillian Boggs
*Howard Gothel Bonnett
Frederick Bertram Brandt
William Kendig Brendle
Dorothy Gertrude Brosius
Shirley Byers
Oscar Wilde Camponeschi
Celeste Esther Capone
Vesta H. Cassedy
*Kenneth James Clark
Elmer Ellsworth Cook, Jr.
Ralph Fletcher Davis
Harry Michael Doukas
Nancy Jeanne Duby
Donald Philips Easter
Doris May Etzler
Emma Gladys Foster
Elizabeth Patricia Frohbose
Esther Blanche Garrett
Daniel Leonard Gendason
Russell Howard Goff
Sol Howard Goodgal
Joseph Roy Guyther
Robert Charles Henry
Shirley Heyman
Harry Edward Hill
Julia Lee Hodges
William Addison Holbrook, Jr.
Edith Holt
Gilmore Hyman
Robert Settle Insley
Robert William Johnson, Jr.
*Bobby Lee Jones
Nancy Lee Jones
Dan Franklin Keeney
*Daniel Kindler
Irene E. Kuslovitz
*Vernon Monroe Lesley
Margaret Matilda Logan
Henry Wadsworth Moore, Jr.
John Morton, II
John Michael Palese
Edgar Thornton Pfeil, Jr.
Edward Hector Price
Robert Delafield Rands, Jr.
Hammond Rau
Martha Virginia Repp
Imogene Lola Rice
*Jerome Stanley Rogers, Jr.
Marvin Rudo
Roy Kennedy Skipton
LaRhett Livingston Stuart, Jr.
Talmadge Stanley Thompson
Howard Marshall Trussell
Rebecca Alden Tucker
Theodore Merriam Vial
Edward Walton
Joseph Weintraub
*Howard Ferdinand Wilds, Jr.
Arthur Fletchall Woodward
William Bruce Yowell, Jr.
Paul Randall Ziegler
Norman Earl Zinberg

COLLEGE OF COMMERCE

Bachelor of Science

John Matthew Bennett
William Tilghman Booth
Harry Arthur Boswell
*Milton Bunevich
Albert Joseph Carry
Robert Stanley Cartee, Jr.
Garwood Chamberlin
William West Christopher
Robert Driscoll Condon
Donald Russell Damuth
Francis Paul DiBlasi, Jr.
James Edward Dunn
Jay Clarence Emrey
Robert Preston Evans
John Dechert Eyler, Jr.
James Andrew Fanning

* Degree conferred August 1, 1941.

Landy Roman Hales
Neal LeRoy Hathaway
Frank Nicholas Heyer, Jr.
William Wylie Hopkins, Jr.
Herbert Steele Huff
Paul Breathed Hutson, Jr.
Donald Herbert Jermain
Lowell Truscott Keagy
William Earl Krouse
John Gilroy Luntz
Lawrence MacKenzie
Stanley Roy Mann
Paul Donathan McCloskey
Richard Horace Meacham
*Allen Vogel Minion
Samuel Varick Moore
Robert Thomas Moran
Robert Marshall Moseley
Edward Warren Nylen
Charles Elton Parker
George Cassity Pendleton
William Carter Pennington
Samuel L. Pfefferkorn, Jr.
Gerald Eugene Prentice
Charles August Rausch, Jr.
Elmer Louis Reese, Jr.
Marjorie Stinson Reside
Harry Rimmer
John Dexter Rogers, III
Alvin Cyril Salganik
Martin Philip Seigel
William Nelson Seitz
Carolyn Elizabeth Seviour
Hiram Henry Spicer, III
*Earl Victor Springer
Edgar Reed Tilton
Albert Eugene Vogel
Frederick Bitzer Walker
John Douglass Wallop, III
Joseph Hilleary White

SCHOOL OF DENTISTRY

Doctor of Dental Surgery

William Albert Aldridge
Andrew James Amatrudo
Clifford Frederic Askins
Alexander Nathaniel Berman
Stanley Gerald Biega
Daniel Bixby
Peter Jeremiah Coccaro
Sylvan Phillip Cohen
Woodrow Wilson Corder
Joseph Thomas Coroso, Jr.
James T. Criss
Paul Deneroff
Paul Maroni Edwards
Morris Eilenberg
Stanley Entelis
Stewart Everson
Charles Gibel
Richard Harold Goldstein
Ezra Ben Ami Gratz
Bernard Helitzer
Alan H. Herman
Arthur Herschaft
Seymour George Hyman
Isador Gilbert Katz
Samuel Leonidas King
Irvin Oscar Kolman
Seymour Koppelman
Henry Robert Lasch, Jr.
Algert Peter Lazauskas
Jason Russell Lewis
Lawrence Lichtenstein
Ricardo Martinelli
Victor William Mintz
Jorge Eugenio Muñoz Vecchini
Louis Leo Murzin
Norman Richard Nathanson
Murray Nussbaum
Raymond Thomas Ouellette
Arthur Anthony Pecoraro
Julius Benjamin Powell

* Degree conferred August 1, 1941.

David Samuel Rakosky
Chester Büerck Ralph
Mario Félix Ramírez Acosta
Joseph Ralph Reynolds
Sidney Rogoff
David Marshall Salutsky
Alvin Henry Savage
Harold Schwartz
Glenn Daniel Steele
Chester Jerome Stoopack
Joseph Michael Tighe
Lewis Cole Toomey
Rosalind Irene Toubman
Donald Hovis Towson
Edwin Beard Waltman
Howard Felix Watsky
Earle Harris Watson
Hans Ernest Weise
Howard G. Weiss
John Thomas Wieland
Roger Elwood Williams
Riley Seth Williamson, Jr.

COLLEGE OF EDUCATION

Bachelor of Arts

Sevier Semmes Baumer
*Hope Dorothy Beauchamp
Marian Hemmons Bochau
Martha Elizabeth Bowling
Helen Joan Carnin
Shirley Nudd Conner
Hiltrude Adelaide Duvall
Mearle Daniel DuVall
*Hester Ann Farlow
Dorothy Maxine Garlitz
Joseph Ernest Gerstell
Francis Vernon Getty
Betty Deloris Hall
Dorothea Kathleen Bockover Hamilton
Esther Handler
Shirley Pfeiffer Herbert
Mary Catherine Kahl
Mary Elizabeth Kane
Marie Poole Kuehle
Vivian Carson Lamm
Eurith Linthicum Maynard
Caroline McGill
*Suzanne Frances Morse
Cecil Virginia Myers
William Francis Oberle, Jr.
Mary Dorsey Parlett
Mary Virginia Powell
Ruth June Ramsdell
Morris Roseman
Katherine Jean Shea
Jean E. Stealey
Robert Benjamin Steele
Helen Duer Stephens
Catherine Audrey Stewart
Sarah Lila Stewart
Charlotte Mae Stubbs
Charlotte Blake White
Dale Bryant Woodburn

Bachelor of Science

Isobel Adkins
Hannah M. Struckman Allamong
Isadore Hotsy Alperstein
Elsie Francis Amoss
Gertrude Mildred Amoss
Charles Ralph Anderson
*Irl H. Beall
Melva Frances Beard
*Mabel Vivian Becraft
Margaret Croswell Bedsworth
*Gene Thomas Benbow
Gertrude Larman Biggins
*Elsie Biret
Athol Byrd Boone
*Lydia Isabel Boone
*Camilla Angle Boward

* Degree conferred August 1, 1941.

Blanche Lucile Bowie
*Emma May Bowman
*Mary Eva Breakall
Agnes Hayden Carpenter
*Edward Maurice Clark
*Orpha Agnes Clark
*Henry Clayman
*Mary Amelia Coffman
Elias Cohen
Helen Louise Crane
Mary Carter Dillon
*Ocie Ella Dodd
*Charles Thomas Dubin
*Sophia Norman Emmerich
*Fern Folk Epstein
*Janet Alma Erickson
Floyd Charles Faulkner
Thomas McCoy Fields
*Zelma Lorraine Fluharty
Dorothy Helen Foerster
Katherine Guinnette Garner
*Hettie Madeline Gibson
*Milton Thomas Goedeke
Harold Goldstein
*Gertrude Hope Greenwell
Helen Casteele Griffin
*Susan Quidort Griffith
*Margaret Emory Haile
Mildred Elaine Hamilton
*Leila Virginia Hardesty
Phillip Charles Heath
*Donald Cummins Hennick
*Ida Louise Hepbron
*Miriam McDonnell Holmes
*Anne Mildred Hoyle
Stella Hutchison
Sylvan William Jacobs
Marjorie Evelyn Jost
Elizabeth Jane Jullien
*Virginia Margaret Kalbaugh
*Gee L. Kaufman
Claire S. Kennedy
William Harold Kinlock, III
*Charles Robert Kinna
Helena Mathilda Alma Knauer
*May Talbert Kyle
Norma Louise Leonard
Eleanor Elizabeth Linthicum
*Evelyn Louise Lippy
*Margaret Marie Lyons
Dora Mildred Magaha
Robert Louis Main
*Mary Elizabeth Manley
Carroll Ely Markowitz
Alice Ray Martin
*Hilda Catherine McGuigan
Mary Josepha McGuigan
Dora Malcolm McLuckie
*Catherine Elizabeth McMahan
J. Paul McNeil
*Helen Ashcom Medinger
Margaret Reed Meiser
Elna Mae Miller
*Mary Emma Mitchell
*Robert Lee Mohlé
*Mary Elliott Monroe
Lillian Gertrude Morgan
*Mary Morgan
*Louise Cusick Mullendore
J. Harvey Nichols
Carole Novick
*George Vincent Oberle
*Pauline Hilda Ornett
*Marie Martha Parrish
Harry Austin Peregoy
*Esther Virginia Phillips
Nina Claflin Piozet
*Albia Eleanor Riggin
George Milford Riggin
William Thomas Riley, Jr.
Henry J. Rockstroh
Florence Broughton Rost
Harriet Miller Schacht
William Harvey Schoenhaar
*Dorothy Wilmot Shires
Harold Gerstell Showacre
*Rose Carney Shuck
Olivia Kerby Sims

* Degree conferred August 1, 1941.

Robert Herman Smith, Jr.
*Henry Sokolsky
*Letty H. Souder
Helen Kuhn Sperry
Ruth Hammond Staley
Henry Norman Steckler
Catherine E. Stiles
Ruth Faye Surosky
*Audrey Sansbury Teunis
Effie Orra Thomas
Jean Campbell Thomas
Anna Marie Urquhart
Eleanor James Vaughan
*Mary Beth Wackwitz
*Fred John Ward
*Dorothy Helen West
James Henry Wharton
Aileen Marie Williams
*Elinor George Wilson
Josephine Eleanora Wilson
*Treva Burgoon Wink
Ann Oldham Wolf
Margaret Estelle Wolfinger
Doris Wood
Millicent-Lois Yamin
*Grace Robinson Zeller

COLLEGE OF ENGINEERING

Bachelor of Science

Robert Drury Baldwin
Jack Ralph Barrett
Hyman Alexander Berg
Joseph Hendricks Bilbrey, Jr.
George William Bollinger
Rodney Leonard Boyer
Robert August Brand, Jr.
Frank Gilbert Carpenter
John Edward Cordyack
John Francis Curtin, Jr.
Harold Elwood Earp, Jr.
John M. Eberhart
Thomas Renwick Finlayson
Elmer Leroy Freemire
Paul Diehl Freeze
Gurney Lindale Godwin
William McLean Graham, Jr.
Robert Edward Greene
Robert Ashby Groves, Jr.
Stuart Haywood
Jeremiah Collins Hege
Reginald Kenning Hoddinott, Jr.
Page Fillmore Hopkins
John LeRoy Hutchinson
Bernard Bertram Klawans
Howard Joseph Klug
Philip Elledge Kurz
John Lopata
James Edwin Malcolm
Richard White McCusker
Benjamin Morris Owens
Ernest Herbert Peterson
Weldon Newton Rawley, Jr.
William Marshall Redd, Jr.
Elijah Rinehart, Jr.
Thomas McDowell Rives, Jr.
Samuel Thomas Robertson, Jr.
Robert Welsh Russell
Francis Robert Schmidt
Irwin Joseph Schumacher
Robert Wellington Searls
Fred Shulman
Joseph Alvin Sirkis
John Franklin Stevens, III
William Reeves Tilley
Vahl Elbert Underwood
Arthur Howard Valentine
George Lawrence Wannall
Norwood Reeves Warehime
Edward Webster
Robert Ramsay Westfall
Roland Gilbert White, Jr.
Donald Herbert Wick
John Wright Williams
Thomas Theodore Witkowski

* Degree conferred August 1, 1941.

COLLEGE OF HOME ECONOMICS

Bachelor of Science

Marjorie Leah Allen
Helen Irene Bedell
*Evelyn Byron
Doris Madeline Clements
Adelaide Emma Coe
Mary Elizabeth Cole
Rebecca Ruth Dashiell
Mary Johnston Davidson
Alberta Rose Dorsey
Erin Ellis
Audrey Louise Erickson
Alice Katherine Fisk
M. Elizabeth Funk
Mary Ann Griffith
Susan Gusack
Jessie Wallace Halstead
Edwina Hambleton
Eleanor Elizabeth Jenkins
Louise Bendette Ladd
Mary Bessant Latimer
Margaret Alice Lillie
Marian Loomis
Agnes Louise Marks
Doris Helen McFarland
Dorothy Ann Medbery
Ruth Louise Meehan
*Marjorie Lillian May Miller
Mildred Melton Muma
Elizabeth Munn Mumma
Betsy Anne Myrick
Phyllis June Newmaker
Jane Elizabeth Page
Martha Locke Rainalter
Carol Remsberg
Elma Louise Staley
Ruth Elaine Stowell
Betty Lou Sullivan
Margaret Louise Teller
Ruth Lee Thompson
Catherine May Trundle
Edythe M. Turner
Elizabeth Louise Tydings
Mary Virginia Vaiden
Clara Elizabeth Vawter
Dorothy Werth

SCHOOL OF LAW

Bachelor of Laws

Thomas Carlyle Carrico
Richard Werber Case
John Thomas Clark, Jr.
Albert Patterson Close
William Paul Frisco
Edwin Anthony Gehring
Alberto Gerardino-Villanueva
Louis Glick
†Joseph Harold Grady
Harry Lindley Grubbs, Jr.
William Gulbransen
Frank Lloyd Hamnond
Frances Neff Harris
Samuel Milton Ivrey
Earle Leonard Kassirer
†William Woodrow Mahoney
Marvin Mandel
Homer Lerch Miller
†William Bruce Oswald
Maurice Judson Page
Edward Bernard Reddy
Vaughn Edward Richardson
†John Reitz Royster
Milton Herman Franklin Saul
William Armiger Skeen
John Lee Smith, Jr.
Harold Solomon
Arthur E. Tarantino
Albert Edward Weir
Meredith Richardson Wilson
Clark Thompson Wisotzki

* Degree conferred August 1, 1941.
† With honors.

SCHOOL OF MEDICINE

Doctor of Medicine

William Alstrom Ahroon
David Bacharach, Jr.
Earl Rudolph Baldwin, Jr.
Robert Amthor Barthel, Jr.
Morton Edward Bassan
Van Boring Bennett
Joseph Gordon Bird
Francis Dorsey Thomas Bowen
Alexander Emmanuil Brodsky
William Luther Byerly, Jr.
Richard Alexius Carey
Harry Franklin Coffman, II
Frank Concilus
Sybil Corbett
Matthew Mordica Cox
Warren Eugene Crane
William Ward Currence
Thomas Eugene Davies
José G. Dávila López
John Russell Davis, Jr.
Newland Edward Day
Karl Anton Dillinger
Philip Lafayette Dixon, Jr.
Richard Cushing File
John Howard Franz
Marion Friedman
José R. Fuertes
Joseph Charles Furnari
Jewett Goldsmith
Arthur Edward Gramse
Exie Mildred Gregory
Morton L. Hamburger
Prévost Hubbard, Jr.
Albert Lester Ingram, Jr.
Robert Clark Irwin
Hansford Fred Johnson
Everett Davis Jones
Theodore Kardash
Joseph Francis Keeley, Jr.
Robert Allan Kiefer
Stanley Benedict Klijanowicz
Lawrence Jacob Koleshko
Martin William Krepp, Jr.
John Gregory Kroll
Paul Charles Kundahl
Etta Carolyn Link
Robert Hamilton Longwell
Irving Robert Lowitz
Louis Ottone Joseph Manganiello
Frank Sebastian Marino
Robert Mazer
James Nathaniel McCosh, Jr.
Malcolm Thomas McGoogan, Jr.
John James Meli
Edgar Allen Miller, Jr.
Robert Abram Moses
George Roy Mullins, Jr.
Caesar Francis Orofino
John Carlton Osborne
Patrick C. Phelan, Jr.
Otto Charles Phillips
Dale Morton Posey
William Thomas Raby
Edward Peyton Ritchings
John David Rosin
Anthony Peter Rousos
Henry Harrison Sadler, Jr.
Wallace Hyman Sadowsky
Isadore Sborofsky
Mary Louise Lyons Scholl
Joseph Whiddon Scott
William Jeffress Senter
Edgar Roderick Shipley
Maurice Isaac Shub
Louis Harry Shuman
James George Stegmaier
Andrew James Summa
Francis James Townsend, Jr.
Francis Willoughby Traynor
Joseph Wallace, Jr.
Charles Monroe Ward
Charles Herman Williams
Edgar Percival Williamson, II
Edwin Andrew Zepp
Loy Miller Zimmerman

SCHOOL OF NURSING

Graduate in Nursing

Ivy May Albaugh
Anna Doris Alt
Grace Elizabeth Angleberger
Emilie Margaret Ballard
Emmett Elizabeth Beach
Nancy Mae Black
Shirley Byers
Louise Mason Coard
Jean Louise Conrad
Helen Pauline Cope
Doris May Etzler
Emma Gladys Foster
Grace Cecilia Frederick
Esther Blanche Garrett
Julia Lee Hodges
Florence Hubbard
Nancy Lee Jones
Gladys Maude Leonard
Margaret Matilda Logan
Marguerite Elizabeth Loock
Louise Dukes Magruder
Mary Ruth Petry
Martha Virginia Repp
Karolyn Gwendolyn Shaffer
Rachel Louetta Skiles
Rosalind Jane Small
Anna Penelope Tucker
Rebecca Alden Tucker

SCHOOL OF PHARMACY

Bachelor of Science in Pharmacy

Elmar Bernard Berngartt
Sidney Gary Clyman
John Michael DeBoy
Milton Stanley Getka
Milton Goldberg
Alice Emily Harrison
Alfred Marion Jankiewicz
Sidney Raymond Klavens
Elmer Wilson Nollau
Stephen Panamarow
Sherman David Pritzker
Milton Reisch
Sidney Sacks
Melvin Shochet
Sidney Smulovitz
Warren Eldred Weaver
Eugene Clayton Weinbach
Wilson Monroe Whaley, Jr.

DEGREES CONFERRED, 1942-1943

HONORARY DEGREES

Doctor of Laws

George L. Radcliffe
Sumner Welles

HONORARY CERTIFICATES IN AGRICULTURE

Guy Everett Harmon
David Benjamin McDowell
James Richard Phillips, Jr.
Robert Wilbur Shermantine

THE GRADUATE SCHOOL

Doctor of Philosophy

Ross Ellwood Backenstoss, Jr.
Richard Henry Barry
Cornelia Marie Cotton
Carroll Eastburn Cox
Julian Coburn Crane
John Milton Cross
Guy M. Everett
Walter Christian Gakenheimer
William Henry Gaub
William Holland Griggs
Walter Judson Haney
Robert Isaac Jaffee
Charles Jarowski
Thomas Morton Little
Raymond Irving Longley, Jr.
John Udell Michaelis
Martin Hammond Muma
Lloyd Elwin Parks
Robert Collom Rand
George Bergin Reynard
Roy Schneiter
Donald Emerson Shay
Robert Edward Thompson
George Clarence Vedova
Thomas Charles Gordon Wagner
Alfred Case Whiton
Edmond Grove Young
John Ashby Yourtee
Bernard Leon Zenitz

Master of Arts

John Conrad Appel
Louisa Gardner Dillard
Frank John Getty
Albert Norman Greenfield
Edwin P. Heinrich
Raymond Frederick Hesler
Ruth Amanda Jehle
Harry William Krausse
Edward Nelson MacConomy, Jr.
Norman Hill Maring
Nicholas George Nides
George Vincent Oberle
Edward Wiltse Paulette
Howard Geisler Phillips
Edith Palmer Popenoe
Helen Wade Pressley
Morris Roseman
Cora Dodson Sasscer
Walter Henry Schuler
Marguerite Martindale Stone
Olive Wright Sudler
Jean Burke Wheeler
Gladys Hildreth Young
Alice Ruth Zerbola

Master of Science

Ming-Chien Chiang
Lexey Jane Cragin
Leon Webster Frayer, Jr.
William Kanode Gautier
Margaret Towell Goldsmith
Harold Ernest Hensel
John Joseph Lander
Joshua Melvin Leise
Hazel B. Murray
Orr Esrey Reynolds
Aaron Wiley Sherwood
Charles Alfred Shreeve, Jr.
Samuel Cantor Temin
Ruth Lee Thompson
Edith-Jane Wiegand
Carroll Christian Woodrow

Master of Education

Louis Pinckney Allen, Jr.
Benjamin Franklin Barger
C. Paul Barnhart
Louise Robey Birch
Dora Goldiner Bresler
Mary Frances Barr Bush
Richard Rowland Clopper
Louise Roberts Colip
Florence Newell Cornell
Kenneth Walden Frisbie
Charles Henry Gontrum
Vernon Brooks Gunther
Nellie Griffith Hardell
Sara Horton
Sidney Taylor Lawler
Robert Faust Lesher
Daniel Cruzen Link
Arria Griffith McGinniss
Ruth Henrietta McRae
Sister Philomena Ossenmacher
Gustavus Adolphus Sieverts
Ruth Elizabeth Smith
Sister Barbara Storms
Robert Henry Weagly
Ruth Alberta Wynn

COLLEGE OF AGRICULTURE

Bachelor of Science

Lee William Adkins
Julian Bradley Anderson
Nevin Snader Baker
Blair Barnard Barger
Robert Harold Benson
Alice Ruth Bentz
Paul Curtis Betts
Lloyd Carroll Biser
Donald Mitchell Boyd
Alan Wolf Brylawski
Philip Nash Buddington
Nicolas Manrique Cartagena
Hartley Douglas Crist
William Evans Crow
James Paul Duke, Jr.
Richard VanDriel Eck
Irving McKim Gordy, Jr.
Oliver Richard Carroll Gore, Jr.
Francis Alexander Gray, Jr.
Sylvan Leonard Handen
John Hansen Hoffman
Philip Raymond Hogue
Marion Clark Hudson
Max VanKuren Hunt
Lester Kiefer
Harry Edward Korab, Jr.
Thaddeus Joseph Kott
Emory Childress Leffel
Theodore Leizman
John Philip Mattingly
Leib McDonald
Russell Francis Mizell, Jr.
Harry Ivan Neuman
Robert Lee Nixon, Jr.
Nestor Obando
Elmer Hammond Owens, Jr.

Gilbert Willard Perry
Arthur George Phillips
Kenneth Lester Ports
James Murray Prigel
Norvell Stanley Ralston
Henry John Rassier
Kenton Charles Reynolds
Orlando Ridout, IV
Norman H. Rosenberg
Aaron Rosenstadt
Charles William St. Clair
Robert Sandler
Edgar A. Schaeffer
Eugene Stanley Schlosnagle
Irvin Philip Schloss
Charles Philip Seltzer
Joseph Miller Shaw
Jane Luray Showacre
Paul Earl Sigrist
Warren Charles Smith
Joseph Matthew Steger
Clyde William Stephens
William Codding Stevens
Eugene John Sullivan
Daniel William Talmadge
Amanda Adelaide Ulm
Joyce Jacquelyn Uthus
Glen Earl Weston
Donald Fillmore Whinerey
John Robert Williams

COLLEGE OF ARTS AND SCIENCES

Bachelor of Arts

John Franklin Adams
Richard Luther Andrews
Anna Virginia Auslund
William Henry Badenhoop
Read Turner Bailey
Ruth P. Barsky
Cynthia Baylin
Betty Fahrney Beachy
Charles August Bechtold, Jr.
Mary Joan Bell
Rex Ricardo Venn Benson
Shirley Berman
Robert Foust Bierly
Margaret Elizabeth Bond
Mary Clare Bonham
Norman Irving Broadwater
Muriel Frances Brockman
Mary Elizabeth Brooks
Eleanor Alice Broome
Margaret Washington Brown
Herbert Gabriel Carhart, Jr.
Berniece Brown Chambers
Mary Alice Clark
Alexander Slater Clarke
Jane Mary Cooper
Robert Vigert Cormack
Ploomie Elva Criner
Ann E. Criswell
Joseph McLain Crockett
William Earl Dixon
Rose Veronica Doyno
Sidney Tzvie Efross
Margaret Ann Engel
Garland William Fairbanks
Rosadean Flaks
Leonard Stanley Freedman
Frances Eileen Long Freet
Elsie May Flom
Ellen Frances Gray
Arla Georgeanna Guild
Oliver Robert Guyther
Dagmar Barbro Hansson
Pauline Hardy
Carl August Harris
Vernon Thomas Hart
David Saul Hurwitz
Bernard M. Hyatt
Delno Edward Ingram
Robert Edward Inman
Betty Cecile Jacoby
Marie Marilyn Janof
Miriam Dianna Kellman
Charlotte Melcher Kidd
Dorothea Theresa Kilmain

Walter Owen Koehler
Mary Virginia Langbein
Joseph Ganam Lindamood, Jr.
Nancy Masters
Marjory Jean Mattingly
Ernest Ray Mattoon
Thomas Stephen McCeney
Alma R. Merican
Frank Savage Mervine
Muriel Ellen Miller
Ruth Morgan
John Neumann
Jeannette Owen
Bertha Ann Paterson
Dorothy Lee Powell
Mary-Stuart Montague Price
Florence Primm
Jacqueline Anne Pritchett
Daniel G. Rice, Jr.
Nelle Price Robertson
Jacob N. Rothstein
Doyle Preston Royal
Nancy Tyler Royal
Mary Ellen Ruff
Irene Jean Scher
Kathryn Gertrude Sheely
Shirley Cynthia Sherman
Loy Monroe Shipp, Jr.
Magdalena Martha Siposs
Martha Ladd Sparhawk
William Perry Stedman, Jr.
William Selby Stewart
George Ely Suser
William Ellsworth Tolley
Robert James Torvestad
Florence Eleanor Trinkle
Frederic Benson Warder, Jr.
Ruth May Weinstein
Sonia Weisberg
Mildred Anita White
George Blaine Wix

COLLEGE OF ARTS AND SCIENCES

Bachelor of Science

Ellsworth George Acker
Norman H. Alshan
Jeanne Dorothy Amlicke
John Louis Apuzzio
Joseph Stanley Ardinger, Jr.
Frederick Louis Bach, Jr.
James Baido
David Hargis Barker
Houston Lesher Bell
Walter Jose Benavent
Elmar Bernard Berngartt
Alfred Dement Bonifant
Gilbert Canter Bowen
Raymond Bradshaw, Jr.
Herbert Gibbs Brandes
Richard James Brown
Louise Paddon Buckner
Francis Vernon Burke
Marguerite Elsie Burr
Robert Francis Byrne
George Russell Callender, Jr.
David Harry Chambers
Paul Chmar
Edmund Parker Churchill, Jr.
Davis Hall Corkran
Gilbert Herbert Cullen
Harry Kirk Dansereau
Joseph Louis Dantoni
John Murray Dennis
Patricia Dodd
Charles Manley Dodson
William Milton Eareckson, III
William Carl Ebeling, III
Bertram Joseph Frankel
Franklyn Drennan Gassaway
Doris Louise Gerwig
Henry Glassner
Daniel Ware Goldman
Eleanor Louise Gordner
Larry Quentin Green
Albert C. Herrmann
Frederick Landis Hill

Betty Elaine Hoffmaster
James Eden Horn
Robert Wanton Ireland
Irwin Seymour Jacobs
Alexander Palmer Kelly, Jr.
Catherine Elizabeth Kurzenknabe
David Raymond Lawrie
Daniel Bair Lemen
Charles Teddy Lempke
Charles Milton Linthicum
Alan Campbell Macpherson
Mary Katherine Martin
George Alexander Maxwell, Jr.
Ula Virginia Maxwell
Margaret Elizabeth McCathran
Elizabeth Jane McCauley
Donald Willis Mintzer
Joseph Herman Mintzer
William Henry Mosberg, Jr.
Paul Woolever Newgarden, II
Richard Baxter Norment, III
Alfred Simpson Norton
Allen Jay O'Neill
Vitale Xavier Paganelli
Richard Merle Peck
Edwin Lowell Pierpont
Robert Lee Porter
Mildred Radin
Mark Raum
Kenneth Albert Richer
Eugene John Riley
Margaret Eagle Roelke
Harry Franklin Rolfes
Ruth Eleanor Schene
Charles Edward Shaw, Jr.
George Murray Simons
Walter Karl Spelsberg
Stanley Herbert Steinberg
William Herman Stellhorn, Jr.
Frederick Louis Stichel, Jr.
Miriam Elizabeth Stultz
Lorraine Long Thomas
Clarence Ashton Thumm, Jr.
Mary Louise Touchet
Dominick Robert Traina
Max Tryon
Roy B. Turner, Jr.
Homer Edward Uhland
Milton H. vanden Berg
Raymond Albert Watson
William Edward Waxter
Harvey O'Neil Webster, Jr.
Gunther Adolf Werner
William Fringer Wheeler
Frances Danby Williams
Charles Randolph Wolfe
Janet Eugenia Wyvell
Mary Agnes Yeager

COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

Bachelor of Science

Charles Ralph Barker, Jr.
Joseph George Berlin
Abraham William Birnbaum
Thomas Earle Bourne, Jr.
Walter E. Christmas
James Richard Coffman
Martin Irving Collins
A. Budd Cutler
Burton Fairall Davis
David Messick Dayton
James Elmer Degges, Jr.
John Jenkins Dobler, II
William Leslie Ellis
Harry Drew Fisher
William J. Fulton
Clemens Weaver Gaines
Charles Pearson Gay, Jr.
Norman Milton Glasgow
William Martin Goldenzweig
Harry Randolph Gordon
Thornton Francis Green
David Harry Greenberg
Kenneth Delos Hall
Robert Braden Hammond
Joseph Charles Harry
William Cramer Heathcote

Herman Farr Kaiser
Sylvan L. Katz
James Nolan Kinsel
William Hubert Krehnbrink
Donald Edward Lacey
Thomas Joseph Lanahan, Jr.
Saul Laniado
Harrison Lee
Walter Ridgely Longanecker, Jr.
Robert George Mahon
William Henry Mattingley, Jr.
Anne Louise Maxwell
Swift McKinney
John Frederick Miller
Robert Morgan Miller
Keith Nicholas Montgomery
John Joseph Murphy, Jr.
Donald Elliott Newell
Robert Willms Petzold
Page Boyd Pratt
John Frank Rabai
Alexander S. Rabins
William Oakley Roach, Jr.
Edward Charles Robinson
Norman Philip Rosenfield
Russell Melvin Rumpf
Clarence Albert Schauman, Jr.
John Reed Scott, Jr.
Wendell Ellsworth Shawn, Jr.
Norman Starr Sinclair
James Gibbons Sneeringer
George Francis Sprott
Edward Harris Steinberg
John Kefauver Tate
Daniel Cleveland Triplett
Bernard Ulman, Jr.
Carl Elmer Vincent
Reginald Charles Vincent
Frederick Ernest Wurzbacher, Jr.

SCHOOL OF DENTISTRY

Doctor of Dental Surgery

Murray Birghenthal
John Pershing Blevins
David Randall Book
Frank Jackson Bryce
Asher Burton Carey, Jr.
William Page Carter, Jr.
John Costa Carvalho
Oscar Check
Irving Jay Cierler
William Cirrito
George Peter Cook
Harry Wolf Cooper
Leo Joseph Czachorowski, Jr.
George Marinus DeYoung
Charles L. DiGristine
James Vincent DiTrolio
Sidney Manuel Dulberg
Lepo Eff
Joseph Anthony Emburgia
Irving Feigenbaum
Milton Feldman
Leo Fishman
Paul Barr Foxman
Mont Morris Gardner
Harold H. Goodman
Willard Theodore Greene
Albert Bernard Greifer
Howard Joel Hauss
Stanley H. Heller
Paul Alden Herman
Morton Kaufman
Joseph Klein
Seymour Stanley Klinger
Hyman Kraman
Leonard Krugman
Jack Kushner
Lester Langel
George Porter Leatherbury
William Glenwood Lee
Bernard Benjamin Leibowitz
Arthur J. Lepine
Lawrence Bertram Levine
Herbert Stanley Levy
Lewis Simpson Libby, Jr.

Michael Peter Liloia
Alfred Albert Martino
Calvin Mass
Joseph Masserman
Kenneth Stuart McAtee
Richard Sterling Mehring
John White Menius, Jr.
Philip Nussbaum
John Owen O'Meara
Vincent Robert Onesti
Philip Pedinoff
Harry George Pfeffer
James Thomas Reilly
Maurice C. Robinson
Kalman Morris Rosenberg
Mortimer Rosenfeld
Norman Harold Rubin
William Rubin
Donald Gerow Russell
Alexander Schechter
David Bytovetzski Scott
Justin Manfred Seides
Sylvan Myron Elliott Shane
Daniel Shaw
Robert Theodore Shilkret
Thomas Rex Simpson
Marvin Skowronek
Russell Phillips Smith, Jr.
Eugene Spanier
Riley Eugene Spoon, Jr.
Martin Stern
Sidney Sucoll
William Massie Tunstall, Jr.
Alberto José Walsh
Benjamin Miller Watson
Milton Snell Wilkinson
Anthony Peter Yablonski
Marvin Sigmond Yalovitz
Julius Zahn
John B. Zimmerman

COLLEGE OF EDUCATION

Bachelor of Arts

Lottie Stevenson Adkins
B. Bernard Cohen
Anthony Louis de Christopher
Mary Dunn
John Thomas Franey
Ramon Grelecki
Janet Heggie
Mari M. Ellicott Hess
Charles Lingo Hudson
Lucille Humphreys
Glennis Lundberg Kabat
Irvin W. Katz
Alma Barbara Laurer
Audrey Betty Levy
Judson Duley Lincoln
Ernest Alvin Loveless, Jr.
Harry Jack Mier, Jr.
Harriet Eleanor Morris
Emma W. Rawlings
Samuel William Seidel
Mary George Stavropoulos
Elizabeth Laura Stratmann
Barbara Jane Wagner
Frank Frederick White, Jr.

Bachelor of Science

Saville Mathews Allnut
Loretta Joy Ashby
Alice Harper Bailey
Gladys Marie Beall
Mary Elizabeth Beard
Mary Mildred Frances Beck
Elisabeth Benner
Marian Birch
Margaret Mary Blocher
Margaret Elizabeth Bouton
Ellen Hooe Bowling
Sara Elizabeth Bowlus
Theresa Elizabeth Brinsfield
Frances Louise Brown
Mabel Catherine Burke
Elva Rebecca Butler

Betty Hopkins Callahan
Patrick Joseph Carolan
Louis George Chacos
Mary Josephine Chapman
Grace Irene Cookson
Mildred Virginia Cromwell
William Walter Culler, Jr.
Preston James Daisey
Leviah Williams Daniel
Ann Alexander Dilgard
Edna Kennedy Downs
Edwena Scott Durr
Laura R. Durst
Edith May English
Thomas Howard Evans
Helen Hargett Horine Everhart
Catherine Faulkner
Grace E. Filer
Mary Edna Fleming
Lillian Ozzella Forsythe
Catherine Anne Gannon
Mildred Pauline Garvin
Francis Gill
Gloria I. Gottlieb
Katharine L. Gough
Abraham Granek
Hilda Brandenburg Greene
Anne Ruth Greenwald
Herbert Joseph Gunther
Mary Elizabeth Hanson
Lillian L. Harvey
Margaret Lee Hatcher
Maria Elizabeth Hearne
Dorothy Donaldson Hendrix
Conrad Hohing, Jr.
Malinda Bennett Holland
Joseph Luther Hoopengardner, Jr.
Margaret Sampson Ingles
Hazel Inskeep
George William Jarmoska
Martha Roberta Jones
Frederick William Kaufman
Emmett Patrick Kavanaugh, Jr.
Frances Jones Keenan
Frances Marie Keesee
Helen Irene King
Olive Elizabeth King
Margaret Menefee Kline
Catharine Elizabeth Krafft
Gladys Irene Lam
Clara Berry Leonard
Katherine Marshall Leonard
Parepa Fidelia Linthicum
Margaret Morgan Lippy
Mary Margaret Longridge
Harriet Ellen Magness
Robert Lee Maisel
Margaret Rose Manley
Amy E. L. Mason
Everett Stewart McCauley
Alice Anna McCormick
Arnold Mermelstein
Edna Marie Michael
Catherine Mileto
Hilda Jane Moore
Dorothy Mudd
Addie Moore Mumford
Eleanor Haggett Murphy
Ruby Welker Myers
Wilma Constance Myers
Clifford LeRoy Nelson, Jr.
Willa Lee Ott
Alex Passen
Margaret Powell Payne
Edna Irene Peters
Novella Harner Phillips
Sallie Rae M. Phillips
Elmer Luther Poffenberger
Elizabeth Smith Pumphrey
Patricia Elizabeth Captolia Richards
Pearl Josephine Romm
Helen Mae Rudy
Maurice Herbert Schreiber
Howard Ferdinand Schwarz
Annette Shalowitz
Virginia Sharp Shinn
Dorothy Elise Shue
Herbert Silver
Evelyn Smith
Klora Estella Smith
Mary Jane Smith
Kathryn Alma Snook

Jessie Gallahan Soper
Kathryn Elizabeth Soper
Nellie Ida Speicher
Margaret Stevens Stack
Clara Beattie Stauffer
Isadore Loy Stein
Samuel Carl Sterling
Margaret Ellen Harriet Stevens
Lottie Simmons Stoker
Elizabeth Baughman Swisher
Lida Maye Testerman
Anna H. Thomas
James Gale Townsend
Louise-Marie Umali
Mary Margaret Vandegrift
Clara Gertrude Weller
Virginia Jane White
Phyllis Edna Harvey-Williams
Electa Jane Williamson
Cynthia Quackenbush Wilmer

COLLEGE OF ENGINEERING

Bachelor of Science

Redfield Wilmerton Allen
Richard Walter Armstrong
Elwood Bates
Clarence Edward Becker
Anson Wesley Biggs
Richard R. Bransdorf
David Timothy Brown
Ralph Mosher Burlin
Fitzhugh Taliaferro Clark
Donald Dwight Davis
Andrew Stilley Deming, Jr.
Leland Arthur De Pue
Charles Raymond Dietz
Howard Frederick Emrich, Jr.
David Alexander Falck
Louis Flax
Samuel Fradin
Richard Harrison Funke, Jr.
Charles Luther Gransee
Morris William Green
John Charles Hamilton
Norman Edward Hathaway
Charles Raymond Hayleck, Jr.
Charles Fiske Hochgesang
Leon Davis Hoffman, Jr.
Edwin William Inglis
Robert Newton Just
Irving Kabik
Elliott Katzen
Howard Lee Keller
Richard Henry Kent
Jackson Arthur Kessinger
Guy Senseny Kidwell, Jr.
William O'Connor King
Frederick Henry Kohloss
Tolbert Harding Konigsberg
Harry Sylvester Leasure, Jr.
George William Lewis, Jr.
Charles Cooke Love
Angelo Louis Lozupone
Edward Warren Lusby
Edmund Frank Magill
Joseph Valentine Mariner, Jr.
James Nathan Marsden
Paul Rhodes Mattix, Jr.
Russell Whitney McFall
Robert Clifton McKee
Daniel Merritt McNally
John T. Mitchell, Jr.
George Joseph Newgarden, III
Emmet Dennis Owens
Arnold George Rawling
George Eugene Reynolds, Jr.
Robert Matthew Rivello
George Victor Rodgers
Hugo Grotius Sheridan, Jr.
Paul Johnson Smith
Burton Solomon
James Robert Spicer
John Robert Spielman
Willis Ray Stafford, Jr.
George Ray Stuntz, Jr.
Henry Gilbert Thompson
John Bonar Tucker

Kenneth Macmillan Uglow, Jr.
Guy Norman Ullman, II
James Edward Updegraff, Jr.
Edward Joseph Warren
Harry Boss Weaver
George Conner Webster
Harry Kennady Wells
Donald Parker Whittemore
Leonard Frederick Williams
Seymour David Wolf
Robert Hugh Yeatman
Willis Harold Young, Jr.

COLLEGE OF HOME ECONOMICS

Bachelor of Science

Marian Louise Beck
Phyllis Beilock
Shirley Luella Bennett
Mary Margaret Bohanan
Elizabeth Marie Burke
Betty Burner
Joyce Anne Cafferty
Eileen Beryl Carr
Mary Charlotte Farrington Chaney
Jane Almy Chapin
Ruth Cohen
Marjorie Louisa Cook
Lois Roberta Davis
Mary Jane Dawson
Elizabeth Jean Donahue
Frances Jean Dunberg
Betty Lou Fike
Evelyn Mary Foerster
Anna Rebecca Freeman
Rita Christine Frey
Mary Hilda Gautier
Jennette Lucile Giovannoni
Beulah May Gisriel
Doris Marie Green
Elizabeth S. Haase
Mary D. Harris
Mary Catherine Henley
Frances Evelyn Hidnert
Nancy Brandes Holland
Shirley Claire Hubel
Mary Anne Hunter
Louise Allene Jones
Mary Jeannette Kaylor
Velma Jeanne Kepner
Myrtle Jean Killingsworth
Mabel Klebold
Carlyn Beatrice Lowe
Shirley McKay
Marilyn Gene Mason
Helen Louise McDaniel
Miriam Rose Mednick
Caroline Tandy Meng
Esther Gulick Mooney
Ellen C. Notz
Jane Bradley Park
Sylvia Perlstein
Jean Murday Persons
Nancy Jean Phillips
Rosaleen Bernardeth Pifer
Margaret Price
Catherine Marianna Ritchie
Katherine Lucy Rolph
Dorothy Alice Rundles
Jean Frances Sexton
Ruth Anne Sleeman
Reta Elizabeth Isele Smith
Lora Marie Stauber
Lois Gertrude Suit
Doris Mae Thompson
Ruth Marie Volland
Charlotte Elizabeth Warthen
Elizabeth Eileen Wascher
Charlotte Elissa Weikinger
Harriet Titus Whitson
Doris Adele Wood
Elizabeth Jean Wood
Anne Lacy Young
Irene Florence Zaladonis

SCHOOL OF LAW

Bachelor of Laws

Leroy Stanley Applefeld
*Margaret Elizabeth Coonan
Charles Thomas Dubin
*George Christian Evering
Donald Harrison Frye
William Larkin Gardner
John Silvio Guandolo
*Dorothy Eileen Holden
Evelyn Marnay LaNeve
Eugene Pomeroy Martin, Jr.
Joseph Vernon Niemoeller
*Francis Edward Rugemer
Archibald Leon Russell
Edward Melvin Seidl
Samuel Louis Silber
George Raymond Stevens
Ernest Morris Thompson
George Bothwell Watson
*Mary Howard Whaley

SCHOOL OF MEDICINE

Doctor of Medicine

Alberto Lotfalla Adam
Marcus Lafayette Aderholdt, Jr.
Richard Charles Allsopp
Ramon Ignacio Almodovar
Emory Forester Baker
John David Barnes
Robert Zinn Berry
James Wooten Bizzell
Charles Vernon Bowen, Jr.
Thomas Joseph Brennan
Sherman Simons Brinton
Ralph King Brooks
Ross Chilton Brooks
William James Bryson
Ralph Stallings Chenowith
Harry Cohen
John Benedict Coughlin
Donald Lawrence Courtney
Philip Crastnopol
Benedict Albert Cusani
Miguel Sebastian Dalmau
William Joseph Graham Davis
John Daniel Diorio
Thomas Benjamin Dunne
William Robert Eaton
John Wallace Walker Epperson
Richard Lowman Fowler
Samuel Lawson French
Paul Norman Friedman
Alfred Selman Garrison
Tony Robert Giglia, Jr.
Raymond Bernard Goldberg
Jose Ignacio Grave de Peralta
David Benoni Gray
William Baker Hagan
Frank Stanley Hassler, III
Alvin Herbert Honigman
William Jack Hunt
William Romulus Jenkins
Robert Franklin Keadle
Robert Charles LaMar, Jr.
Ferdinand Wayne Lee
Richard Quarles Lewis
Robert Charles Livingstone
Paul George Lukats
Charles Renwick MacDonald
Joseph Charles Matchar
Marcy Emory McMillan, Jr.
Vincent James Mele, Jr.
Nestor Hernan Mendez
James Delmar Miller
Robert Virginius Minervini
John David Morris
Henry Musnick
Joseph Carl Myers
Kenneth Powell Nash
Charles Amos Neff
Maria Amalia Pares

* With honor.

Frank Strong Parrott
Enrique Perez
Henry Baker Perry, Jr.
Preston Horsley Peterson
Joseph Emmett Queen
Raymond Veto Rangle
Josephine Elizabeth Renshaw
Granville Hampton Richards
Martin Albert Robbins
Louis Nathan Rosenstein
Earl Linwood Royer
Richard Sprogoe Rude
Seymour Sacks
Irving Leonard Samuels
Nathaniel Sharp
John Wiltshire Sigler
Marta Emilia Soler-Favale
Andrew Allan Spier
Harold Rellinger-Stafford
Edwin Harvey Stewart, Jr.
Howard William Stier
James Ernest Stoner, Jr.
Irving Julian Taylor
Jose Manuel Torres
Charles Weldon Trader
Robert Boone Tunney
Stephen Joseph Van Lill, III
Joseph Gregory Varhol, Jr.
Irvin Louis Wachsman
Samuel Haywood Walker
Frank Orville Warren, Jr.
Thomas Clyde Webster
Maurice Richard Weiss
Joseph Carlton Wich
Oliver Wayne Williamson
Thomas Leslie Wilson
Robert Edward Wise
Arthur Overton Wooddy
David Kuykendall Worgan
Leonard Emory Yurko

SCHOOL OF NURSING

Graduate in Nursing

Jane Elizabeth Adams
Mary Evelyn Allen
Ethel Webster Beard
Irma LeNora Bennington
Ada Brown
Rebecca Brown
Marguerite Elsie Burr
Florence Estelle Darden
Estelle Neel Davis
Amy DeShane
Perry Ruth Dougher
Evelyn Doloris Eselhorst
Martha Carroll Fanning
Ruth Elizabeth Forsyth
Doris Louise Gerwig
Eloise Josephine Goode
Eleanor Louise Gordner
Elizabeth Harlan
Phyllis Moore Holbrook
Sarah Hollister
Bernice Horner
Miriam Elisabeth Hutchins
Betty Mae James
Francis Jones
Catherine Elizabeth Kurzenknabe
Clara Gertrude Lebeck
Ula Virginia Maxwell
Idona Elizabeth Mehring
Mary Michael
Ruth Michaels
Ruth M. Misener
Pauline Moore
Marguerite Pannill
Shirley Virginia Pratt
Thelma Ann Price
Clara Roberts
Margaret Eagle Roelke
Maria Sagardia
Rita Dorothy Schwinger
Margaret Florence Sellner
Elizabeth Jane Smith
Miriam Elizabeth Stultz
Helen Wellham
Anna Wiegert
Frances Danby Williams
Susan Margaret Yeager

SCHOOL OF PHARMACY

Bachelor of Science in Pharmacy

Leonard Applebaum
Albert Julius Blankman
Gilbert Morris Carouge
James Phillip Cragg, Jr.
Herbert Ehudin
Frederick Robert Haase
Alfred Klotzman
Beryle Philip Kremer
Leo Baden Lathroum, Jr.
Evelyn Shirley Levin
Harold Paul Levin
Morton Myers
Leonard Rodman
Robert Rosenberg
Benjamin Scheinin
Nathan Schwartz
Theodore H. Schwartz
Joseph Shear
Alvin M. Siegel
Alder Irvin Simon
Melvyn M. Sindler
Morton Smith
Norman Sober
Sherman Steinberg
Hamilton Boyd Wylie, Jr.
Jack Joseph Yarmosky
Benjamin Yevzeroff

HONORS, MEDALS AND PRIZES—1941-1942

Elected Members of Phi Kappa Phi, Honorary Society

Isobel Adkins
Katherine Ellen Barker
Fred Frank Bartel
Harry Arthur Boswell
Martha Elizabeth Bowling
Albert Joseph Carry
George Robert Cook
John Edward Cordyack
M. Elizabeth Funk
Francis Vernon Getty
Gurney Lindale Godwin
Russell Howard Goff
Sol Howard Goodgal
Jerome Winston Grollman
Stuart Haywood
Anne Ghantt Hoen
Harry Marshall Hutson
Irene E. Kuslovitz
Carolyn Lacey
Cecil Roscoe Martin
Doris Helen McFarland
Samuel Varick Moore
Cecil Virginia Myers
Merl D. Myers
Benjamin Morris Owens
Katherine Perkins
Edward Hector Price
Marjorie Stinson Reside
George Bergin Reynard
Morris Roseman
Robert Welsh Russell
Ann Elizabeth Ryon
Jacob Calvin Siegrist
Hiram Henry Spicer, III
Helen Duer Stephens
Charlotte Mae Stubbs
Ruth Lee Thompson
Edythe M. Turner
Dorothy Werth
Roscoe Newton Whipp
Charlotte Blake White
Phillip Jerome Wingate
William Bruce Yowell, Jr.

Citizenship Medal, Offered by Dr. H. C. Byrd, Class of 1908
William Addison Holbrook

Citizenship Prize, Offered by Mrs. Albert F. Woods
Ruth Lee Thompson

Athletic Medal, Offered by the Class of 1908
Ralph Mosher Burlin

Maryland Ring, Offered by Charles L. Linhardt
Mearle Daniel DuVall

Goddard Medal, Offered by Mrs. Anne K. Goddard James
Levin Barnett Broughton

Sigma Chi Freshman Medal
Sidney Herman Sachs

Delta Delta Delta Sorority Medal
Ruth Margaret Blackwell

Medal and Junior Membership, Offered by the American Institute of Chemists
Edward Hector Price

Dinah Berman Memorial Medal, Offered by Benjamin Berman
Felix Joseph Cardegna

Mortar Board Cup
Charlotte Mae Stubbs

Honor Key, Offered by the Class of 1926 of the School of Business Administration
Albert Joseph Carry

Omicron Nu Sorority Medal
Mary Alice Spielman

Service Award, Offered by the Staff of Office of Dean of Women
Mary Virginia Powell

Bernard L. Crozier Award
Thomas McDowell Rives, Jr.

American Society of Civil Engineers Award
Fred Shulman

Tau Beta Pi Award
Tolbert Harding Konigsberg

Alpha Lambda Delta Sorority Award
Charlotte Mae Stubbs

The Charles B. Hale Dramatic Award
Walter Lee Neal

Sigma Alpha Omicron Award
Irene E. Kuslovitz

Hillegeist Memorial Award
Cecil Roscoe Martin

Edward Powell Lacrosse Trophy
William Alan McGregor, Jr.

Louis W. Berger Baseball Trophy
James Henry Wharton

Diamondback Award, for Outstanding Football Player
Ralph Mosher Burlin

The Diamondback Medals

Marvin Morris Polikoff
Helen Alice James
Alan Louis Sagner
Doris Helen McFarland
Paul Breathed Hutson, Jr.
Charles Batchelder Raymond
Rosalie Thornton Lyon

The Terrapin Medals

Gerald Eugene Prentice
Paul Donathan McCloskey
Ruth Lee Thompson
George Cassity Pendleton
Dorothy Anne Aiello
William Rowland Maslin

The Old Line Medals

John Douglass Wallop, III
Carolyn Lacey
Walter Joseph Kerwin, Jr.
Neal LeRoy Hathaway
Cecil Roscoe Martin
Norman Edward Hathaway

Governor's Drill Cup
Company K, commanded by Cadet Captain Theodore Merriam Vial

Alumni Cup
Third Platoon, Company L, commanded by Cadet Second Lieutenant Robert Driscoll Condon

Military Medal, Offered by the Class of 1899
Cadet James Polk LaCroix, Jr.

Pershing Rifles Medals to the Members of the Best Drilled Squad
Second Squad, Third Platoon, Company B,
commanded by Cadet Sergeant Peter Fancis Vial

Military Department Gold Medal to Individual Firing High Score on Varsity Rifle Team
Cadet Ulrich Aloysius Geller

Military Department Gold Medal to Individual Firing High Score on Freshman Team
Cadet Stephen Tyree Early, Jr.

Gold Medal to Individual Winning the Mehring Trophy Rifle Competition
Cadet Ulrich Aloysius Geller

Mehring Trophy Rifle Competition Silver Medal to Individual Showing Greatest Improvement
Cadet Levin Barnett Broughton

Third Corps Area, William Randolph Hearst Trophy Rifle Match Awards for Second Place

Cadet Ulrich Aloysius Geller
Cadet Paul Woolever Newgarden
Cadet Dorsey Meredith Owings
Cadet Stephen Tyree Early, Jr.
Cadet Joseph Murray Decker

Third Corps Area, William Randolph Hearst Trophy Rifle Match Awards for Third Place

Cadet Walter Hammond Wessels
Cadet Conrad Hohing, Jr.
Cadet Robert Matthew Rivello
Cadet Henry James Greenville
Cadet Levin Barnett Broughton

National Intercollegiate, Shoulder to Shoulder Rifle Match Bronze Medals for Third Place

Cadet Ulrich Aloysius Geller
Cadet Paul Woolever Newgarden
Cadet Dorsey Meredith Owings
Cadet Joseph Murray Decker
Cadet Robert Delafield Rands, Jr.

Felt Shields to Members of the R. O. T. C. Rifle Team and Managers for Rifle

Cadet Ulrich Aloysius Geller
Cadet Dorsey Meredith Owings
Cadet Joseph Murray Decker
Cadet Robert Delafield Rands, Jr.
Cadet Paul Woolever Newgarden
Cadet George Joseph Newgarden, III
Cadet Robert Harold Benson
Cadet Levin Barnett Broughton
Cadet Clifton Bradford Currin
Cadet Robert Matthew Rivello
Cadet Stephen Tyree Early, Jr.
Cadet Conrad Hohing, Jr.
Cadet Hilton Lee Carter
Cadet Henry James Greenville
Cadet Walter Hammond Wessels
Cadet Vernon LeRoy McKinstry
Cadet Bastian Hello

Fifth Regimental Drill Meet, National Society of Pershing Rifles Award

Company C

Fifth Regimental Rifle Match Trophy, National Society of Pershing Rifles

Company C

War Department Award of Commissions as Second Lieutenant, United States Army

Isadore Hotsy Alperstein
Tarleton Smith Bean, Jr.
Charles Rawlings Beaumont, Jr.
Frank Lawrence Bentz, Jr.
Harry Arthur Boswell
Rodney Leonard Boyer
J. C. Bray
Frank Gilbert Carpenter
Robert Driscoll Condon
George Robert Cook
John Francis Curtin, Jr.
Robert Lee Dorn
Bruce Allan Douglas
Neal Dow, Jr.
James Edward Dunn
Mearle Daniel Duvall
Harold Elwood Earp, Jr.
John Dechert Eyler, Jr.
Thomas McCoy Fields
Theodore Eiswald Fletcher, Jr.
Thomas Crawford Galbreath
Daniel Leonard Gendason
Walter Kingsley Grigg, Jr.
Joseph Lane Gude
Robert Hall
Phillip Charles Heath
Jeremiah Collins Hege
Robert Charles Henry
Fred Carlisle Hicks, Jr.
William Addison Holbrook, Jr.
Lloyd Gordon Huggins
Vincen Joshua Hughes, Jr.
Paul Breathed Hutson, Jr.
Robert Settle Insley
Charles Richard Jubb, Jr.
Walter Joseph Kerwin, Jr.
Lawrence MacKenzie
Donald Richard Magruder
James Edwin Malcolm
William Rowland Maslin
James Elden McFarland, Jr.
William Alan McGregor, Jr.
Vernon LeRoy McKinstry
J. Paul McNeil
Samuel Varick Moore
George Cassity Pendleton
Samuel L. Pfefferkorn, Jr.
Gerald Eugene Prentice

Edward Hector Price
Charles August Rausch, Jr.
Charles Batchelder Raymond
Frank Sam Reid
William Thomas Riley, Jr.
Harry Rimmer
Robert Welsh Russell
William Harvey Schoenhaar
John Lester Scott
Orville Cresap Shirey
Joseph Alvin Sirkis
Roy Kennedy Skipton
Robert Herman Smith, Jr.
Robert Edward Stalcup
Theodore John Stell
Louis Martin Tierney
William Reeves Tilley
Arthur Howard Valentine
Warren Francis Vandervoort
Theodore Merriam Vial
Hugh McKelden Walton
George Lawrence Wannall
Mordecai Gist Welling
James Henry Wharton
Thomas Theodore Witkowski
Robert Raines Ziegele

HONORABLE MENTION

College of Agriculture

First Honors.....Merl D. Myers, Robert Hicks McKay, Jacob Calvin Siegrist, Roscoe Newton Whipp, Frank Lawrence Bentz, Jr., Matthew Franklin Elimore.

Second Honors...Frank Sam Reid, Rudolph Graham Degen, John Daniel Cooley, Jr., Marvin Bernard Solomon, John Jones Smoot, Melvin James Bradley.

College of Arts and Sciences

First Honors.....Irene E. Kuslovitz, Cecil Roscoe Martin, Edward Hector Price, Harry Marshall Hutson, Jerome Winston Grollman, Katherine Ellen Barker, William Bruce Yowell, Jr., Talmadge Stanley Thompson, Ann Elizabeth Ryon, George Robert Cook, Carolyn Lacey, Katharine Perkins, Annarose Catherine Sleeth, Joseph Roy Guyther, Sol Howard Goodgal, Anne Ghantt Hoen.

Second Honors...Russell Howard Goff, Margaret Brooke, Edith Holt, Samuel Cohen, Mary Lillian Boggs, Norma Louise Thompson, Elizabeth Leila Eves, Roy Stuart Ramsey, Jr., LaRhett Livingston Stuart, Jr., Richard Craig Sullivan, Anne Cary McKinley, Rosalie Thornton Lyon, Marvin Rudo, Rebecca Alden Tucker, Nancy Jeanne Duby, Erma Kathryn Hughes.

College of Commerce

First Honors.....Albert Joseph Carry, Harry Arthur Boswell, Samuel Varick Moore, Hiram Henry Spicer, III, Marjorie Stinson Reside, Paul Donathan McCloskey.

Second Honors...Robert Stanley Cartee, Jr., John Douglass Wallop, III, Robert Marshall Moseley, William Carter Pennington, Lowell Truscott Keagy.

College of Education

First Honors.....Charlotte Mae Stubbs, Isobel Adkins, Martha Elizabeth Bowling, Helen Duer Stephens, Cecil Virginia Myers, Charlotte Blake White, Olivia Kerby Sims, Josephine Eleanora Wilson, Francis Vernon Getty, Morris Roseman.

Second Honors...Effie Orra Thomas, Joseph Ernest Gerstell, Betty Deloris Hall, Mary Carter Dillon, Doris Wood, Caroline McGill, Sevier Semmes Baumer, Elias Cohen, Catherine Audrey Stewart.

College of Engineering

First Honors.....Stuart Haywood, Frank Gilbert Carpenter, John Edward Cordyack, Robert Welsh Russell, Gurney Lindale Godwin, Benjamin Morris Owens.

Second Honors...Vahl Elbert Underwood, James Edwin Malcolm, Jeremiah Collins Hege, Arthur Howard Valentine, Thomas McDowell Rives, Jr.

College of Home Economics

First Honors.....M. Elizabeth Funk, Doris Helen McFarland, Dorothy Werth, Ruth Lee Thompson, Mary Johnston Davidson.

Second Honors...Mary Bessant Latimer, Agnes Louise Marks, Jessie Wallace Halstead, Alice Katherine Fisk, Louise Bendette Ladd.

School of Dentistry

University Gold Medal for Scholarship

Riley Seth Williamson, Jr.

Certificates of Honor

Donald Hovis Towson
Samuel Leonidas King
Stewart Everson
Lewis Cole Toomey
Harold Schwartz

School of Law

Elected to the Order of the Coif

Richard Werber Case
Joseph Harold Grady
William Woodrow Mahoney

Alumni Prize for the Best Argument in the Honor Case in the Practice Court

Richard Werber Case

George O. Blome Prizes to Representatives on the Honor Case in the Practice Court

Richard Werber Case
Louis Glick
Marvin Mandel
Edward Bernard Reddy

School of Medicine

University Prize Gold Medal

Joseph Whiddon Scott

Certificates of Honor

Alexander Emmanuil Brodsky
Patrick C. Phelan, Jr.
Joseph Gordon Bird
Etta Carolyn Link
Anthony Peter Rousos

The Dr. A. Bradley Gaither Memorial Prize of $25.00 for the Best Work in Genito-Urinary Surgery During the Senior Year

Otto Charles Phillips

School of Nursing

The Janet Hale Memorial Scholarship, Given by the University of Maryland Nurses' Alumnae Association, to Pursue a Course in Administration, Supervisory, or Public Health Work at Teachers' College, Columbia University, to the Student Having the Highest Average in Scholarship

Jean Louise Conrad

The Elizabeth Collins Lee Prize to the Student Having the Second Highest Average in Scholarship

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The Mrs. John L. Whitehurst Prize for the Highest Average in Executive Ability

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The Edwin and Leander M. Zimmerman Prize for Practical Nursing and for Displaying the Greatest Interest and Sympathy for the Patients

Anna Penelope Tucker

The University of Maryland Nurses' Alumnae Association Pin and Membership in the Association, for Practical Nursing and Executive Ability

Margaret Matilda Logan

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Gold Medal for General Excellence

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Wilson Monroe Whaley, Jr.

The William Simon Memorial Prize for Proficiency in Practical Chemistry

Wilson Monroe Whaley, Jr.

The L. S. Williams Practical Pharmacy Prize

Warren Eldred Weaver

The Conrad L. Wich Botany and Pharmacognosy Prize

Milton Reisch

Certificates of Honor

Milton Reisch — Sidney Gary Clyman — Alice Emily Harrison

HONORS, MEDALS AND PRIZES—1942-1943

Elected Members of Phi Kappa Phi, Honorary Society

Saville Mathews Allnutt
David Hargis Barker
Charles August Bechtold, Jr.
Robert Harold Benson
Paul Curtis Betts
Eli Matthew Brown
Margaret Washington Brown
Berniece Brown Chambers
Edmund Parker Churchill, Jr.
Benjamin Bernard Cohen
Jacquelin Stuart Cooley
Charles Raymond Dietz
James Paul Duke
William Carl Ebeling, III.
Leon Goldman
Margaret Towell Goldsmith
Ellen Frances Gray
Ramon Grelecki
Elizabeth S. Haase
Mary D. Harris
Joseph Charles Harry
Charles Fiske Hochgesang
David Saul Hurwitz
Irving Kabik
Mary Catherine Kahl
Richard Henry Kent
Catharine Elizabeth Krafft
Robert Lee Maisel
Marjory Jean Mattingly
Ernest Ray Mattoon
Russell Whitney McFall
Robert Clifton McKee
Robert Morgan Miller
Joseph Herman Mintzer
Martin Hammond Muma
Harry Ivan Neuman
John William Neumann
Emmet Dennis Owens
Richard Merle Peck
Jean Murday Persons
Robert Willms Petzold
Mildred Radin
Robert Matthew Rivello
Margaret Eagle Roelke
Edgar A. Schaeffer
Irvin Philip Schloss
Hugo Grotius Sheridan, Jr.
Jane Luray Showacre
John Robert Spielman
Stanley Herbert Steinberg
William Ellsworth Tolley
John Bonar Tucker
Kenneth Macmillan Uglow, Jr.
Homer Edward Uhland
Milton H. vanden Berg
George Conner Webster
Alfred C. Whiton
Robert Hugh Yeatman
Edmond Grove Young
Irene Florence Zaladonis

Citizenship Prize, Offered by Mrs. Albert F. Woods
Nancy Brandes Holland

Goddard Medal, Offered by Mrs. Anne K. Goddard James
Arthur Holcomb Ballard

Delta Delta Delta Sorority Medal
Margaret Ruth Beattie

Medal and Junior Membership, Offered by the American Institute of Chemists
Milton H. vanden Berg

Dinah Berman Memorial Medal, Offered by Benjamin Berman
Miriam Kleeger Gerla

Mortar Board Cup
Catharine Elizabeth Krafft

Omicron Nu Sorority Medal
Ruth Maurine Lingle

Service Award, Offered by the Staff of Office of Dean of Women
Bertha Ann Paterson

Bernard L. Crozier Award
Joseph Valentine Mariner

Tau Beta Pi Award
William Earle Sturges, III

The Charles B. Hale Dramatic Awards
Arla Georgeanna Guild — Frank Savage Mervine

Sigma Alpha Omicron Award
Robert Sandler

Hillegeist Memorial Award
Florence Primm

Edward Powell Lacrosse Trophy
Milton H. vanden Berg

The Diamondback Medals
Herbert Gabriel Carhart, Jr. — Eugene John Sullivan
Jane Luray Showacre — Jacqueline Anstead Brophy

The Terrapin Medals

Rosaleen Bernardeth Pifer
Joseph McLain Crockett
Jeannette Owen Jenkins
Burton Fairall Davis
Paul Woolever Newgarden
Frederick Miller Johnson

The Old Line Medals

Pauline Hardy
Frederick Louis Bach, Jr.
Edward Harris Steinberg
Mildred Anita White
Bertha Ann Paterson
Joseph McLain Crockett

Diamondback Award for the Outstanding Football Player of 1942

Thomas Allison Mont, Jr.

Gold Medal to Individual Winning the Mehring Trophy Rifle Competition

Paul Woolever Newgarden

A. L. Mehring All-American Silver Medal for Rifle Competition

David Fountian Jenkins

The George E. Meeks Memorial Rifle Match Trophy

Joseph Murray Decker

The Hearst Memorial Trophy Rifle Match Awards for First Place

Clifton Bradford Currin
Joseph Murray Decker
Ulrich A. Geller
Paul Woolever Newgarden
Walter Hammond Wessels

The National Intercollegiate Postal Match Awards for First Place

James Lockhart Baker
Robert Harold Benson
Hilton Lee Carter
James Atkins Clark
Clifton Bradford Currin
Joseph Murray Decker
Omus Denitz
Carl Walter Eicker
Thomas Richard Hogan
Edwin Jacobsen
David Fountian Jenkins
Dana John Keller
Milton Charles Kurtz
Walter Hammond Wessels

Certificates of Military Training

David Miller Abercrombie, Jr.
John Franklin Adams
Walter Orrin Allen, Jr.
Julian Bradley Anderson
Mervin William Arps, Jr.
Stanley Julian Asrael
Frederick Louis Bach, Jr.
Eugene Filippo Baldi
Burton Lee Bank
George Wimmel Barnard, Jr.
Richard Alfred Barr
Rollison Hall Baxter
Charles August Bechtold, Jr.
Richard Edwin Berger
William Spencer Betts
Herbert Talmadge Beuermann
Anson Wesley Biggs
Robert Byron Bird

Abraham William Birnbaum
Richard Brown Blackwell
Daniel Underdown Boothe
Thomas Earle Bourne, Jr.
Donald Mitchell Boyd
Edward Lee Boyer
Harold Roger Bradshaw
Thomas Marshall Brandt
John Augusta Brenner
Samuel Bernard Burch, Jr.
Philip Nash Buddington
Harry Millaway Butler
William Kirkland Byrd
Donald Marshall Call, Jr.
Felix Joseph Cardegna
Richard David Carr
Peter John Carroll
Nicolas Manrique Cartagena
Hilton Lee Carter
Giles Leonard Chapin
Paul Chmar
James Atkins Clark
Harry Speake Cobey
Alan Kolker Cohen
Luther Burkey Conrad
Jacquelin Stuart Cooley
Robert Vigert Cormack
George Washington Couch, Jr.
Nelson Roger Cox
Charles Willard Crawford
Joseph McLain Crockett
John Yoder Crow
William Evans Crow
Louis Culiner
Clifton Bradford Currin
Charles Covode Davis, Jr.
Robert McCloud Davison
Franklin Richard Day
J. Kirkwood Decker
Joseph Murray Decker
John Edward deKowzan
Robert Curtis Diehl
Hugo Gaetano DiMichele
Jack Stanley Dittmar
John Jenkins Dobler, II
Edwin Burton Donaldson, Jr.
Joseph Francis Dougherty
Oscar Herbert Du Bois
James Paul Duke, Jr.
William Dykes Dulaney
Rochester Z. DuTeil
Roy Stanley Eckert
Warren Harding Eierman
James David Engle
Joseph Robert Esher, Jr.
David Robert Fetters
Louis Flax
Clemens Weaver Gaines
Jack Arthur Gaines
Charles Pearson Gay, Jr.
Ulrich Aloysius Geller
Harold Napoleon Gilbert, Jr.
James Joseph Gill
John Douglas Gilmore, Jr.
Vernon Ragan Gingell
Olin Chappell Gochenour
William Martin Goldenzweig
William Gordon
Irving McKim Gordy, Jr.
Francis Alexander Gray, Jr.
Ramon Grelecki
Donald Shaeffer Gross
Herbert Joseph Gunther
Thomas Benjamin Hagerman, Jr.
James Edward Haines
J. Oakley Hall
Kenneth Delos Hall
Robert Spencer Hall
Herbert Andrew Haller
Daniel Seitz Harbaugh
Herbert William Harden
John Philip Hauswald
Norvell Hamner Hawkins
William Cramer Heathcote
William Paul Helbock
Bastian Hello
Robert George Hill, Jr.
Harvey Hodges Holland, Jr.
Jack Witherington Hoskinson
John Harry Hoyert, Jr.
Clark Joseph Hudak
Max VanKuren Hunt

Ellsworth Allen Hurlock, Jr.
Robert Wanton Ireland
Thornton Ennells Ireland
Robert Chelmers James
David Fountian Jenkins
Edward McKenna Johnson, Jr.
Charles Hudson Jones, Jr.
Herbert Omar Jones
Richard Nathan Jones
Thomas Wesley Jones
Sylvan L. Katz
James Alexander Kearney
Stirling Vincent Kehoe
Deane Ellington Keith
Howard Lee Keller
Edwin Joseph Kelly
Guy Senseny Kidwell, Jr.
Lester Kiefer
George David Kieffer
James Gamble Kinsman
James Wellington Kirkpatrick
Frederick Henry Kohloss
William Hubert Krehnbrink
Marvin Joseph Lambert
Roberts Edwin Latimer, Jr.
Audley Brooks Leaman
Harrison Lee
John Newman Libby
James Paul Libertini
Judson Duley Lincoln
John Frederick Loos, Jr.
Carl Gerold Luebben
Arthur Eugene Lundvall
Alan Campbell Macpherson
Robert George Mahon
Lloyd Lowndes Mallonee, Jr.
Joseph Valentine Mariner, Jr.
James Nathan Marsden
Barton Hirst Marshall, Jr.
William Henry Mattingley, Jr.
Paul Rhodes Mattix, Jr.
Donald Cooper Maxcy
Robert Clifton McKee
Daniel Merritt McNally
Edward Dickinson Meares
Alfred Ben Merendino
E. Clark Mester
Harry Jack Mier, Jr.
John Frederick Miller
John Lawrence Milligan
John T. Mitchell, Jr.
Thomas Allison Mont, Jr.
Charles Acker Morell
James Casper Myers
Geoffrey MacDonald Nairn, Jr.
William Wallace Nairn, III
Anthony Charles Nardo
George Joseph Newgarden, III
Paul Woolever Newgarden, II
John Francis Newman
George Nick Nikolopoulos
John Gray Norris
William Bradford Norris
Byron Hopkins Nuttle
Raymond Merrimen O'Kelly
Juan Luis Oliver, Jr.
Elmer Hammond Owens, Jr.
Thomas Alan Payne
Leon Pear
Charles Wesley Pearce, Jr.
Mervin Leroy Peterson, Jr.
George Osbourn Phillips
Edward Richardson Pierce, Jr.
William Hamilton Pindell, Jr.
William Lockhart Port
Kenneth Lester Ports
Page Boyd Pratt
Henry John Rassier
Mark Raum
Edward McGee Rider
Andress Owen Ridgway
Orlando Ridout, IV
Elmer Charles Rigby
John Blackstone Riley
Robert Matthew Rivello
Lloyd Wherry Roberts
Samuel Hamilton Rogers, Jr.
George Jefferson Ross
Carroll Louis Rowny
Doyle Preston Royal
Julian Roger Sanders
James Baines Saum

Edgar A. Schaeffer
Charles Philip Seltzer
Robert Willard Senser
Loy Monroe Shipp, Jr.
Benjamin Stump Silver
John Leonard Slade
James Gibbons Sneeringer
David Maxwell Snyder
Burton Solomon
Robert Hoagland Steen
Edward Harris Steinberg
John Charles Stidman
William Codding Stevens
William Selby Stewart
Draper Krum Sutcliffe
Daniel William Talmadge
William Lupo Tarbert
John Kefauver Tate
Philip Wesley Tawes
Edmond Gilmore Taylor
Preston William Taylor
David Dallas Thoma
John Edward Thomas, Jr.
Fred Paul Timmerman, Jr.
Homer Edward Uhland
Bernard Ulman, Jr.
James Edward Updegraff, Jr.
Earle Mason Uzzell
Milton H. vanden Berg
Peter Francis Vial
Reginald Charles Vincent
Frederic Benson Warder
Gerard Theodore Warwick
Roderick Dows Watson, Jr.
Robert Alden Webster, Jr.
Ernest Conrad Wegman
Chester Carlton Westfall, Jr.
Glen Earl Weston
Richard Lee Whelton
Donald Fillmore Whinerey
Douglas Jerome Willey
Paul Millard Wimert, Jr.
David Kenelm Winslow
James Bernard Witkowski
Myron Leonard Wolfson
George Gene Younger

HONORABLE MENTION

College of Agriculture

First Honors.....James Paul Duke, Jr., Edgar A. Schaeffer, Irvin Philip Schloss, Harry Ivan Neuman, Robert Harold Benson, Jane Luray Showacre, John Robert Williams.

Second Honors...Paul Curtis Betts, John Hansen Hoffman, Glen Earl Weston, Eugene John Sullivan, Robert Lee Nixon, Jr., Donald Fillmore Whinerey.

College of Arts and Sciences

First Honors.....David Hargis Barker, Marjory Jean Mattingly, William Ellsworth Tolley, Edmund Parker Churchill, Jr., Charles August Bechtold, Jr., Sidney Tzvie Efross, Margaret Washington Brown, Richard Merle Peck, Stanley Herbert Steinberg, Ellen Frances Gray, Joseph Herman Mintzer, Milton H. vanden Berg, Mildred Radin, Margaret Eagle Roelke, Berniece Brown Chambers, Bernard M. Hyatt.

Second Honors...John William Neumann, Jeanne Dorothy Amlicke, Florence Primm, Homer Edward Uhland, Louise Paddon Buckner, Pauline Hardy, Larry Quentin Green, Ruth

Eleanor Schene, Mary Virginia Langbein, Mary Louise Touchet, Albert C. Herrmann, Alan Campbell Macpherson, Dagmar Barbro Hansson, Ann E. Criswell, Anna Virginia Auslund.

College of Business and Public Administration

First Honors.....Joseph Charles Harry, Robert Morgan Miller, Robert Willms Petzold, John Reed Scott, Jr., A. Budd Cutler, William Martin Goldenzweig.

Second Honors...Wendell Ellsworth Shawn, Jr., Harry Drew Fisher, John Frederick Miller, Thomas Earle Bourne, Jr., Thornton Francis Greene.

College of Education

First Honors.....B. Bernard Cohen, Catharine Elizabeth Krafft, Robert Lee Maisel, Edna Irene Peters, Saville Mathews Allnutt.

Second Honors...Ramon Grelecki, Irvin W. Katz, Parepa Fidelia Linthicum, Olive Elizabeth King.

College of Engineering

First Honors.....Kenneth Macmillan Uglow, Jr., Russell Whitney McFall, John Robert Spielman, Hugo Grotius Sheridan, Jr., George Conner Webster, John Bonar Tucker, Irving Kabik, Robert Hugh Yeatman.

Second Honors...Richard Henry Kent, Robert Clifton McKee, Robert Matthew Rivello, Emmet Dennis Owens, Charles Raymond Dietz, Charles Fiske Hochgesang, Leonard Frederick Williams.

College of Home Economics

First Honors.....Elizabeth S. Haase, Mary D. Harris, Irene Florence Zaladonis, Jean Murday Persons, Charlotte Elissa Weikinger, Ellen C. Notz, Mabel Klebold.

Second Honors...Frances Jean Dumberg, Nancy Brandes Holland, Dorothy Alice Rundles, Evelyn Mary Foerster, Charlotte Elizabeth Warthen.

School of Dentistry

University Gold Medal for Scholarship

Riley Eugene Spoon, Jr.

Certificates of Honor

John Pershing Blevins
Arthur J. Lepine
David Randall Book
Jack Kushner
John White Menius, Jr.

School of Law

Elected to the Order of the Coif

Dorothy Eileen Holden
Francis Edward Rugemer
Mary Howard Whaley

School of Medicine

University Prize Gold Medal

Paul Norman Friedman

Certificates of Honor

Philip Crastnopol
Kenneth Powell Nash
Martin Albert Robbins
Louis Nathan Rosenstein
David Kuykendall Worgan

The Dr. A. Bradley Gaither Memorial Prize for the Best Work in Genito-Urinary Surgery During the Senior Year

David Kuykendall Worgan

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Doris Louise Gerwig

The Elizabeth Collins Lee Prize to the Student Having the Second Highest Average in Scholarship

Miriam Elisabeth Hutchins

The Mrs. John L. Whitehurst Prize for the Highest Average in Executive Ability

Maria Teresa Sargardia

The Edwin and Leander M. Zimmerman Prize for Practical Nursing and for Displaying the Greatest Interest and Sympathy for the Patients

Maria Teresa Sargardia

The University of Maryland Nurses' Alumnae Association Pin and Membership in the Association, for Practical Nursing and Executive Abiltiy

Idona Elizabeth Mehring

School of Pharmacy

Gold Medals for General Excellence

Joseph Shear

The William Simon Memorial Prize for Proficiency in Practical Chemistry

Morton Smith

The L. S. Williams Practical Pharmacy Prize

Sherman Steinberg

The Conrad L. Wich Botany and Pharmacognosy Prize

Gilbert Morris Carouge

Certificates of Honor

Morton Smith
Benjamin Scheinin
Beryle Philip Kremer

SUMMARY OF STUDENT ENROLLMENT

For the Academic Year 1942-43, as of June, 1943

Resident Collegiate Courses Three Semesters: Summer, Fall, Spring	College Park	Baltimore	Total Less Duplications	
College of Agriculture	313	....	313	
College of Arts and Sciences	1,243	....	1,243	
College of Business and Public Administration	358	....	358	
School of Dentistry	....	390	390	
College of Education	338	290	626	(2 dupl.)
College of Engineering	826	....	826	
Graduate School	272	78	341	(9 dupl.)
College of Home Economics	289	....	289	
School of Law	....	121	121	
School of Medicine	....	480	480	
School of Nursing	....	172	172	
School of Pharmacy	....	149	149	
Total	3,639	1,680	5,308	
Duplications	10	4	72	
Total	3,629	1,676	5,236	
Summer School, 1942	324	60	384	
Total	3,953	1,736	5,620	
Duplications	59	25	98	(+ 11 above)
Total Less Duplications	3,894	1,711	5,522	
Mining Courses, Western Maryland			77	
Engineering, Defense Extension			2,750	
C. A. A., Civilian Pilot Training Program			114	
Short Courses and Conferences				
American Home Economics Association			326	
Boys' and Girls' Club 4-H Victory Day			750	
Food Conservation Conference			40	
Gardenkeepers' Short Course			38	
Hatchery School			60	
Homemakers' Day			1,850	
Maryland Congress of Parents and Teachers			75	
Training Women for Farm Labor, Short Course			54	
Turkey Improvement School			25	
Volunteer Aids in Child Care, Short Course			50	
Women's Farm Short Course			27	
Total Short Courses and Conferences			3,295	
GRAND TOTAL, All Courses, Baltimore and College Park, less duplications			11,758	

SUMMARY OF STUDENT ENROLLMENT
For the Academic Year 1943-1944, as of June, 1944

Resident Collegiate Courses

Academic Year	*College Park	†Baltimore	Total Less Duplications	
College of Agriculture	106	....	106	
College of Arts and Sciences	980	....	980	
College of Business and Public Administration	130	....	130	
School of Dentistry	....	402	402	
College of Education	210	361	571	
College of Engineering	376	....	376	
Graduate School	237	74	301	(10 dupl.)
College of Home Economics	261	....	261	
School of Law	....	99	99	
School of Medicine	....	475	475	
School of Nursing	....	193	193	
School of Pharmacy	....	112	112	
Army Specialized Training Program:				
Basic Engineering	1,185	....	1,185	
Advanced Engineering	159	....	159	
Foreign Area and Language	180	....	180	
Pre-Professional	69	....	69	
Total	3,893	1,716	5,599	
Duplications Intercollege, A. S. T. P. and Civilian	3	8	11	
Duplications College Park and Baltimore	....	....	42	
Net Total	3,890	1,708	5,546	
Short Summer Session, 1943	141	....	141	
Total	4,031	1,708	5,687	
Duplications	28	....	39	
Net Total	4,003	1,708	5,648	
Mining Courses, Western Maryland			98	
Engineering, Defense Extension			2,778	
Fire Service Extension			648	

Short Courses and Conferences

Boys' and Girls' Club Day	660
Greenskeepers' Course	20
Maryland Boys' Legislature	171
Total Short Courses and Conferences	851
GRAND TOTAL, All Courses, Baltimore and College Park, less duplications	10,023

*Four Quarters: Summer, Fall, Winter, Spring.

†Three Semesters: Summer, Fall, Spring, except Pharmacy which is four quarters.

GENERAL INDEX

An admission application form, or any further information desired concerning the University, will gladly be furnished, on request, by

THE DIRECTOR OF ADMISSIONS,
University of Maryland,
College Park, Maryland.

UNIVERSITY OF MARYLAND

REGISTRATION PROGRAM FOR NEW STUDENTS REGISTERING FOR THE SUMMER QUARTER

JULY 10 TO SEPTEMBER 28, 1944

Friday, July 7

REGISTRATION FOR FRESHMEN AND OTHER NEW STUDENTS ACCORDING TO THE FIRST LETTER OF LAST NAME, AS FOLLOWS. Report to the office of the dean of the college in which you are registered.

Time	
8:30 A. M.	A——G
9:30 A. M.	H——P
10:30 A. M.	Q——Z

7:30 P. M.—DEAN OF MEN'S MEETING—All men students—Room A-1.

DEAN OF WOMEN'S MEETING—All women students—Women's Lounge, Dean of Women's Building.

8:15 P. M.—STUDENT BOARD MEETING—All new students. Room A-1.

Saturday, July 8

9:00-10:00 A. M.—LANGUAGE QUALIFICATION TEST—All incoming students, registering for second or third year French, German, or Spanish—Room A-1, Arts and Science Building.

8:00 P. M.—Dormitory Party for All Women, Anne Arundel Hall.

Sunday, July 9

10:30 A. M.—CATHOLIC SERVICES AT LOCAL CHURCHES.

11:00 A. M.—PROTESTANT SERVICES AT LOCAL CHURCHES.

Monday, July 10

8:20 A. M.—CLASSES BEGIN.

Friday, July 14

9:00 P. M.—MIXER AND DANCE FOR ALL STUDENTS—Gymnasium.

Saturday, July 15

1:30 P. M.—APTITUDE TESTS—All new students. Room A-1. Students entering with advanced standing are required to take this test.

SPECIAL NOTES

LIBRARY LECTURES: All new students are required to attend one of the following lectures:

Friday, July 7	3:00 P. M.
Saturday, July 8	10:00 A. M.
	11:00 A. M.

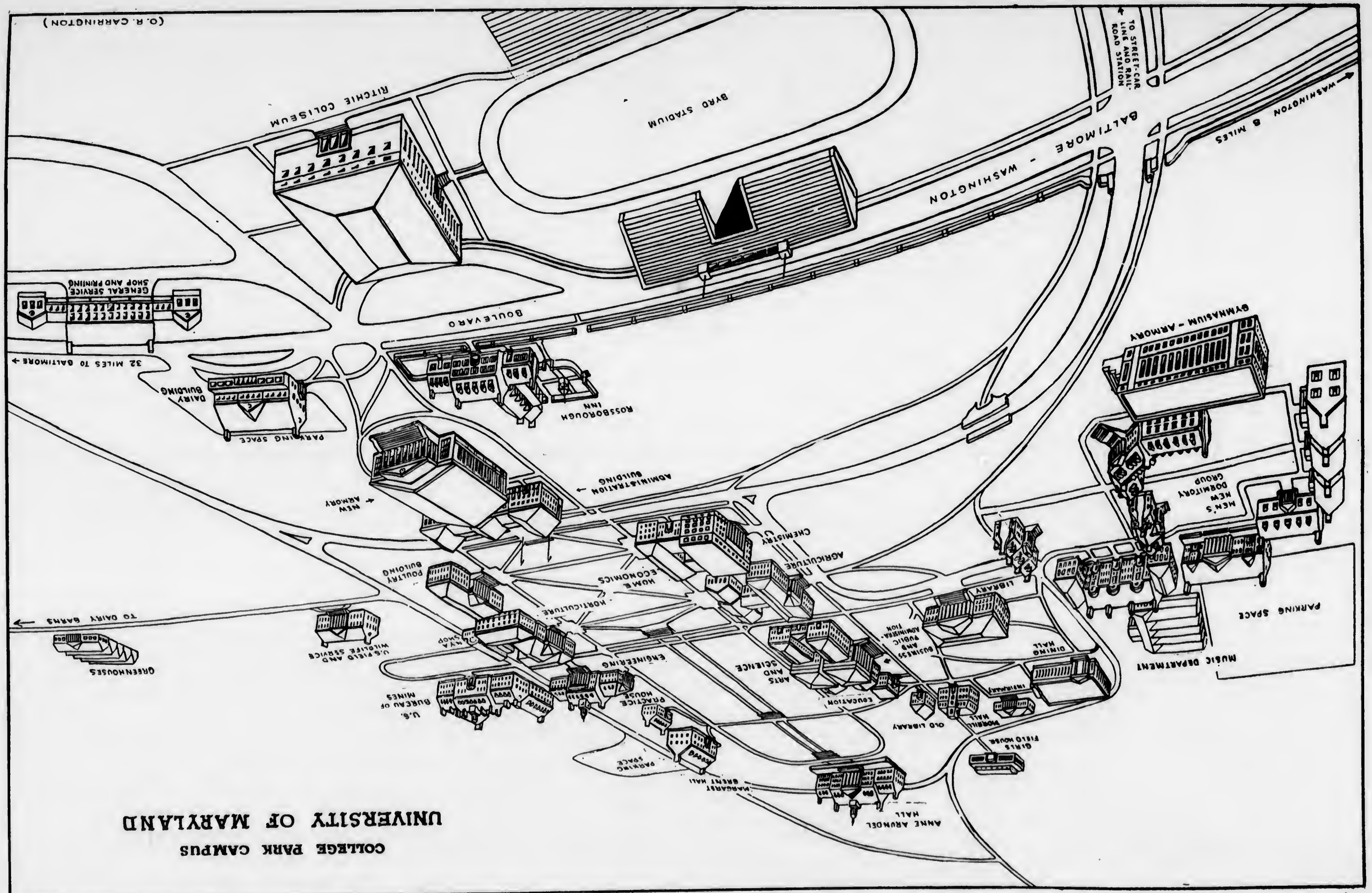
PHYSICAL EXAMINATIONS FOR MEN: All incoming men students who do not present acceptable medical certificates must report to the boxing room, Basement, Armory, for physical examinations during registration days. Instructions will be given at the Medical Certificate Desk during registration.

PHYSICAL EXAMINATIONS FOR WOMEN: All incoming women students who do not present acceptable medical certificates will be given physical examinations during the first weeks of school. Appointments for examinations will be made in the regularly scheduled classes of Physical Education.

R. O. T. C. UNIFORMS: Men students registered for military training should report on Monday, July 10, to the store room (basement of Armory) to draw unifoms and puchase a pair of shoes of approved type.

DINING HALL STUDENTS—Meals will be served (cafeteria style) as follows: Breakfast—7:30 a. m.; Lunch—12:30-noon; Dinner—5:50 p.m.

Before receiving a dining hall card which admits the students to the dining hall for meals, the student must deposit at the Cashier's Office, War Ration Book No. 4.



COLLEGE PARK CAMPUS

UNIVERSITY OF MARYLAND