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University of Maryland
College Park, Maryland

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UNIVERSITY OF MARYLAND

SUMMER SCHOOL

JUNE 24 TO AUGUST 2

1946

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No. 2

College Park, Maryland

SUMMER SCHOOL, 1946

CALENDAR

- June 21-22, Friday-Saturday—Registration, new graduate students only.
- June 24, Monday—Registration—all undergraduate students and matriculated graduate students.
- June 29, Saturday—Classes as usual.
- July 16-17—P.T.A. Summer Conference.
- July 6, Saturday—Classes as usual.
- July 26, Friday—Institute on Professional Relations.
- July 29-31, School Building Institute.
- August 2, Friday—Close of Summer School.

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	Term Expires
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THOMAS R. BROOKES, Vice-Chairman..... Bel Air, Maryland	1952
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INSTRUCTORS IN SUMMER SCHOOL

- Francis R. Adams, Jr., A.B., Graduate Assistant in English
 Arthur M. Ahalt, M.S., Associate Professor of Agricultural Education
 Emily W. Akin, M.S., Instructor in Textiles and Clothing
 Charles O. Appleman, Ph.D., Professor of Botany and Plant Physiology
 Oliver E. Baker, Ph.D., Professor of Geography
 Ronald Bamford, Ph.D., Professor of Botany
 Madge Beauman, R.N., Assistant in Physical Education
 Harold Benjamin, Ph.D., Director, Division of International Educational
 Relations, United States Office of Education
 Rachel Benton, Ph.D., Professor of Physical Education
 Henry Brechbill, Ph.D., Professor of Education
 Glen D. Brown, A.M., Professor of Industrial Education
 Russell G. Brown, Ph.D., Assistant Professor of Plant Physiology
 Eleanor B. Browne, Ph.D., Part-Time Instructor, College of Education
 Marie D. Bryan, A.M., Instructor in English and Education
 Sumner O. Burhoe, Ph.D., Assistant Professor of Zoology
 Gordon M. Cairns, Ph.D., Professor of Dairy Husbandry
 Charles E. Calhoun, M.B.A., Professor of Business Administration
 Verne E. Chatelain, Ph.D., Professor of History
 C. William Cissel, A.M., Associate Professor of Accounting
 Eli W. Clemens, Ph.D., Professor of Economics
 S. Grant Conner, A.M., Associate Professor of Industrial Education
 Franklin D. Cooley, Ph.D., Associate Professor of English
 Harold F. Cotterman, Ph.D., Professor of Agricultural Education
 Ernest N. Cory, Ph.D., Professor of Entomology
 Carroll E. Cox, Ph.D., Assistant Professor of Plant Pathology
 Jane H. Crow, M.S., Instructor in Institution Management
 Dieter Cunz, Ph.D., Assistant Professor of Foreign Languages
 Samuel H. DeVault, Ph.D., Professor of Agricultural Economics and Farm
 Management
 Dudley Dillard, Ph.D., Assistant Professor of Economics
 Eitel W. Dobert, A.B., Assistant in Foreign Languages
 Luke E. Ebersole, A.M., Instructor in Sociology
 John E. Faber, Ph.D., Associate Professor of Bacteriology
 William K. Gautier, M.S., Instructor in Physics
 Wesley M. Gewehr, Ph.D., Professor of History
 Guy W. Gienger, M.S., Associate Professor of Agricultural Engineering
 Richard A. Good, Ph.D., Assistant Professor of Mathematics
 Romain G. Greene, A.M., Instructor in English
 Edward W. Gregory, Jr., Ph.D., Professor of Sociology
 Allan G. Gruchy, Ph.D., Professor of Economics
 James M. Gwin, A.M., Professor of Poultry
 Ray C. Hackman, Ph.D., Instructor in Business Administration
 Eugene T. Halaas, Ph.D., Director of Bureau of Business Research, Pro-
 fessor of Business Administration
 Dick W. Hall, Ph.D., Assistant Professor of Mathematics
 Arthur B. Hamilton, M.S., Associate Professor of Agricultural Economics
 Irvin C. Haut, Ph.D., Associate Professor of Pomology

- Elizabeth E. Haviland, Ph.D., Instructor in Entomology
Jane B. Hobson, A.B., B.S.L.S., Head, Loan Department, University Library
Laura Hooper, Ph.D., Assistant Director, Illman School for Children, University of Pennsylvania
R. Lee Hornbake, Ph.D., Associate Professor of Industrial Education
Charles E. Hutchinson, Ph.D., Assistant Professor of Sociology
Raymond S. Hyson, A.B., Superintendent of Schools, Carroll County
Stanley B. Jackson, Ph.D., Assistant Professor of Mathematics
Walter F. Jeffers, Ph.D., Assistant Professor of Plant Pathology
John G. Jenkins, Ph.D., Professor of Psychology
Robert E. Jones, Ph.D., Assistant Professor of Botany
George J. Kabat, A.M., Acting Chief, European Section, International Educational Relations, United States Office of Education
James Kehoe, B.S., Instructor in Physical Education
George A. Kelly, Ph.D., Associate Professor of Psychology
Charles A. Kirkpatrick, Ph.D., Assistant Professor of Business Administration
Charles F. Kramer, A.M., Associate Professor of Foreign Languages
Norman C. Laffer, Ph.D., Associate Professor of Bacteriology
Hazel W. Lapp, M.S., Assistant Professor of Foods and Nutrition
Frederick H. Leinbach, Ph.D., Professor of Animal Husbandry
Peter P. Lejins, Ph.D., Associate Professor of Sociology
Robert A. Littleford, Ph.D., Instructor in Zoology
Edward F. Longley, A.M., Baltimore Polytechnic Institute, Baltimore, Md.
Minerva L. Martin, Ph.D., Instructor in English
Monroe H. Martin, Ph.D., Professor of Mathematics
Salvatore F. Martino, B.S., Graduate Assistant in Physics
Frieda W. McFarland, A.M., Professor of Textiles and Clothing
Edna B. McNaughton, A.M., Professor of Home Economics Education
Frances H. Miller, A.M., Instructor in English
Emory A. Mooney, Ph.D., Assistant Professor of English
Raymond Morgan, Ph.D., Professor of Physics
Earl W. Mounce, A.M., LL.M., Associate Professor of Law and Labor
M. Marie Mount, A.M., Professor of Home and Institution Management
Garrett Nyweide, A.M., Director, Vocational Education and Extension Board of Rockland County, New York
Norman E. Phillips, Ph.D., Professor of Zoology
Hugh B. Pickard, Ph.D., Assistant Professor of Chemistry
Augustus J. Prah, Ph.D., Associate Professor of Foreign Languages
Ernest F. Pratt, Ph.D., Associate Professor of Chemistry
J. Freeman Pyle, Ph.D., Professor of Economics and Marketing
George D. Quigley, B.S., Associate Professor of Poultry Husbandry
Harlan Randall, B.Mus., Associate Professor of Music
E. Wilkins Reeve, Ph.D., Associate Professor of Chemistry
James H. Reid, A.M., Assistant Professor of Economics
Lawrence A. Ringenberg, Ph.D., Assistant Professor of Mathematics
Harlan Rosenblatt, M.S., Graduate Assistant in Physics
Fillmore H. Sanford, Ph.D., Assistant Professor of Psychology
Alvin W. Schindler, Ph.D., Associate Professor of Education
Albert L. Schrader, Ph.D., Professor of Pomology

Burton Shipley, B.S., Assistant Professor of Physical Education
Arthur W. Silver, A.M., Assistant Professor of History
Denzel D. Smith, Ph.D., Assistant Professor of Psychology
Jesse W. Sprowls, Ph.D., Professor of Psychology
Reuben G. Steinmeyer, Ph.D., Professor of Political Science
William J. Svirbely, D.Sc., Associate Professor of Chemistry
Esther T. Taylor, M.S., Assistant Professor of Foods and Nutrition
Royle P. Thomas, Ph.D., Professor of Soils
Edward D. Trembly, M.B.A., C.P.A., Assistant Professor of Accounting
Willis L. Tressler, Ph.D., Assistant Professor of Zoology
John L. Vanderslice, Ph.D., Assistant Professor of Mathematics
William Van Royen, Ph.D., Professor of Geography
W. Paul Walker, M.S., Associate Professor of Agricultural Economics
Kathryn M. P. Ward, A.M., Assistant Professor of English
Ruth K. Webb, A.M., Assistant Professor, Wilson Teachers College, Wash-
ington, D. C.
Joe Young West, Ph.D., Professor of Science, State Teachers College,
Towson, Md.
Charles E. White, Ph.D., Professor of Inorganic Chemistry
Raymond C. Wiley, Ph.D., Associate Professor of Analytical Chemistry
Albert Woods, B.S., Assistant Professor of Physical Education
Mark W. Woods, Ph.D., Associate Professor of Plant Pathology
Harold C. Yeager, M.Mus.Ed., Instructor in Music
W. Gordon Zeeveld, Ph.D., Associate Professor of English
Yvonne Zenn, A.M., Instructor in Physical Education

GENERAL INFORMATION

The 1946 Summer School of the University of Maryland will open with registration on Monday, June 24, and extend for six weeks, ending Friday, August 2.

In order that there may be 30 class periods for each full course, classes will be held on Saturday, June 29, and July 6, to make up for time lost on registration. All divisions of the University at College Park, except the College of Engineering, will participate in the Summer School. All courses in the Summer School will extend for six weeks.

TERMS OF ADMISSION

Teachers and special students not seeking degrees are admitted to the courses of the Summer Session for which they are qualified.

The admission requirements for those who desire to become candidates for degrees are the same as for other sessions of the University. Before registering, a candidate for a degree will be required to be admitted to the University. He should see Dr. E. F. Long, Director of Admissions, and also should consult the Dean of the College in which he seeks a degree.

Graduates of accredited normal schools with satisfactory normal school records may be admitted to advanced standing in the College of Education. The objectives of the individual student determine the exact amount of credit allowed. The student is given individual counsel as to the best procedure for fulfilling the requirements for a degree.

ACADEMIC CREDIT

The semester hour is the unit of credit. A semester credit hour represents one lecture or recitation a week for a semester, which is approximately seventeen weeks in length. Two or three hours of laboratory or field work are counted as equivalent to one lecture or recitation. During the Summer Session a course meeting five times a week for six weeks requiring the standard amount of outside work is given a weight of two semester hours.

Students who are matriculated as candidates for degrees will be given credit towards the appropriate degree for satisfactory completion of courses. All courses offered in the Summer Session are creditable towards the appropriate degree.

Teachers and other students not seeking degrees will receive official reports specifying the amount and quality of work completed. These reports will be accepted by the Maryland State Department of Education and by the appropriate education authorities in other states for the extension and renewal of certificates in accordance with their laws and regulations.

NORMAL AND MAXIMUM LOADS

Six semester hours is the normal load for the Summer Session. Undergraduate students in the College of Education and teachers in service may take a maximum of eight semester hours if they have above-average grades. Extra tuition is charged for loads over six semester hours. For details, see "Tuition and Fees."

REGISTRATION

Registration for the Summer School will take place on Monday, June 24, from 9 a. m. to 4:30 p. m. for all students except new graduate students. Graduate students who are not matriculated should register on Friday and on Saturday morning, June 21 and 22, and should report to the office of the Graduate Dean, Dr. C. O. Appleman, 214 Agriculture Building.

Teachers and other Summer Session students, except regular undergraduates who are candidates for degrees in other colleges than the College of Education, will register in the office of the Acting Director of the Summer School, Education Building. Regular undergraduate students will register in the offices of their respective deans. After registration materials have been completed and approved, bills will be issued and fees paid at the offices of the Registrar and Cashier in the Administration Building.

Instruction will begin on Tuesday, June 25, at 8:20 a. m. The late registration fee on Tuesday, June 25, will be \$3.00; thereafter, it will be \$5.00.

Students who have not previously been admitted to and matriculated in the University should report before registration to the Acting Director of Admissions, Dr. E. F. Long, in the Administration Building. Such students will find it advantageous to make arrangements for admission in advance by mail.

TUITION AND FEES

Undergraduate Students

General Tuition Fee.....	\$26.50
This fee entitles the student to 6 semester hours of work, the general recreational program, and the use of a post office box.	
Non-residence Fee.....	10.00
This fee must be paid by all undergraduate students not residents of Maryland or the District of Columbia.	
Matriculation Fee	10.00
Payable only once, upon admission to the University. Every student must be matriculated.	
Special Tuition Fees	
For load of 3 semester hours, or less, or for additional work over 6 semester hours, per semester hour.....	
	6.00

Graduate Students

General Tuition Fee.....	\$31.50
This fee entitles the student to 6 semester hours of work, the general recreational program, and the use of a post office box.	
Matriculation Fee.....	10.00
Payable only once, upon admission to the Graduate School.	
Special Tuition Fee for load of 4 semester hours, or less, per semester hour	6.00

Miscellaneous Information

There is no non-residence fee for graduate students.

Auditors pay the same fees as regular students except that no charge is made to students who have paid the general fee.

A special laboratory fee may be charged for certain courses where such fee is noted in the course description.

The diploma fee is \$10.00.

A fee of \$1.00 is charged for each change in program after June 29th.

If such changes involve entrance to a course, they must be approved by the instructor in charge of the course entered. Courses cannot be dropped after July 13th.

CANCELLATION OF COURSES

Courses may be cancelled if the number of students enrolled is below certain minima. In general, freshman and sophomore courses will not be maintained for classes smaller than 15. Minimum enrollments for upper courses and graduate courses will be 10 and 5 respectively.

LIVING ACCOMMODATIONS—MEALS

Students are accommodated in the University dormitories up to the capacity of the dormitories. Students wishing to live in the dormitories on the campus will be required to take their meals in the University Dining Hall. Dormitory rooms will cost from \$15.00 to \$25.00 for the session, depending on the type of accommodations. Board will be \$60.00. For reservations, write to Miss Marian Johnson, Assistant Dean of Women, or Mr. James Kehoe, Men's Dormitory Manager.

A few off campus houses may accommodate summer school teachers without board. Miss Johnson or Mr. Kehoe will furnish the names of these householders to whom you should write to make your own arrangements. Cafeteria meal service will be available to all Summer School students in the University Dining Hall.

Rooms may be reserved in advance but will not be held later than noon of Tuesday, June 25. As the number of rooms is limited, early application for reservations is advisable. The University dormitories will be open for occupancy the morning of Monday, June 24.

Students attending the Summer School and occupying rooms in the dormitories will provide themselves with towels, pillows, pillow cases, sheets, and blankets. Trunks should be marked plainly with name and address (dormitory and room number if rooms have been assigned in advance). Trunks sent by express should be prepaid. Maid service will be provided for student rooms.

The University assumes no responsibility for rooms and board offered to Summer Session patrons outside of the University dormitories and dining room.

REFUNDS

In cases of withdrawal for illness or other unavoidable causes, refunds will be made as follows:

For withdrawal within five days after registration full refund of fixed charges and fees, with a deduction of \$5.00 to cover cost of registration will be made.

After five days, and up to two weeks, refunds on all charges will be prorated with the deduction of \$5.00 for cost of registration.

Applications for refunds must be made to the registrar's office and approved by the appropriate dean and the director. No refund will be paid until the application form has been signed by the dean and the director and countersigned by the dormitory representative if the applicant rooms in a dormitory.

STUDENT HEALTH

The University Infirmary, located on the campus, in charge of the regular University physician and nurse, provides medical service of a routine nature for the students in the Summer Session. Students who are ill should report promptly to the University Infirmary, either in person or by phone (Extension 326).

PARKING OF AUTOMOBILES

For the use of students, staff members, and employees, several conveniently located and wholly adequate parking lots are provided. The University rules forbid the parking of cars on any of the campus roads. These rules are enforced by State police.

SOCIAL AND RECREATIONAL ACTIVITIES

There will be a carefully planned program of social and recreational events administered by the Office of the Dean of Women. The recreational fee of one dollar, paid by all registrants in the Summer Session, is used to finance the program.

A representative advisory committee of students will be appointed to plan such events as they may wish to provide. Suggestions as to the nature of the social program will be welcomed by the Assistant Deans of Women or by the Director.

SUMMER GRADUATE WORK

Graduate work in the Summer School may be counted as residence toward an advanced degree. A full year of residence is required for the Master's degree, the summer term counting in proportion to the amount of credit carried. The maximum amount of graduate credit for the six weeks is six semester hours. Normally four such summer terms will be required for the Master's degree although a fifth summer term may be required in order that a satisfactory thesis may be completed.

Five Masters' degrees with slightly varying requirements are offered, as follows:

- Master of Arts
- Master of Science
- Master of Arts in American Civilization
- Master of Education
- Master of Business Administration

The requirements for these degrees are set forth in the Graduate School Announcements, a copy of which may be procured by request addressed to the Graduate School.

Special regulations governing graduate work in Education and supplementing the statements contained in the Graduate School Announcements are available in duplicated form and may be obtained at the College of Education. Each graduate student in Education should have a copy. Students seeking the Master's degree as a qualification for a certificate issued by the Maryland State Department of Education or any other certifying authority should consult the appropriate bulletin for specific requirements. Advisers will assist students in planning to meet such requirements.

All students desiring graduate credit, whether for meeting degree requirements, for transfer to another institution, or for any other purpose, must be regularly matriculated and registered in the Graduate School. Those expecting to register as graduate students should bring with them transcripts of their undergraduate and graduate records from other institutions.

CANDIDATES FOR DEGREES

Undergraduate students who expect to complete their requirements for baccalaureate degrees during the summer session should make application for diplomas at the office of the Registrar.

LIBRARY FACILITIES

The General Library at College Park, completed in 1931, is an attractive well equipped and well lighted 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 stack room is equipped with carrels and desks for the use of advanced students. About 10,000 of the 125,000 volumes on the campus are shelved in the Chemistry and Entomology departments, the Graduate School, and other units. Over 900 periodicals are currently received.

The University Library System is able to supplement its reference service by borrowing material from other libraries through inter-library loans or bibliofilm service, or by arranging for personal work in the Library of Congress, the United States Office of Education Library, the United States Department of Agriculture Library, and other agencies in Washington.

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 textbooks, stationery, classroom materials and equipment, confectionery, etc.

The store is operated on the 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 textbooks 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.

SPECIAL INSTITUTES AND MEETINGS

The Parent-Teacher Association Summer Conference—July 16-17

The College of Education will cooperate with the Maryland Congress of Parents and Teachers in planning their convention to be held this summer on the University campus. The theme of the meeting will be: "The Improvement of Understanding of Young Children by Adults." Persons of national reputation will be present as speakers and discussion leaders at the conference.

Institute on Professional Relations—July 26

The annual institute on Professional Relations, sponsored jointly by the Maryland State Teachers Association, the National Education Association, and the College of Education will be held on July 26th. A theme and keynote speaker will be announced early in the summer session.

Most education, and some other classes, will be dismissed on this day to permit students to attend the sessions of the institute. An invitation to attend is extended to teachers generally, whether enrolled in the summer session or not.

Institute on the Planning of School Buildings—July 29-31

In recognition of the present need for expansion of the educational plant in the state and the extensive building program which is scheduled to take place in the near future, a three-day institute has been planned for July 29-31, inclusive, at which the problems of planning, building, and maintenance of school houses and grounds will be discussed under the leadership of competent authorities in this field.

Dr. Ray L. Hamon of the United States Office of Education, who has already taken an active part in both surveys and conferences relating to school plant in the state will be present throughout the Institute as chief consultant. Under his leadership a number of other experts will be present to discuss problems in their respective fields. The whole institute will be under the administrative direction of Mr. Paul D. Cooper, who is in charge of the building program in Prince George's County.

While the institute will render most immediate service to superintendents and their staff members, school board members, principals, and other administrative officers, its proceedings should be of interest to teachers also. It will constitute an integral part of the regular summer school course, Ed. S 214—School Buildings and Equipment, given by Mr. Raymond S. Hyson, Superintendent of Schools, Carroll County.

COURSE OFFERINGS AND DESCRIPTIONS

(Unless otherwise stated, courses meet one hour daily, five days a week.)

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

A. E. 109. Research Problems (1-2). To be arranged. (DeVault and staff.)

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. 200. Special Problems in Farm Economics (2). To be arranged. (DeVault.)

An advanced course dealing extensively with some of the economic problems affecting the farmer, such as land values, taxation, credit, prices, production adjustments, transportation, marketing, and cooperation.

A. E. S. 207. Farm Business Analysis (1). First three weeks. To be arranged. (Hamilton.)

This course considers the preparation, keeping, and analysis of farm records; farm budgeting, farm management surveys, the reorganization of typical farms, and the use of farm records for income tax reports. Students will analyze records of different types of farms located in various parts of the State and make specific recommendations as to how these farms may be improved.

A. E. S. 208. Advanced Farm Economics (1). Not given in 1946.

A. E. 210. Taxation in Relation to Agriculture (2). To be arranged. (Walker.)

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.

AGRICULTURAL EDUCATION AND RURAL LIFE

The three-week courses in Agricultural Education and Rural Life which follow are offered primarily for teachers of vocational agriculture, county agents, and others interested in the professional and cultural development of rural communities. The normal load in such a program is three courses, which gives 3 units of credit. The courses of this department are offered in a cycle. By pursuing such a program successfully for four summers, a student will be able to earn 12 semester hours, a minimum major in this field, and could then return for two full summer sessions or one semester of regular school or for four more summers of three weeks each to complete the remaining 12 hours required for the master's degree. These courses are arranged to articulate with the three-week courses in Agricultural Economics and Farm Management, Agronomy, Animal Husbandry, Botany, Dairy Husbandry, Entomology, Horticulture and Poultry.

In 1946 the first three-week period will extend from June 24 to July 12. School will be held on Saturdays, June 29 and July 6, to make up for registration day, and July 4.

R. Ed. S. 207 A-B. **Problems in Teaching Vocational Agriculture and Related Science (1-1)**. First three weeks. Part A. 8:20, T-112. (Ahalt.)

A critical analysis of current problems in the teaching of vocational agriculture with special emphasis upon recent developments in all-day programs.

R. Ed. S. 208 A-B. **Problems in Teaching Farm Mechanics (1-1)**. First Three weeks. Part A. 1:30 to 3:20; T-112. (Gienger.)

This course deals with the latest developments in the teaching of Farm Mechanics. Various methods in use will be compared and studied under laboratory conditions.

R. Ed. S. 209 A-B. **Adult Education in Agriculture (1-1)**. First three weeks. Part A. 11:20; T-112. (Ahalt.)

Principles of adult education as applied to rural groups. Organizing classes, planning courses, and instructional methods are stressed.

AGRONOMY

Agron. 206 S. **Cropping Systems (1)**. Not given in 1946.

Soils 101 S. **Soil Management (1)**. First three weeks. To be arranged. (Thomas.)

Factors involved in management of soils in general and of Maryland soils in particular. Emphasis is placed on methods of maintaining and improving chemical, physical, and biological characteristics of soils. Illustrations with conservation practices received particular attention.

ANIMAL HUSBANDRY

A. H. 206 S. **Beef Cattle (1)**. First three weeks. To be arranged. (Leinbach.)

A summary course primarily designed for vocational agriculture teachers. This course deals with the principles involved in practical economical beef production. Topics discussed will include: the selection of breeding stock, management problems and practices, the feeding of the commercial herd and fattening steers; general market problems.

BACTERIOLOGY

Bact. 1. **General Bacteriology (4)**. Five lectures and five two-hour laboratory periods a week. Lecture, 9:20, T-314; laboratory, 10:20-12:10, T-314. Laboratory fee, \$8.00. (Faber.)

The physiology, culture, and differentiation of bacteria. Fundamental principles of microbiology in relation to man and his environment.

Bact. 5. **Physiology of Bacteria (4)**. Five lectures and five two-hour laboratory periods a week. Lecture, 8:20, T-314; laboratory, 9:20-11:10, T-307. Laboratory fee, \$8.00. (Laffer.)

Emphasis upon the fundamental physiological activities of bacteria; cytology and growth; respiration. Preparation of culture media, reagents, and staining solutions; introduction to preparation room procedures. Refinement of bacteriological technique.

Bact, 290. Research. Credit, time of lectures and laboratories, and character of work determined through consultation with head of the department. (Staff.)

BOTANY

Bot. 1. General Botany (4). Five lectures and five two-hour laboratory periods per week. Lecture, 11:20, T-219; laboratory, 8:20, T-208. Laboratory fee, \$5.00. (Brown and Jones.)

General introduction to botany, touching briefly on all phases of the subject. The chief aim in this course is to present fundamental biological principles rather than to lay the foundation for professional botany. The student is also acquainted with the true nature and aim of botanical science, its methods, and the value of its results.

Bot. 50. Plant Taxonomy (3). Three lectures and five two-hour laboratory periods per week. Prerequisite, Bot. 1, or equivalent. Not given in 1946. (Brown.)

Bot. 122 S. Field Plant Pathology (1). A course for teachers of vocational agriculture and county agents. Important diseases of Maryland crops will be discussed. Not given in 1946. Prerequisite, Bot. 20. (Cox.)

Bot. 206. Research, Physiology. (Credit according to work done.) Students must be qualified to pursue with profit the research to be undertaken. (Appleman.)

Bot. 214. Research, Morphology. (Credit according to work done.) (Bamford.)

Bot. 225. Research, Pathology. (Credit according to work done.) (Woods and Jeffers.)

BUSINESS AND PUBLIC ADMINISTRATION

B. A. 10. Organization and Control (2). 8:20; A-248. (Clemens.)

B. A. 11. Organization and Control (2). 9:20; A-248. Prerequisite, sophomore standing. (Clemens.)

A survey course treating the internal functional organization of a business enterprise.

B. A. 20. Principles of Accounting (4). 8:20-10:10; A-243. (Trembly.)

B. A. 21. Principles of Accounting (4). 8:20-10:10; A-246. (Cissel.)

The fundamental principles and problems involved in the accounting system; capital and surplus; bonds; and manufacturing and cost accounting.

B. A. 120. Intermediate Accounting (5). Thirteen periods a week; daily, 1:20-3:10, and M., W., F., 3:20; A-243. Prerequisite, B. A. 21.

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. 130. Elements of Business Statistics (3). Eight periods a week; daily, 11:20, and M. W., F., 10:20; A-246. Prerequisite, junior standing. (Halaas.)

This course is devoted to a study of the fundamental of statistics. Emphasis is placed upon 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. 140. Financial Management (3). Eight periods a week; daily, 10:20, M., W., F., 11:20; A-252. Prerequisite, Econ. 140. (Calhoun.)

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. 144. Life, Group, and Social Insurance (2). 2:20; A-246. Prerequisite, Econ. 32 or 37. (Calhoun.)

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. 150. Marketing Management (3). Eight periods a week; daily, 8:20, and M., W., F., 9:20; A-250. Prerequisite, Econ. 150. (Reid.)

A study of the work of the marketing division in a going organization. The work 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 various forms of manufactured products.

B. A. 160. Personnel Management (3). Eight periods a week; daily, 8:20, and M., W., F., 9:20; A-252. Prerequisite, Econ. 160. (Mounce.)

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. 186. Real Estate Law and Conveyancing (2). 10:20; A-250. Prerequisites, B. A 156 and 181. (Mounce.)

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.

CHEMISTRY

A. Analytical Chemistry

Chem. 19. Quantitative Analysis (4). Five lectures and five three-hour laboratory periods a week. Lecture, 11:20, H-5; laboratory, 1:20, K-231. Laboratory fee, \$8.00. (Svirbely.)

A brief survey of quantitative analysis with particular reference to volumetric methods.

Chem. 166. Food Analysis (3). Three lectures and five three-hour laboratory periods a week. Lecture, M., T., W., 10:20, K-307; laboratory, 1:20, K-105. Prerequisites, Chem. 19, 31, 32, 33, 34. Laboratory fee, \$8.00. (Wiley.)

For students of home economics, bacteriology, and agriculture.

B. Inorganic Chemistry

Chem. 3. General Chemistry (4). Five lectures and five three-hour laboratory periods a week. Lecture, 11:20, A-1; laboratory, 1:20, K-9. Prerequisite, Chem. 1. Laboratory fee, \$8.00. (White.)

C. Organic Chemistry

Chem. 37. Elementary Organic Chemistry (2). Five lectures per week. 8:20; K-307. Prerequisites, Chem. 1, 3. (Reeve.)

Chem. 38. Elementary Organic Laboratory (2). Five three-hour laboratory periods a week. 9:20-12:10; K-306. Prerequisite, Chem. 35, or concurrent registration therein. Laboratory fee, \$8.00. (Reeve.)

Chem. 142, 144. Advanced Organic Laboratory (2, 2). Five three-hour laboratory periods a week. Arranged; K-310. Prerequisites, Chem. 19 or 23 and Chem. 37, 38. Laboratory fee, \$8.00. (Pratt.)

Syntheses and the quantitative determination of carbon and hydrogen, halogen, and nitrogen are studied.

Chem. 146, 148. The Identification of Organic Compounds (2, 2.) Five three-hour laboratory periods a week. Arranged; K-310. Prerequisites, Chem. 141, 143, or concurrent registration therein. Laboratory fee, \$8.00. (Pratt.)

The systematic identification of organic compounds.

Chem. 254. Advanced Organic Preparations (2-4). Five to ten three-hour laboratory periods a week. Arranged; K-310. Laboratory fee, \$8.00. (Pratt.)

Chem. 258. The Identification of Organic Compounds; an Advanced Course (2, 4). Five to ten three-hour laboratory periods a week. Arranged; K-310. Laboratory fee, \$8.00. (Pratt.)

Chem. 260. Advanced Organic Laboratory (1-2). Three to five three-hour laboratory periods per week. Arranged; K-310. Laboratory fee, \$8.00. (Pratt.)

An orientation course designed to demonstrate a new student's fitness to begin research in organic chemistry.

Chem. 295. Phase Rule (2). Five lectures a week. 8:20; T-219. (Pickard.)

A systematic study of heterogenous equilibria. One, two, and three component systems will be studied, with practical applications of each.

Chem. 360. Research. (Staff.)

DAIRY HUSBANDRY

D. H. 208 S. Advanced Dairy Production (1). First three weeks. To be arranged. (Cairns.)

An advanced course primarily designed for vocational teachers of agriculture and county agents. Deals with outstanding problems and latest developments in the field.

ECONOMICS

Econ. 1. Economic Resources (2). 10:20, A-106. (Baker.)

Econ. 2. Economic Resources (2). 11:20, A-106. (Van Royen.)

General comparative study of the geographic factor underlying production economics. Emphasis upon climate, soils, land forms, agricultural products, power resources, and major metallic minerals, concluding with brief survey of geography of commerce and manufacturing.

Econ. 4. Economic Developments (2). 9:20; A-12. (Dillard.)

Econ. 5. Economic Developments (2). 10:20; A-12. (Dillard.)

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. Principles of Economics (3). Eight periods a week; daily, 10:20, M., W., F., 11:20; A-248. Prerequisite, sophomore standing. (Gruchy.)

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. 32. Principles of Economics (3). Eight periods a week; daily, 1:20, M., W., F., 2:20; A-250. Prerequisite, Econ. 31. (Reid.)

Continuation of Econ. 31.

Econ. S. 135. Current Economic Problems (2). 1:20; A-246. Prerequisite, Econ. 32 or 37. (Gruchy.)

A survey of the major economic problems of the postwar reconstruction period. Attention is given to both national and international problems.

Econ. 140. Money and Banking (3). Eight periods a week; daily, 11:20, and M., W., F., 10:20; A-243. Prerequisite, Econ. 32 or 37. (Kirkpatrick.)

A study of our money and banking system and the basic principles involved in its proper operation.

Econ. 160. Labor Economics (3). Eight periods a week; daily, 10:20, and M., W., F., 11:20; A-21. Prerequisite, Econ. 32 or 37.

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 organizations, collective bargaining.

EDUCATION

Ed. 102. History of Education in the United States (2). 9:20; N-101. (Browne.)

A study of the origins and development of the chief features of the present system of education in the United States.

Ed. S 122. The Social Studies in the Elementary School (2). 9:20; E-212. (Webb.)

The emphasis will be on pupil growth through social experiences. Consideration will be given to the utilization of environmental resources, curriculum organization and methods of teaching, and evaluation of newer methods and materials in the field.

Ed. S 127. Recent Trends in Curriculum and Methods in the Elementary School (2). 10:20; E-212. (Webb.)

Emphasis in this course will be placed on recent trends in elementary education, newer instructional practices and classroom procedures, organization of learning experiences, and modern techniques of evaluation. New methods and materials will be critically evaluated. Opportunity for the study and discussion of individual problems will be given.

Ed. 130. Theory of the Junior High School (2). 11:20; N-106. (Browne.)

A study of the junior high school; its purposes, functions, population, organization, program of studies, staff, and other pertinent features.

Ed. 141. High School Course of Study-English (2). 10:20; E-214. (Bryan.)

This course is concerned principally 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. S 144. Materials and Procedures for the Junior High School Core Curriculum (2). 9:20; E-121.

This course is designed to bring practical suggestions to teachers who are in charge of core classes in the emerging Maryland junior high schools. Materials and teaching procedures for specific units of work will be stressed.

Ed. 147. Audio-Visual Education (2). 8:20; N-106. Fee, \$1.00. (Brechtbill.)

The use in and by the school of sensory impressions as a basis for learning; pictures, museum materials, journeys, etc.

Ed. 150. Educational Measurements (2). 10:20; N-106. (Brechtbill.)

A study of tests and examinations with emphasis upon their construction and use. Elementary statistical concepts.

Ed. S 153. The Improvement of Reading (2). 10:20; N-101. (Schindler.)

This course is designed for teachers of pupils in grades four to twelve. It is concerned with specific types of reading lessons for the improvement of major reading and study skills, the teaching of reading in subject fields, certain elements of psychology essential to the intelligent direction of

reading activities, causation and analysis of reading difficulties, reading materials, and instruction for pupils with pronounced reading and study deficiencies.

Ed. 155. Child Development and Guidance (2). 8:20; A-14. (Schindler.)

This course is concerned with (1) the characteristics of elementary school children and (2) their implications for teachers. It includes the following areas: significant characteristics of physical growth; factors which influence social, emotional, and intellectual development; how to gain an understanding of individuals; utilizing and modifying home influences; basic personality needs of children; how to work with children, including desirable pupil-teacher relationships.

Ed. 161. Guidance in Secondary Schools (2). 11:20; N-101. (Schindler.)

This course is designed for teachers in terms of the day-by-day demands made upon them in the guidance of youth in their classes. It is also intended as an introductory course for teachers who wish to specialize in guidance work. Attention is given to problems on which pupils may need guidance, guidance responsibilities of different members of the school staff, counseling techniques, making and interpreting case studies, ways of getting and organizing information about students, and group guidance.

Ed. 209. Seminar in History of Education (2). 10:20; DW-106. (Browne.)

Ed. 210. The Organization and Administration of Public Education (2). 9:20; N-105. (Hyson.)

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. S 213. Administration and Teaching in Junior High School (2). 8:20; E-121.

This course is concerned with persistent teaching problems and related administrative organization and policy, and is designed for teachers and administrators. Emphasis will be placed on ways and means whereby junior high schools may realize their functions fully.

Ed. S 214. School Buildings and Equipment (3). 10:20-12:10; N-105. (Hyson.)

This course will emphasize the planning and construction of school buildings, the development of building programs, and the selection of equipment. The care and management of school buildings will also receive attention. Students who register for this course will participate in the three-day conference on school buildings.

Ed. 217. Administration and Supervision in the Elementary School (2). 11:20; E-212. (Webb.)

Problems, basic principles, and recent improvements in elementary school administration and supervision with emphasis on personnel services, classification and grouping of pupils, promotion and grading policies, socializing

activities, reports to parents, attendance, community relations, and types of school organization will be considered. For both prospective and in-service principals.

Ed. 219. Seminar in School Administration (2). 8:20; N-101. (Kabat.)

Ed. S 232. Student Activities in the High School (2). 10:20; E-121.

This course offers a consideration of the problems connected with the so-called "extra-curricular" activities of the present-day high school. Special consideration will be given to (1) philosophical bases, (2) aims, (3) organization, and (4) supervision of student activities such as student council, school publications, musical organizations, dramatics, assemblies, and clubs. Present practices and current trends will be evaluated.

Ed. S 250. Analysis of the Individual (2). 11:20; E-213. (Nyweide.)

In this course emphasis is placed on the selection and administration of tests and inventories and on the interpretation of data obtained.

Ed. S 261. Counseling Techniques (2). 9:20; E-213. (Nyweide.)

This course deals with the various specialized techniques, procedures, and materials utilized by guidance specialists in the schools. To be required for the proposed Maryland counseling certificate.

Ed. S 262. Occupational Information (2). 10:20; E-213. (Nyweide.)

This course is designed to give counselors, teachers of social studies, school librarians, and other workers in the field of guidance and education a background of educational and occupational information which is basic for counseling and teaching.

Ed. 279. Seminar in Adult Education (2). 8:20; N-105. (Benjamin.)

Ed. 289. Research. (Staff.)

Sci. Ed. S 1. General Science for the Elementary School. Section B-2—For Intermediate Grades 2). 9:20; N-11. (West.)

This course comprises appropriate science subject matter organized into patterns adaptable to the needs of elementary school children. Lectures, demonstrations, and individual projects will be utilized.

Sci. Ed. 191. Workshop in Conservation Education (3). 10:20-12:10; N-11. Arranged laboratories, including two required field trips. Fee, \$1.00. (West.)

Registrants in this workshop will organize into committees and devote their efforts to the discovery and collection of source materials suitable for instruction on the various school levels from primary to senior high school. Among the resources whose conservation may be studied are soils, water, forests, fisheries, wild life, and minerals.

Among the various groups which have agreed to cooperate in the operation of this workshop are the departments of botany, entomology, zoology, and the Agricultural Extension Service of the University; the State Department of Research and Education; the U. S. Department of the Interior; and others.

Enrollment will be limited to 25 students.

HOME ECONOMICS EDUCATION

H. E. Ed. 110. Child Development (3). M., W., F., 1:20-3:20; T., Th., 1:20-2:20; N-101. (McNaughton.)

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 in nursery school; reviews of current books.

H. E. Ed. 102. Problems in Teaching Home Economics (2). 9:20; E-110. (McNaughton.)

Construction of units; analysis of text-books; evaluation of illustrative material.

H. E. Ed. 112. Play and Play Materials (2). 9:20; T-218. (Hooper.)

Study of play materials and play equipment in relation to use by different age levels; observation in nursery school; participation with a play group in a home.

H. E. 113. Education of the Young Child (2). 8:20; T-218. Two hours observation per week, arranged. (Hooper.)

A study of the nature and needs of the child from two to six years of age, including learning tendencies. The course will place emphasis on the planning of a child's day in nursery school and kindergarten based on his developmental needs. Housing, equipment, methods of studying children, and activities for each age group will be discussed. Opportunities for observation in child centers will be provided.

H. E. Ed. 118. Teaching Nursery School (2). 10:20; T-218. (Hooper.)

Observation and teaching two hours daily in a cooperative nursery school in College Park; conferences with director.

H. E. Ed. 200. Seminar in Home Economics Education (2). 9:20; E-110. (McNaughton.)

Study of newer techniques; reviews of Masters' theses; selection of special problems; seminar paper.

INDUSTRIAL EDUCATION

A. Professional Courses

The following four courses are intended for vocational-industrial teachers and supervisors, for industrial arts teachers and supervisors, for secondary school principals and for other educators who desire to acquaint themselves with the underlying principles and contributions of industrial arts and vocational education at the secondary school level.

Ind. Ed. S 150. Methods of Teaching Vocational and Occupational Subjects (3). 11:20; F-104. Laboratory periods to be arranged. Laboratory fee, \$3.00. (Conner.)

Identification and analysis of the factors essential to helping others learn; the organization of these factors into "patterns" for effective teaching in varying learning situations; and practice in applying the techniques of teaching.

Classroom discussion will be supplemented by laboratory work permitting the development and construction of usable teaching aids such as mock-ups, models, etc.

Ind. Ed. 170. Principles and Practices of Vocational Education (2). 9:20; F-104. (Conner.)

Establishment and evaluation of the principles underlying the vocational education movement; a study of the practices by which the principles are implemented; and their relationship to a comprehensive educational program for all youth and adults.

Ind. Ed. 240. Research in Vocational and Industrial Arts Education (2). Arranged. (Staff.)

Advanced and original work by graduate students in connection with approved problems of pertinent phases of industrial education.

Ind. Ed. 207. Philosophy of Industrial Arts Education (2). 8:20; F-104. (Hornbake.)

A course intended to assist the student in his development of a point of view as regards industrial arts and its relationship with the total educational program. The course should serve as a basis for projecting industrial arts programs and as a "yardstick" for evaluating current procedures and proposals.

B. Technical Courses

The following courses are offered to persons who are preparing to teach industrial arts at the secondary school level or to teachers already engaged in Industrial Arts teaching. The courses are comparable in content and presentation to those offered during the regular school term in the Industrial Arts curriculum. The primary purpose of each course is to have the student develop sufficient skill and technique to instruct secondary school pupils in similar courses. To the extent that time permits an effort is made to study comprehensively the industries represented by each course.

Ind. Ed. 26. Art Metal Work I (2). 8:20-10:10; I. Laboratory fee, \$3.00.

An introductory course in designing and constructing art products in aluminum, copper and brass. The processes covered include surface decoration by hammering, piercing, etching, enameling, heat treatment, and finishing.

Ind. Ed. 67. Cold Metal Work (2). 8:20-10:10; I. Laboratory fee, \$3.00.

Metal in the form of bars, rods and tubes are shaped cold to produce "ornamental iron" and bench metal products. The use of the hacksaw, file, drill press, taps and dies, the designing and forming of scrolls and the finishes appropriate for cold metal work are representative of the course content.

Ind. Ed. 28. Electricity I (2). 8:20-10:10; I. Laboratory fee, \$3.00.

An introductory course to electricity in general. It deals with the electrical circuit, elementary wiring problems, the measurement of electrical energy, and a brief treatment of radio such as may be offered at the junior high school level.

Ind. Ed. 1. Mechanical Drawing I (2). 10:20-12:10; I. Laboratory fee, \$3.00.

This course constitutes an introduction to orthographic and isometric projection. Emphasis is placed upon the visualization of an object when it is represented by a multi-view drawing, and upon the making of multi-view drawings.

The course carries through auxiliary views, sectional views, dimensioning, conventional representation and single stroke letters.

Ind. Ed. 21. Mechanical Drawing II (2). 10:20-12:10; I. Laboratory fee, \$3.00

Mechanical Drawing II provides additional practice in the elements of drawing introduced in Mechanical Drawing I. The drawings range from detail to assembly. The student has practice in carrying a design through from sketch to print. Mechanical Drawing I, or equivalent experience, is a prerequisite.

Ind. Ed. 24. Sheet Metal Work (2). 8:20-10:10; I. Laboratory fee, \$3.00.

Articles are made from metal in its sheet form and involve the operations of cutting, shaping, soldering, riveting, wiring, folding, seaming, beading, burring, etc. The student is required to develop his own patterns inclusive of parallel line development, radial line development, and triangulation. Common sheet metal tools and machines are used in this course.

Ind. Ed. 2. Elementary Woodworking (2). 10:20-12:10; I. Laboratory fee, \$3.00.

This is a woodworking course which involves the use of hand tools almost exclusively. The course is developed so that the student uses practically every common woodworking hand tool in one or more situations. There is also included elementary wood finishing, the specifying and storing of lumber, and the care and conditioning of tools used.

Ind. Ed. 22. Machine Woodworking I (2). 10:20-12:10; I. Laboratory fee, \$3.00.

Machine Woodworking I offers initial instruction in the proper operation of the jointer, band saw, variety saw, jig saw, mortiser, shaper, and lathe. The types of jobs which may be performed on each machine and their safe operation are of primary concern. The medium of instruction is school shop equipment and useful home or farm projects.

Elementary Woodworking, or equivalent experience, is a prerequisite.

C. Art Crafts

Art Crafts I, II and III constitute a sequence of related courses intended to assist persons who are preparing to teach art crafts in grade 7 of the public schools of Maryland, or teachers who have already undertaken this type of work in the schools. The work is appropriate also for persons who teach art crafts at any grade level and for those who teach art crafts in camps, clubs, adult evening classes and the like. The sequence places emphasis upon practical work experience.

Ind. Ed. S 9. Art Crafts I (2). 1:20-3:10; I. Laboratory fee, \$3.00.

The materials used in Art Crafts I are woods, metals, leathers and plastics. Each student is provided the opportunity of doing a variety of types of work in the four media.

Art Crafts II will be offered in the summer of 1947 and Art Crafts III in the summer of 1948.

Women

PHYSICAL EDUCATION

Physical Activities (1). 9:20; Field House. (Benton.)

Open to sophomore, junior, and senior women who have not completed the physical education requirement for graduation.

P. E. 42. Hygiene I (2). 9:20; E-214. (Beaman.)

A course designed to acquaint women students with individual behavior in relation to health.

P. E. 46. Hygiene III—Advanced Hygiene (2). 8:20; E-214. Prerequisites, P. E. 42, 44, or equivalent. (Beaman.)

A consideration of special topics of current interest in personal and community health.

P. E. S 110. Co-recreational Activities (2). 11:20; Field House. (Zenn.)

Activities for social recreation. Open to men and women.

P. E. S 122. Individual Sports (2). Daily, 10:20; and M., T., W., Th., 11:20; Field House. (Benton.)

Theory and practice in the techniques and teaching of badminton, golf, and tennis. Open to women only.

P. E. S 144. Health Education for Elementary Schools (2). 9:20; E-213. (Zenn.)

Materials and methods in health education for the classroom teacher.

P. E. S 162. Recreational Games for the Elementary School (2). 10:20; E-116; Field House. (Zenn.)

Materials and methods. Theory and practice in teaching games.

Men

P. E. 41 S. Football (2). 10:20; Coliseum. (Woods.)

A study of coaching methods; fundamental skills, organization; officiating; schedule making and training in football.

P. E. 45 S. Track (2). 1:20; Coliseum. (Kehoe.)

Fundamental skills of the various track events, including officiating and training.

P. E. 47 S. Basketball (2). 9:20; Coliseum. (Shipley.)

Study and practice of the fundamental skills; officiating and methods of coaching basketball.

P. E. 51 S. Minor Sports Skills (2). 2:20; Coliseum. (Staff.)

Fundamental skills, rules, and strategies of volleyball, soccer, softball, and recreational sports.

P. E. S 149. Gymnasium Technique (1). M., W., F., 11:20; Coliseum. (Staff.)

A study and practice of the different methods of handling large and small groups in gymnasium classes, particularly related to the junior and senior high schools.

ENGLISH

Eng. 1, 2. Composition and American Literature (3, 3).

Eng. 1. Eight periods a week; daily, 10:20; M., W., F., 11:20; A-16. (Staff.)

Eng. 2. Eight periods a week; daily, 10:20; M., W., F., 11:20; A-14. (Staff.)

Required of all students. Prerequisite, three units of high school English.

Eng. 5, 6. Composition and English Literature (3, 3).
(3, 3).

Eng. 5. Eight periods a week; daily, 9:20; M., W., F., 8:20; A-210. (Staff.)

Eng. 6. Eight periods a week; daily, 9:20; M., W., F., 8:20; A-130. (Staff.)

Eng. 5 and 6 (or 3 and 4) required of all students. Prerequisites, Eng. 1, 2.

Eng. 8 S. College Grammar (2). 11:20; A-130. Prerequisite, Eng. 1, 2. (Ward.)

An analytical study of Modern English grammar, with lectures on the origin and history of inflectional and derivational forms.

Eng. 52. Children's Literature (2). 8:20; A-106. Prerequisite, Eng. 1, 2. (Bryan.)

A study of the literary values in prose and verse for children.

Eng. 104 S. Chaucer (2). 11:20; A-110. Prerequisites, Eng. 1, 2, and 3, 4 or 5, 6. (Cooley.)

A literary and language study of the *Canterbury Tales*, *Troilus and Criseyde*, and the principal minor poems.

Eng. S 114. Shakespeare (2). 9:20; A-106. Prerequisites, Eng. 1, 2, and 3, 4 or 5, 6. (Zeeveld.)

Important plays.

Eng. 129 S. Literature of the Romantic Period (2). 9:20; A-110. Prerequisites, Eng. 1, 2, and 3, 4 or 5, 6. (Ward.)

Eng. 134 S. Literature of the Victorian Period (2). 10:20; A-110. Prerequisites, Eng. 1, 2, and 3, 4 or 5, 6. (Cooley.)

Eng. 140 S. The English Novel (2). 10:20; A-130. Prerequisites, Eng. 1, 2, and 3, 4 or 5, 6. (Mooney.)

Eng. 150 S. American Literature to 1900 (2). 8:20; A-110. Prerequisites, Eng. 1, 2, and 3, 4 or 5, 6. (Adams.)

Eng. 206 S. Seminar in Renaissance Literature (2). Arranged. (Zeeveld.)

Eng. 214 S. Seminar in Nineteenth-Century Literature (2). Arranged. (Mooney.)

ENTOMOLOGY

Ent. 1. Introductory Entomology (3). Lecture 9:20; laboratory 1:20 to 4:20, M., W., F.; DW-106. (Haviland.)

The position of insects in the animal kingdom, their gross structure, classification into orders and principal families and the general economic status of insects. A collection of common insects is required. Fee, \$3.00.

Ent. 115 S. Field Problems in Entomology (1). First three weeks. 10:20; M-107. (Cory and Staff.)

This course is designed especially for teachers of vocational agriculture county agents, and other field workers. It deals with the latest developments in insect control including predators and parasites.

Ent. 114 S. Bee Keeping (1). Not offered in 1946.

Ent. 201. Advanced Entomology. (Credit and prerequisites to be determined by the department.) To be arranged. (Cory and Staff.)

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. (Credit depends upon the amount of work done.) To be arranged. (Cory and Staff.)

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 a part of the requirements for an advanced degree.

FOREIGN LANGUAGES AND LITERATURES

A. Elementary

Fr. 1. Elementary French (3). Eight periods a week; daily, 8:20; M., W., F., 10:20; A-209.

Elements of grammar; pronunciation and conversation; exercises in composition and translation. First semester of first-year French.

Fr. 2. Elementary French (3). Eight periods a week; daily, 9:20; M., W., F., 11:20; A-209.

A continuation of work accomplished in Fr. 1. Second semester of first-year French.

Fr. 4. Intermediate Literary French (3). Eight periods a week; daily, 8:20; M., W., F., 10:20; A-17. Prerequisite, Fr. 1, 2, or equivalent.

Translation; conversation; exercises in pronunciation. Reading of texts designed to give some knowledge of French life, thought, and culture. First semester of second-year French for students interested in literature or in fields related to literature.

Fr. 5. Intermediate Literary French (3). Eight periods a week; daily, 9:20; M., W., F., 11:20; A-17.

A continuation of work accomplished in French 4. Second semester of second-year French.

Ger. 1. Elementary German (3). Eight periods a week; daily, 8:20; M., W., F., 10:20; A-204.

Elements of grammar; pronunciation and conversation; exercises in composition and translation. First semester of first-year German.

Ger. 2. Elementary German (3). Eight periods a week; daily, 9:20; M., W., F., 11:20; A-204.

A continuation of work accomplished in Ger. 1. Second semester of first-year German.

Ger. 4. Intermediate Literary German (3). Eight periods a week, daily, 8:20; M., W., F., 10:20; A-203. Prerequisite, Ger. 1, 2, or equivalent.

Reading of narrative prose, grammar review, and oral and written practice. First semester of second-year German.

Ger. 5. Intermediate Literary German (3). Eight periods a week; daily, 9:20; M., W., F., 11:20; A-203.

A continuation of work accomplished in Ger. 4. Second semester of second-year German.

Span. 1. Elementary Spanish (3). Eight periods a week; daily, 8:20; M., W., F., 10:20; A-228.

Elements of grammar; pronunciation and conversation; exercises in composition and translation. First semester of first-year Spanish.

Span. 2. Elementary Spanish (3). Eight periods a week; daily, 9:20; M., W., F., 11:20; A-228.

A continuation of work accomplished in Span. 1. Second semester of first-year Spanish.

Span. 4. Intermediate Spanish (3). Eight periods a week; daily, 8:20; M., W., F., 10:20; A-212. Prerequisite, Span. 1, 2, or equivalent.

Translation; conversation; exercises in pronunciation. Reading of texts designed to give some knowledge of Spanish and Latin-American life, thought, and culture. First semester of second-year Spanish.

Span. 5. Intermediate Spanish (3). Eight periods a week; daily, 9:20; M., W., F., 11:20; A-212.

A continuation of work accomplished in Span. 4. Second semester of second-year Spanish.

B. Advanced

The Foreign Language Department will offer also one advanced course each in French, German, and Spanish—whichever will be selected by the largest number of students from the following choices. Each class will meet daily at 10:20 and will carry two semester hours of credit.

Fr. 107. French Literature of the Eighteenth Century. T-219.

Fr. 123. Advanced Composition. T-219.

- Fr. 163. French Life and Culture. T-219.
- Ger. 107. German Literature of the Eighteenth Century. E-110.
- Ger. 110. German Literature of the Nineteenth Century. E-110.
- Ger. 113. Contemporary German Literature. E-110.
- Span. 111. The Novel in the Nineteenth Century. A-302.
- Span. 151. Latin-American Literature. A-302.
- Span. 165. Advanced Composition. A-302.

C. Comparative Literature.

Comp. Lit. 107. The Faust Legend in English and German Literature (2). 9:20; A-231.

A study of the Faust Legend of the Middle Ages and its later treatment by Marlow in *Dr. Faustus* and by Goethe in *Faust*.

HISTORY

H. 2 S. History of Modern Europe, 1789-1870 (2). 8:20; A-16. (Silver.)

A general course covering the French Revolution, the rise of Napoleon, and the impact of the democratic ideas of the Revolution upon Europe.

H. 102 S. The American Revolution (2). 9:20; A-1. Prerequisites, H. 5, 6 or equivalent. (Chatelain.)

The background and course of the American Revolution through the formation of the Constitution.

H. 107 S. Social and Economic History of the United States, 1860-1890 (2). 10:20; A-1. Prerequisites, H. 5, 6 or equivalent. (Chatelain.)

The development of American life and institutions, with emphasis upon the period since 1876.

H. 129 S. The United States and World Affairs (2). 11:20; A-12. Prerequisites, H. 5, 6 or equivalent. (Gewehr.)

A consideration of the changed position of the United States with reference to the rest of the world since 1917.

H. 165 S. Revolutionary and Napoleonic Europe (2). 9:20; A-21. Prerequisites, H. 1, 2 or equivalent. (Silver.)

A survey of the developments in France during the Revolutionary period and the relations of France with the rest of Europe.

H. 195 S. The Far East (2). 10:20; A-210. (Gewehr.)

A survey of institutional, cultural, and political aspects of the history of China and Japan, and consideration of present-day problems of the Pacific area.

H. 201. Seminar in American History (2). Arranged. (Gewehr.)

H. 250. Seminar in European History (2). Arranged. (Silver.)

H. 287. Historians and Historical Criticism (2). Arranged. (Chatelain.)

HOME ECONOMICS

Clo. 22. Clothing Construction (2). 8:20-10:10; H-132. Laboratory fee, \$3.00. (Akin.)

For students who desire additional experience in garment construction.

Clo. 123. Children's Clothing (2). 10:20-12:10; H-132. Laboratory fee, \$3.00. (McFarland.)

For elementary, nursery school, and home economics teachers; and for parents. Selection of children's clothing for suitable design, fabric, and construction in order to promote the good health and personal development of the child. Consideration also is given to ease of care, the durability and economy of clothing for children.

Clo. 124. Projects and Readings in Textiles and Clothing (2). 11:20; H-132. Laboratory fee, \$3.00. (Akin.)

Students will have an opportunity to select and develop projects suited to their needs; to organize and present a clothing demonstration; to survey and discuss current textile and clothing literature.

Tex. 106. Recent Development in Textiles (2). 1:20; H-9. Laboratory fee, \$3.00. (Akin.)

Review of basic textile materials; identification and use of the new fibers and fabrics; a forecast for fabrics.

Pr. Art 1 S. Design (2). 11:20; H-105. Laboratory fee, \$2.00.

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. For beginners in art and teachers of beginners.

Cr. 2. Simple Crafts (2). 1:20-3:10; H-9. Laboratory fee, \$2.00.

Creative art expressed in clay, plaster of Paris, wood, thin metal, papier maché, and paint and dye with silk screen process. Emphasis is laid upon inexpensive materials and tools and simple techniques, which can be pursued in the home. Excellent for teachers and directors of recreation centers.

Inst. Mgt. 165 S. The School Lunch (2). 11:20; H-222, 223. Laboratory fee, \$3.50. (Crow.) Prerequisite, consent of the instructor.

The educational and nutritional aspect of the school lunch; its administration, equipment, financing and accounting as well as the planning, preparing, and serving of school lunch menus. Of special interest at this time due to the National School Lunch Program.

Home Mgt. 155 S. Housing (2). 8:20; H-5 or H-19. (H. E. staff and specialists in housing from the government, from business and industry.)

The social aspects of housing; our national housing program; housing legislation; the house of the present and of the future; trips to nearby housing projects. It may be possible to develop a housing work shop during the summer session. If so, information will be available by May 1.

Foods 105. Foods of Other Countries (2). 8:20-10:10; H-222, 223. Prerequisite, consent of the instructor. Laboratory fee, \$6.00. (Taylor and representatives of countries to be studied.)

This is a new course planned to give a better understanding of the food customs and food preparation by the people of other countries.

Nut. 111. Child Nutrition (2). 1:20-3:10; H-5. Prerequisites, Nut. 10 or 110; Foods 1 or 3. Laboratory fee, \$4.00. (Taylor.)

Principles of human nutrition applied to the growth and development of children. Observation and experience in nearby child care centers, health clinics, adult groups, and social agencies.

or

Nut. 114. Refresher Course in Nutrition (2). 1:20; H-5. (Taylor.)

This course is offered primarily for those who have had basic work in nutrition and wish to bring their knowledge up to date.

Nut. 212 S. Nutrition for Community Service (2). 10:20; H-222. (Lapp.)

Applications of the principles of nutrition to various community problems. Students may work on problems of their own choosing.

Foods and Nut. 220. Seminar (1). Arranged (3 periods a week); H-225. (Lapp.)

Foods and Nut. 221. Research. Arranged; H-225. (Lapp.)

Investigation in some phase of foods or nutrition which may form the basis of a thesis.

HORTICULTURE

Hort. 115 S. Truck Crop Management (1). First three weeks. To be arranged.

Primarily designed for vocational agricultural teachers and county agents. Special emphasis will be placed upon new and improved commercial methods of production of the leading truck crops. Current problems and their solution will receive special attention.

Hort. 123 S. Ornamental Horticulture (1). Not given in 1946.

Hort. 124 S. Tree and Small Fruit Management (1). First three weeks. To be arranged. (Haut and Schrader.)

Primarily designed for vocational agricultural teachers and county agents. Special emphasis will be placed upon new and improved commercial methods of production of the leading tree and small fruit crops. Current problems and their solution will receive special attention.

LIBRARY SCIENCE

L. S. 101. School Library Administration (2). 11:20; L-109. (Hobson.)

The organization and maintenance of effective library service in the modern school. Planning and equipping library quarters, purpose of the library in the school, standards, instruction in the use of books and libraries, training student assistants, acquisition of materials, repair of books, publicity, exhibits, and other practical problems.

MATHEMATICS

Math. 1. Introductory Algebra (0). Eight lectures a week; daily, 8:20; and M., W., F., 9:20; E-304. Prerequisite, one unit of algebra. Open to students of Engineering, and required of students who fail the qualifying examination in Math. 15. (Good.)

A review of the topics covered in a second course in algebra.

Math. 6. Mathematics of Finance (3). Eight periods a week; daily, 1:20; and M., W., F., 2:20; E-116. Prerequisite, Math. 5 or equivalent. Open to students in the College of Business and Public Administration and the College of Agriculture.

Simple and compound interest, discount, amortization, sinking funds, valuation of bonds, depreciation, annuities, and insurance.

Math. 10. Algebra (3). Eight lectures a week; daily, 10:20; and M., W., F., 11:20; E-307. Prerequisite, one unit of algebra. Open to biological, pre-medical, pre-dental, and general arts and sciences students.

Fundamental operations, factoring, fractions, linear equations, exponents and radicals, logarithms, quadratic equations, variation, binomial theorem, theory of equations.

Math. 11. Trigonometry and Analytic Geometry (3). Eight lectures a week; daily, 10:20; and M., W., F., 11:20; E-304. Prerequisite, Math. 10 or equivalent. Open to biological, pre-medical, pre-dental, and general arts and sciences students. This course is not recommended for students planning to enroll in Math. 20. (Vanderslice.)

Trigonometric functions, identities, the radian and mil, graphs, addition formulas, solution of triangles, coordinates, locus problems, the straight line and circle, conic sections, graphs.

Math. 14. Plane Trigonometry (2). 10:20; E-305. Prerequisite, college algebra or concurrent registration in Math. 15. Open to students in engineering, education, and the physical sciences.

Trigonometric functions, identities, the radian and mil, graphs, addition formulas, solution of triangles, Demoivre's theorem.

Math. 15. College Algebra (3). Eight lectures a week; daily, 8:20; and M., W., F., 9:20; E-212. Prerequisite, high school algebra completed. Open to students in engineering, education, and the physical sciences. (Jackson.)

Fundamental operations, variation, functions and graphs, quadratic equations, theory of equations, binomial theorem, complex numbers, logarithms, determinants.

Math. 17. Analytic Geometry (4). Eight lectures and four laboratory periods a week; Monday through Friday, 8:20; Monday through Saturday, 9:20; and Saturday, 10:20; E-306. Prerequisites, Math. 14 and 15 or equivalent. Open to students in engineering, education, and the physical sciences. (Hall.)

Coordinates, locus problems, the straight line and circle, graphs, transformation of coordinates, conic sections, parametric equations, transcendental equations, solid analytical geometry.

Math. 21. Second Semester Calculus (4). Eight lectures and four laboratory periods a week; Monday through Saturday, 8:20 and 9:20; E-307. Prerequisite, Math. 20 or equivalent. (Ringenberg.)

Limits, derivatives, differentials, maxima and minima, curve sketching, rates, curvature, kinematics, integration, geometric and physical applications of integration, partial derivatives, space geometry, multiple integrals, infinite series, differential equations.

Math. 100 S. Higher Algebra (2). 11:20; E-306. Prerequisite, two years of college mathematics. (Good.)

Selected topics in algebra will be taken up from a point of view designed to strengthen and deepen the grasp of the subject.

Math. 128 S. Higher Geometry (2). 10:20; E-306. Prerequisite, two years of college mathematics. (Jackson.)

This course is designed for the teacher of plane geometry in high school. It is the first of a sequence of two courses and will be devoted to the modern geometry of the triangle and circle. The second course, to be offered next summer, will take up the axiomatic development of Euclidean and non-Euclidean geometry.

Math. 139 S. Operational Calculus (2). 9:20; E-116. Prerequisites, calculus and college physics. (Vanderslice.)

Ordinary and partial differential equations arising in problems in engineering and physics, operational solutions, Fourier and Laplace transforms.

MUSIC

Mus. 1 S. Music Appreciation (2). 9:20; B. (Randall.)

This course is designed for the general student. It will acquaint the student with musical terms and expressions and give him a knowledge of the best in music literature from the time of Haydn to the present. The teacher should be helped by this course in the conducting of classroom music.

Mus. 6. Orchestra (1). 1:20; B. (Yeager.)

All students who play musical instruments are cordially invited to participate. If possible, bring your own instrument. An orchestral concert will be given before the close of the Summer Session.

Mus. S 20. Choral Technique (2). 8:20; B. (Randall.)

For those who sing in choirs or other choral groups. Also, for those who may have the responsibility of directing choral groups or community singing. The high school music director should be helped by this course.

Mus. S 21. Elementary School Music Methods (2). 11:20; B. (Yeager.)

This course is designed to provide a preparation for teaching music in the three lower elementary grades. It deals with the principles, procedures, objectives, and materials in elementary school music. Students are requested to bring the books they use in their classrooms.

Mus. S 22. Elementary School Music Methods (2). 10:20; B. (Yeager.)

A continuation of Mus. S 21, designed for the three upper elementary grades. Students should bring the books they use in their classrooms.

PHYSICS

Phys. 11. Fundamentals of Physics: Sound, Optics, Magnetism, and Electricity (4). Four lectures, three and one-half recitations, and two and one-half three-hour laboratory periods weekly. Prerequisites, Phys. 10 or 20. Laboratory fee, \$5.00. (Gautier and Martino.)

The second half of a course in general physics:

Daily—8:20; E-131.

M., W.—10:20; E-131.

F.—10:20, in 1st, 3rd, and 5th weeks; E-131.

M., W.—1:20, 2:20, 3:20; A-300.

F.—1:20, 2:20, 3:20 in 1st, 3rd, and 5th weeks; A-300.

Phys. 21. General Physics: Sound, Optics, Magnetism, and Electricity (5). Five lectures, five recitations, and two and one-half three-hour laboratory periods weekly. Prerequisites, Phys. 20 and Math 21. Laboratory fee, \$5.00. (Morgan and Rosenblatt.)

The second half of a course in general physics. Required of all students in the engineering curricula.

Daily—9:20 and 11:20; E-131.

T., Th.—1:20, 2:20, 3:20; A-300.

F.—1:20, 2:20, 3:20 in 2nd, 4th, and 6th weeks; A-300.

POLITICAL SCIENCE

Pol. Sci. 10. Comparative Government (2). 9:20; A-207. (Steinmeyer.)
A study of the governments of China and Japan.

Pol. Sci. 154. Problems in World Politics (3). Eight periods a week; daily, 10:20; and M., W., F., 11:20; A-207. (Steinmeyer.)

This course is devoted to a study of current international issues. The United Nations Organization, the role of the great powers in post-war organization, etc., will be especially emphasized.

POULTRY

P. H. 111 S. Poultry Breeding and Feeding (1). Not given in 1946.

P. H. 112 S. Poultry Products and Marketing (1). First three weeks. To be arranged. (Quigley and Gwin.)

This course is designed primarily for teachers of vocational agriculture and county agents. It deals with the factors affecting the quality of poultry production and with hatchery management problems, egg and poultry grading, preservation problems, and market outlets for Maryland poultry.

PSYCHOLOGY

Psychological Testing and Counseling 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.

Note on prerequisites in Psychology: Except for Psychology 1—Introductory Psychology, and Psychology 10—Educational Psychology, all courses in psychology have the following prerequisites: (1) an introductory course in psychology, and (2) permission of the instructor.

Psych. 1 S. Introduction to Psychology (2). 9:20; A-14. (Hackman.)

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. 2 S. Applied Psychology I (2). 9:20; A-16. (Sanford).

A general introduction to psychological research in the field of medicine, law, criminology, education, public opinion, and propaganda.

Psych. 3 S. Applied Psychology II (2). 10:20; A-306. (Kelly.)

Application of research to practical psychological problems in business and industry, including industrial selection, methods of production, advertising, selling, and market research.

Psych. 10. Educational Psychology (3). Eight periods a week; daily, 8:20; M, W, F., 9:20; A-18. (Smith.)

Experimental studies of basic psychological problems encountered in education; measurement and significance of individual differences, learning, motivation, and transfer of training.

Psych. 110 S. Advanced Educational Psychology (2). 11:20; A-133. (Smith.)

An advanced course for teachers and prospective teachers. Systematic approach to advanced problems in educational psychology based upon experimental contributions.

Psych: 121 S. Social Psychology (2). 8:20; A-133. (Sanford.)

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. 125 S. Child Psychology (2). 9:20; A-133. (Kelly.)

Analysis of child behavior; motor, intellectual, and emotional development, social behavior, parent-child relationships; and problems of the growing personality.

Psych. 130 S. Mental Hygiene (2). Lecture, M., T., Th., F., 11:20; A-18; clinic, W., 2:20-4:40. (Sprowls.)

The more common deviations of personality; typical methods of adjustment.

Psych. 131 S. Abnormal Psychology (2). Lecture, M., T., Th., F., 10:20; A-18; clinic, W., 2:20-4:40. (Sprowls.)

The nature, occurrence, and causes of psychological abnormality with emphasis on the clinical rather than theoretical aspects.

Psych. 150 S. Psychological Tests and Measurements (2). 10:20; A-133. Laboratory fee, \$4.00. (Hackman.)

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. 216 S. Seminar in Clinical Psychology for Teachers (2). Arranged. (Sprowls.)

A systematic consideration of clinical procedure in treating pupil and student problems.

Psych. 250. Participation in Testing Clinic (2-4). Arranged. (Smith.)

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 and counseling bureau.

Psych. 299. Research in Psychotechnology (3-6). Arranged. (Credit apportioned to work accomplished.) (Staff.)

SOCIOLOGY

Soc. 1 S. Sociology of American Life (2). 11:20; A-210. (Ebersole.)

An analysis of contemporary American society. Institutions, groups, social processes and personality structures will be discussed within the framework of the American rural community, the American small town and the American metropolitan area.

Soc. 2 S. Principles of Sociology (2). 10:20; A-231. (Gregory.)

An analysis of society in terms of the basic concepts and principles of sociology; social interaction; social organization; culture and social change.

Soc. 5 S. Introduction to Anthropology (2). 10:20; A-243. (Hutchinson.)

The emergence of man and the development of culture with emphasis upon the rise of such culture patterns as language, the family, religion, the state, music, and art.

Soc. 72 S. Criminology (2). 9:20; W-106. (Lejins.)

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. Punishment, correction and protection. Prevention of crime.

Soc. 81 S. Introduction to Social Work (2). 8:20; A-207. (Hutchinson.)

A general introduction to social work and the administration of public and private agencies.

Soc. 103 S. Rural Sociology (2). 8:20; A-12. (Ebersole.)

The structure and functions of rural communities, composition and characteristics of the rural population; rural planning.

Soc. 104 S. Urban Sociology (2). 9:20; A-306. (Ebersole.)

The origin and growth of cities; composition and characteristics of city population; the social ecology of the city; the planning and control of urban development.

Soc. 107 S. Ethnic Minority Groups (2). 11:20; A-231. (Lejins.)

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 lights of past experiences and desiderata for the future.

Soc. 123 S. Public Welfare Services (2). 1:20; A-231. (Hutchinson.)

A comprehensive study of the social services maintained by federal, state, and local governments in the United States.

Soc. 223 S. Juvenile Delinquency. Arranged. (Lejins.)

Theories of juvenile delinquency. Methods of treatment of juvenile delinquency with particular reference to the United States. An intensive study will be undertaken of one or more selected problems in the field.

ZOOLOGY

Zool. 1. General Zoology (4). Five lectures and five two-hour laboratory periods a week. Lecture, 8:20; M-107; laboratory, 10:20-12:10; M-202. Laboratory fee, \$6.00. (Burhoe.)

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.

Zool. 5. Comparative Vertebrate Morphology (4). Five lectures and five three-hour laboratory periods a week. Lecture, 8:20; M-302; laboratory, 1:20-4:10; M-302. Prerequisite, one course in zoology. Laboratory fee, \$6.00. (Littleford.)

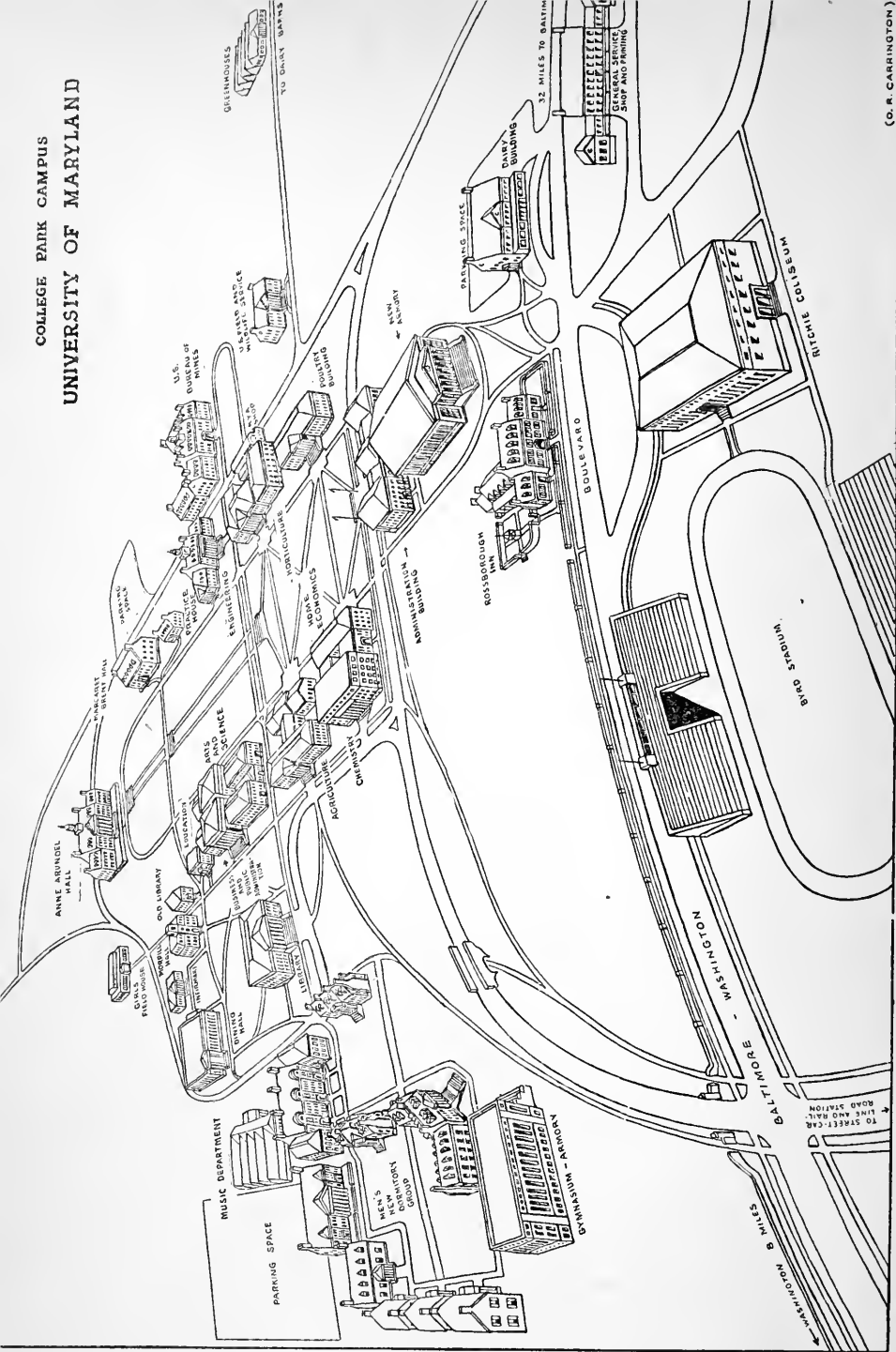
A comparative study of selected organ systems in certain vertebrate groups.

Zool. 16 S. Human Physiology (3). Five lectures and three demonstration periods a week. Lecture, 9:20; M-107; demonstration, 1:20, M., W., F.; M-105. (Phillips.)

Zool. 101. Mammalian Anatomy (3). Permission of the instructor must be obtained before registration. Time of meeting to be arranged; M-105. Laboratory fee, \$6.00. (Tressler.)

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.

COLLEGE PARK CAMPUS
UNIVERSITY OF MARYLAND



(G. A. CARRINGTON)

Building Identification

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|-----------------------|----------------|--------------------|
| DW—Dean of Women's | D—Dairy | G—Gymnasium-Armory |
| W—Women's Field House | E—Engineering | H—Home Economics |
| Z—Sylvester Hall | F—Horticulture | K—Chemistry |
| A—Arts and Sciences | Building | L—Library |
| B—Music | P—Poultry | M—Morrill Hall |
| C—Calvert Hall | T—Agriculture | N—Education |





