

Catalog of

Summer School

1961

UNIVERSITY OF MARYLAND
BULLETIN

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SUMMER SCHOOL

1961



UNIVERSITY OF MARYLAND


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CONTENTS

GENERAL

University Calendar	v	General Information	
Summer School Registration		Registration	5
Schedule and Calendar	vii	Registration for all colleges	
Board of Regents	viii	except Education	5
Officers of Administration	ix	Registration: College of Edu-	
Chairmen, Standing Committees,		cation only	6
Faculty Senate	xii	Length of Class Period	6
The School	1	Definition of Residence and	
Academic Information	1	Non-Residence	6
Terms of Admission	1	Tuition and Fees	7
Undergraduate and Special		Withdrawal and Refund of	
Students	1	Fees	8
Graduate Students	2	Living Accommodations and	
Academic Credit	2	Meals	8
Marking System	3	Student Health	9
Normal and Maximum Loads	3	Parking of Automobiles	10
Summer Graduate Work	3	Library Facilities	10
Candidates for Degrees	4	University Bookstore	10
Program in American		Nursery School	10
Civilization	4	For Additional Information	11

CONFERENCES, INSTITUTES

WORKSHOPS, SPECIAL COURSES AND LECTURES

University-wide Lecture Series	12	National Science Foundation Summer Institute for High School Teachers of Science	19
Television Workshop	12	Institute for Teachers of Mathematics in Junior High School	20
Typewriting Demonstration for Business Education Teachers	12	Workshops on Teaching Elementary School Science	21
Business Educator's Conference on Office Practices and Machines	12	Summer Institute in Counseling and Guidance Training	21
Workshops in Music	13	Counselor Education II	21
Workshops in Special Education	14	Workshop on Use of Community Resources	22
Workshops in Human Development	15	Workshop on Human Relations in Educational Administration	22
Education in Family Finance Workshop	17		
Workshop on Teaching Conservation of Natural Resources	18		
Institute of Acarology	18		

(Continued on next page)

CONTENTS

COURSE OFFERINGS

Workshop on the Public Transportation of School Children . . .	23	Foreign Languages	47
Agricultural Economics	24	Geography	48
Agricultural Engineering	24	Government and Politics	49
Agricultural and Extension Education	24	History	50
Agronomy	25	Home Economics	51
Animal Husbandry	25	Horticulture	52
Art	26	Journalism and Public Relations . .	52
Botany	26	Library Science	53
Business Organization and Administration	27	Mathematics	53
Chemistry	28	Microbiology	55
Classical Languages and Literatures	29	Music	55
Dairy	29	Philosophy	57
Economics	29	Physical Education, Recreation and Health	57
Education	30	Physics	59
Engineering	45	Poultry	61
English	45	Psychology	61
Entomology	46	Sociology	62
		Speech	63
		Zoology	64

The Faculty	66
-----------------------	----

UNIVERSITY CALENDAR

FALL SEMESTER 1960

JANUARY 1961

- 3 Tuesday—Christmas Recess Ends 8 a.m.
- 20 Friday—Inauguration Day, Holiday
- 25 Wednesday—Pre-Examination Study Day
- Jan. 26 } Thursday to Wednesday, inclusive—Fall Semester Examinations
- Feb. 1 }

SPRING SEMESTER 1961

FEBRUARY

- 6-10 Monday to Friday—Spring Semester Registration
- 13 Monday—Instruction Begins
- 22 Wednesday—Washington's Birthday, Holiday

MARCH

- 25 Saturday—Maryland Day
- 30 Thursday—Easter Recess Begins After Last Class

APRIL

- 4 Tuesday—Easter Recess Ends 8 a.m.

MAY

- 17 Wednesday—AFROTC Day
- 30 Tuesday—Memorial Day, Holiday

JUNE

- 2 Friday—Pre-Examination Study Day
- 4 Sunday—Baccalaureate Exercises
- 3-9 Saturday to Friday, inclusive—Spring Semester Examinations
- 10 Saturday—Commencement Exercises

SUMMER SESSION 1961

JUNE 1961

- 26 Monday—Summer Session Registration
- 27 Tuesday—Summer Session Begins

JULY

- 4 Tuesday—Independence Day, Holiday
- 8 Saturday—Classes as usual

AUGUST

- 4 Friday—Summer Session Ends

SHORT COURSES 1961

JUNE 1961

- 19-24 Monday to Saturday—Rural Women's Short Course

AUGUST

- 7-12 Monday to Saturday—4-H Club Week

SEPTEMBER

- 5-8 Tuesday to Friday—Firemen's Short Course

UNIVERSITY CALENDAR

FALL SEMESTER 1961

SEPTEMBER

- 18-22 Monday to Friday—Fall Semester Registration
- 25 Monday—Instruction Begins

NOVEMBER

- 22 Wednesday—Thanksgiving Recess Begins After Last Class
- 27 Monday—Thanksgiving Recess Ends 8 a.m.

DECEMBER

- 20 Wednesday—Christmas Recess Begins After Last Class

JANUARY 1962

- 3 Wednesday—Christmas Recess Ends 8 a.m.
- 24 Wednesday—Pre-Examination Study Day
- 25-31 Thursday to Wednesday, inclusive—Fall Semester Examinations

SPRING SEMESTER 1962

FEBRUARY

- 5-9 Monday to Friday—Spring Semester Registration
- 12 Monday—Instruction Begins
- 22 Thursday—Washington's Birthday, Holiday

MARCH

- 25 Sunday—Maryland Day

APRIL

- 19 Thursday—Easter Recess Begins After Last Class
- 24 Tuesday—Easter Recess Ends 8 a.m.

MAY

- 16 Wednesday—AFROTC Day
- 30 Wednesday—Memorial Day, Holiday

JUNE

- 1 Friday—Pre-Examination Study Day
- 2-8 Saturday to Friday, inclusive—Spring Semester Examinations
- 3 Sunday—Baccalaureate Exercises
- 9 Saturday—Commencement Exercises

SUMMER SESSION 1962

JUNE 1962

- 25 Monday—Summer Session Registration
- 26 Tuesday—Summer Session Begins
- 30 Saturday—Classes as Usual

JULY

- 4 Wednesday—Independence Day, Holiday

AUGUST

- 3 Friday—Summer Session Ends

SHORT COURSES 1962

JUNE 1962

- 18-23 Monday to Saturday—Rural Women's Short Course

AUGUST

- 6-11 Monday to Saturday—4-H Club Week

SEPTEMBER

- 4-7 Tuesday to Friday—Firemen's Short Course

SUMMER SCHOOL REGISTRATION SCHEDULE

MONDAY, JUNE 26, 1961*

8:00 A.M. — 3:00 P.M.

To expedite registration, students have been grouped on the basis of the first letter of the last name. *No student will be permitted into the Armory until the appropriate time as listed below:*

TIME	STUDENTS	TIME	STUDENTS
8:00	K—M	12:00	T—Z
9:00	N—R	1:00	A—B
10:00	S	2:00	C—F
		3:00	G—J

SUMMER SCHOOL CALENDAR

June 27	Tuesday	Classes begin
July 4	Tuesday	Holiday (no classes)
July 8	Saturday	Classes as usual, Monday Schedule
Aug. 4	Friday	Close of Summer Session

*Dormitories will be open for occupancy on and after 2:00 P. M., Sunday, June 25, 1961.

BOARD OF REGENTS
and
MARYLAND STATE BOARD OF AGRICULTURE

	<i>Term Expires</i>
CHARLES P. McCORMICK <i>Chairman</i>	1966
McCormick and Company, 414 Light Street, Baltimore 2	
EDWARD F. HOLTER <i>Vice-Chairman</i>	1968
The National Grange, 744 Jackson Place, N.W., Washington 6	
B. HERBERT BROWN <i>Secretary</i>	1967
The Baltimore Institute, 10 West Chase Street, Baltimore	
HARRY H. NUTTLE <i>Treasurer</i>	1966
Denton	
LOUIS L. KAPLAN <i>Assistant Secretary</i>	1961
5800 Park Heights Avenue, Baltimore 15	
C. E. TUTTLE <i>Assistant Treasurer</i>	1962
907 Latrobe Building, Charles and Read Streets, Baltimore 2	
RICHARD W. CASE	1967
Commercial Credit Building, Baltimore	
THOMAS W. PANGBORN	1965
The Pangborn Corporation, Pangborn Blvd., Hagerstown	
THOMAS B. SYMONS	1963
Suburban Trust Company, 6950 Carroll Avenue, Takoma Park	
WILLIAM C. WALSH	1968
Liberty Trust Building, Cumberland	
MRS. JOHN L. WHITEHURST	1967
4101 Greenway, Baltimore 18	

Members of the Board are appointed by the Governor of the State for terms of seven years each, beginning the first Monday in June. Members may serve only two consecutive terms.

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.

OFFICERS OF ADMINISTRATION

Principal Administrative Officers

WILSON H. ELKINS, *President*

B.A., University of Texas, 1932; M.A., 1932; B.LITT., Oxford University, 1936;
D.PHIL., 1936.

ALBIN O. KUHN, *Executive Vice President*

B.S., University of Maryland, 1938; M.S., 1939; PH.D., 1948.

ALVIN E. CORMENY, *Assistant to the President, in Charge of Endowment and Development*

B.A., Illinois College, 1933; LL.B., Cornell University, 1936.

R. LEE HORNBAKE, *Vice President for Academic Affairs*

B.S., California State College, Pa., 1934; M.A., Ohio State University, 1936; PH.D., 1942.

FRANK L. BENTZ, JR., *Assistant, President's Office*

B.S., University of Maryland, 1942; PH.D., 1952.

Emeriti

HARRY C. BYRD, *President Emeritus*

B.S., University of Maryland, 1908; LL.D., Washington College, 1936; LL.D.,
Dickinson College, 1938; D.SC., Western Maryland College, 1938.

ADELE H. STAMP, *Dean of Women, Emerita*

B.A., Tulane University, 1921; M.A., University of Maryland, 1924.

Administrative Officers of the Schools and Colleges

MYRON S. AISENBERG, *Dean of the School of Dentistry*

D.D.S., University of Maryland, 1922.

VERNON E. ANDERSON, *Dean of the College of Education*

B.S., University of Minnesota, 1930; M.A., 1936; PH.D., University of Colorado,
1942.

RONALD BAMFORD, *Dean of the Graduate School*

B.S., University of Connecticut, 1924; M.S., University of Vermont, 1926; PH.D.,
Columbia University, 1931.

GORDON M. CAIRNS, *Dean of Agriculture*

B.S., Cornell University, 1936; M.S., 1938; PH.D., 1940.

RAY W. EHRENSBERGER, *Dean of University College*

B.A., Wabash College, 1929; M.A., Butler University, 1930; PH.D., Syracuse Uni-
versity, 1937.

NOEL E. FOSS, *Dean of the School of Pharmacy*

PH.C., South Dakota State College, 1929; B.S., 1929; M.S., University of Maryland,
1932; PH.D., 1933.

LESTER M. FRALEY, *Dean of the College of Physical Education, Recreation, and Health*

B.A., Randolph-Macon College, 1928; M.A., 1937; PH.D., Peabody College, 1939.

FLORENCE M. GIPE, *Dean of the School of Nursing*

B.S., Catholic University of America, 1937; M.S., University of Pennsylvania, 1940; ED.D., University of Maryland, 1952.

LADISLAUS F. GRAPSKI, *Director of the University Hospital*

R.N., Mills School of Nursing, Bellevue Hospital, New York, 1938; B.S., University of Denver, 1942; M.B.A., in Hospital Administration, University of Chicago, 1943.

IRVIN C. HAUT, *Director, Agricultural Experiment Station and Head, Department of Horticulture*

B.S., University of Idaho, 1928; M.S., State College of Washington, 1930; PH.D., University of Maryland, 1933.

ROGER HOWELL, *Dean of the School of Law*

B.A., Johns Hopkins University, 1914; PH.D., 1917; LL.B., University of Maryland, 1917.

VERL S. LEWIS, *Dean of the School of Social Work*

A.B., Huron College, 1933; M.A., University of Chicago, 1939; D.S.W., Western Reserve University, 1954.

SELMA F. LIPPEATT, *Dean of the College of Home Economics*

B.S., Arkansas State Teachers College, 1938; M.S., University of Tennessee, 1945; PH.D., Pennsylvania State University, 1953.

FREDERIC T. MAVIS, *Dean of the College of Engineering*

B.S., University of Illinois, 1922; M.S., 1926; C.E., 1932; PH.D., 1935.

PAUL E. NYSTROM, *Director, Agricultural Extension Service*

B.S., University of California, 1928; M.S., University of Maryland, 1931; M.P.A., Harvard University, 1948; D.P.A., 1951.

J. FREEMAN PYLE, *Dean of the College of Business and Public Administration*

PH.B., University of Chicago, 1917; M.A., 1918; PH.D., 1925.

LEON P. SMITH, *Dean of the College of Arts and Sciences*

B.A., Emory University, 1919; M.A., University of Chicago, 1928; PH.D., 1930; Diplome le l'Institut de Touraine, 1932.

WILLIAM S. STONE, *Dean of the School of Medicine and Director of Medical Education and Research*

B.S., University of Idaho, 1924; M.S., 1925; M.D., University of Louisville, 1929; PH.D., (HON.), University of Louisville, 1946.

General Administrative Officers

G. WATSON ALGIRE, *Director of Admissions and Registrations*

B.A., University of Maryland, 1930; M.S., 1931.

THEODORE R. AYLESWORTH, *Professor of Air Science and Head, Department of Air Science*

B.S., Mansfield State Teachers College, 1936; M.S., University of Pennsylvania, 1949.

B. JAMES BORRESON, *Executive Dean for Student Life*

B.A., University of Minnesota, 1944.

- DAVID L. BRIGHAM, *Director of Alumni Relations*
B.A., University of Maryland, 1938.
- C. WILBUR CISSEL, *Director of Finance and Business*
B.A., University of Maryland, 1932; M.A., 1934; C.P.A., 1939.
- HELEN E. CLARKE, *Dean of Women*
B.S., University of Michigan, 1943; M.A., University of Illinois, 1951; ED.D., Teachers College, Columbia University, 1960.
- WILLIAM W. COBEY, *Director of Athletics*
A.B., University of Maryland, 1930.
- LESTER M. DYKE, *Director of Student Health Service*
B.S., University of Iowa, 1936; M.D., University of Iowa, 1926.
- GEARY F. EPPLEY, *Dean of Men*
B.S., Maryland State College, 1920; M.S., University of Maryland, 1926.
- HARRY D. FISHER, *Comptroller and Budget Officer*
B.S., University of Maryland, 1943.
- GEORGE W. FOGG, *Director of Personnel*
B.A., University of Maryland, 1926; M.A., 1928.
- ROBERT J. MC CARTNEY, *Director of University Relations*
B.A., University of Massachusetts, 1941.
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B.S., University of Maryland, 1927; B.E., 1931.
- HOWARD ROVELSTAD, *Director of Libraries*
B.A., University of Illinois, 1936; M.A., 1937; B.S.L.S., Columbia University, 1940.
- ORVAL L. ULRY, *Director of the Summer School*
B.S., Ohio State University, 1938; M.A., 1944; PH.D., 1953.
- GEORGE O. WEBER, *Director and Supervising Engineer, Department of Physical Plant*
B.S., University of Maryland, 1933.

Division Chairmen

- JOHN E. FABER, JR., *Chairman of the Division of Biological Sciences*
B.S., University of Maryland, 1926; M.S., 1927; PH.D., 1937.
- HAROLD C. HOFFSOMMER, *Chairman of the Division of Social Sciences*
B.S., Northwestern University, 1921; M.A., 1923; PH.D., Cornell University, 1929.
- CHARLES E. WHITE, *Chairman of the Lower Division*
B.S., University of Maryland, 1923; M.S., 1924; PH.D., 1926.
- ADOLF E. ZUCKER, *Chairman of the Division of Humanities*
B.A., University of Illinois, 1912; M.A., 1913; PH.D., University of Pennsylvania, 1917.

CHAIRMEN, STANDING COMMITTEES, FACULTY SENATE

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Dr. Peter P. Lejins (Arts and Sciences), *Chairman*

GENERAL COMMITTEE ON STUDENT LIFE AND WELFARE

Dr. L. Morris McClure (Education), *Chairman*

COMMITTEE ON ADMISSIONS AND SCHOLASTIC STANDING

Dr. Kenneth O. Hovet (Education), *Chairman*

COMMITTEE ON INSTRUCTIONAL PROCEDURES

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COMMITTEE ON FACULTY RESEARCH

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COMMITTEE ON PUBLIC FUNCTIONS AND COMMENCEMENTS

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COMMITTEE ON LIBRARIES

Dr. William J. Svirbely (Arts and Sciences), *Chairman*

COMMITTEE ON UNIVERSITY PUBLICATIONS

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COMMITTEE ON INTERCOLLEGIATE COMPETITION

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COMMITTEE ON PROFESSIONAL ETHICS, ACADEMIC FREEDOM, AND TENURE

Dr. Peter P. Lejins (Arts and Sciences), *Chairman*

COMMITTEE ON APPOINTMENTS, PROMOTIONS, AND SALARIES

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COMMITTEE ON FACULTY LIFE AND WELFARE

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COMMITTEE ON MEMBERSHIP AND REPRESENTATION

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COMMITTEE ON COUNSELING OF STUDENTS

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COMMITTEE ON THE FUTURE OF THE UNIVERSITY

Dr. Augustus J. Prah (Graduate School), *Chairman*

Adjunct Committees of the General Committee on Student Life and Welfare

STUDENT ACTIVITIES

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FINANCIAL AIDS AND SELF-HELP

Dr. Paul E. Nystrom (Agriculture), *Chairman*

STUDENT PUBLICATIONS AND COMMUNICATIONS

Prof. Warren Strausbaugh (Arts and Sciences), *Chairman*

RELIGIOUS LIFE

Dr. Redfield Allen (Engineering), *Chairman*

STUDENT HEALTH AND SAFETY

Dr. M. H. Eyler (Physical Education), *Chairman*

STUDENT DISCIPLINE

Dr. A. J. Fisher (Business and Public Administration), *Chairman*

BALTIMORE CAMPUS, STUDENT AFFAIRS

Dr. Vernon E. Krahl (Medicine), *Chairman*

SUMMER SCHOOL

TO SERVE BETTER THOSE WHO DESIRE SUMMER STUDY, THE UNIVERSITY OF Maryland Summer Session affords opportunities to two major groups: to the professional men and women for additional work in their chosen fields; and, to college students for meeting requirements toward graduation. This summer of 1961, special emphasis has been placed upon broadening, the variety and the extent of offerings at both the graduate and the undergraduate levels throughout the various colleges and departments on the campus. Summer offerings include institutes, workshops, conferences, short courses, and a lecture series in addition to a large number and variety of regularly scheduled offerings. These offerings are conducted on the same high plane that prevails during the regular academic year.

Recreational, Social and Cultural Activities

A Recreation and Social Activities Committee, working with a full-time Director of Recreation, has planned a varied program of activities to suit Summer Session students of all ages. University swimming pools will be open scheduled hours each afternoon and evening. Softball, tennis and golf tournaments will interest some; others may care to participate in the summer theatre workshop or summer chorus.

Planned activities will include round and square dancing, outdoor movies, Chapel vesper services, band concerts, watermelon feasts, guided tours of Washington, and other social functions. The Summer Session Recreation Director will be available to counsel with groups planning picnics or other events.

Academic Information

TERMS OF ADMISSION

All summer school students must be officially admitted to the University. *This applies to all non-degree as well as degree candidates.*

UNDERGRADUATE AND SPECIAL STUDENTS

A student seeking a bachelor's degree in any undergraduate college, who has not been previously admitted to the University, must file application with the Director of Admissions not later than the end of the first week in June, 1961. Graduates of accredited two and three year normal schools, with satisfactory normal school records, may be admitted to advanced standing in the College of Education.

A student who already has a bachelor's degree and who either does not wish graduate credit or does not meet requirements for admission to the Graduate School may be admitted to the undergraduate college consistent with his major interests, as a **Special Student**. He should be admitted to the University through the Director of Admissions no later than the end of the first week in

Academic Information

June 1961. Credit so obtained through the College of Education is ordinarily accepted for renewal of teaching certificate. A Special Student may take upper division (100's) but not the (200's, 300's) courses.

GRADUATE STUDENTS

Application for admission to the Graduate School, and all supporting academic records, must be in the office of the Dean of the Graduate School by June 1, 1961.

Transfer Credit: To another institution. The student who wishes to transfer credit to another institution should submit an application on which he writes "For Transfer Only." Along with the application he should submit a letter from the graduate dean of the institution in which he is enrolled as a degree student, to the Dean of the Graduate School, University of Maryland, requesting permission to take a limited amount of work.

Transfer Credit: To the University of Maryland. Credit not to exceed six semester hours for course work at other recognized institutions may be applied towards the master's degree only when such course work has been taken after the student has been admitted to the University of Maryland Graduate School. Before taking course work for transfer the student must have the approval of his adviser and the head of the department in his major field. Normally, approval may be given only for courses which are not offered by the University of Maryland during the period of the student's attendance. The request for transfer of credit shall be submitted to the Graduate Council for approval when the student applies for admission to candidacy. The candidate is subject to final examination by this institution in all work offered for the degree.

Special Non-Degree Credit. The student who already has a master's degree and does not wish to pursue a doctoral program may submit an application marked "Non-Degree" and along with it, an official transcript of the master's degree only. If the student later desires to embark on a doctoral program, the credit earned in Special Non-Degree status may, at the discretion of the major adviser, be used in a doctoral program.

Degree Credit. The student who wishes to pursue either a master's or doctoral program must submit, along with his application, official transcripts of all work taken in institutions of higher education. The applicant is subject to admission requirements of the Graduate School and of the department in which he hopes to pursue his graduate work.

ACADEMIC CREDIT

The semester hour is the unit of credit. 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 three 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 toward the appropriate degree provided they are included in the student's program as planned with his adviser.

Teachers and other students will receive official grade 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.

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 "D," passing scholarship. The mark of "I" (incomplete) is exceptional. Complete regulations governing marks are printed in *University General and Academic Regulations*.

NORMAL AND MAXIMUM LOADS

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

SUMMER GRADUATE WORK

Masters' degrees are offered through the Graduate School as follows:

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

Doctors' degrees offered through the Graduate School are as follows:

- Doctor of Philosophy
- Doctor of Education

Graduate work in the Summer School may be counted as residence toward a master's degree or Doctor of Education degree. A full year of residence or the equivalent is the minimum requirement for each degree.

The requirements for each of the seven degrees above may be procured from the Graduate School upon request.

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 from 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 appropri-

Academic Information

ate 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.

CANDIDATES FOR DEGREES

All students who expect to complete requirements for degrees during the Summer Session should make applications for diplomas at the office of the Registrar during the first two weeks of the Summer Session.

THE PROGRAM IN AMERICAN CIVILIZATION

The University considers that it is important for every student to achieve an appreciative understanding of this country, its history and its culture. It has therefore established a comprehensive program in American civilization. This program is also designed to provide the student with a general educational background.

Work in American civilization is offered at three distinct academic levels. The first level is required of all freshmen and sophomores at the University and is described below. The second level is for undergraduate students wishing to carry a major in this field (see catalog for the College of Arts and Sciences). The third level is for students desiring to do graduate work in this field (see catalog for the Graduate School).

All students receiving a baccalaureate degree from the University of Maryland must (except as specific exceptions are noted in printed curricula) obtain 24 semester hours of credit in the lower division courses of the American Civilization Program. Although the courses in the Program are prescribed generally, some choice is permitted, especially for students who demonstrate in classification tests good previous preparation in one or more of the required subjects.

The 24 semester hours in American civilization are as follows:

1. English (12 hours, Eng. 1, 2 and 3, 4 or 5, 6), American history (6 hours, H. 5, 6), and American government (3 hours, G. & P. 1) are required subjects; however, students who qualify in one, two or all three of these areas by means of University administered tests will substitute certain elective courses. Through such testing a student may be released from 3 hours of English (9 hours would remain an absolute requirement), 3 hours of American history (3 hours remaining as an absolute requirement), and 3 hours of American government. Students released from 3 hours of English will take Eng. 21 instead of Eng. 1 and 2. Those released from 3 hours in history will take H. 56 instead of H. 5 and 6. Students who have been exempted from courses in English, American history, or American government may not take such courses for credit.

2. For the 3 additional hours of the 24 hours required the student elects one course from the following group (Elective Group I):

Econ. 37, Fundamentals of Economics (Not open to freshmen; students who may wish to take additional courses in economics should substitute Econ. 31 for Econ. 37)

Phil. 1, Philosophy for Modern Man

Psych. 1, Introduction to Psychology

Soc. 1, Sociology of American Life

3. Students who, on the basis of tests, have been released from 3, 6 or 9 hours in otherwise required courses in English, American history or American government (see 1 above), shall select the replacements for these courses from any or all of the following groups: (a) more advanced courses in the same department as the required courses in which the student is excused, or (b) Elective Group I (see 2 above) provided that the same course may not be used as both a Group I and a Group II choice, or (c) Elective Group II. Group II consists of the following 3-hour courses:

H. 42, Western Civilization; either H. 51 or 52. The Humanities; either Music 20, Survey of Music Literature or Art 22, History of American Art; and Soc. 5, Anthropology.

General Information

REGISTRATION

All new students must obtain admission to the University from the Director of Admissions or the Dean of the Graduate School *before* registration. Every student planning to register for a course or courses must have been admitted to the University regardless of his status as a degree or non-degree student.

Registration for undergraduate and graduate students will take place on Monday, June 26, from 8:00 a.m. to 3:00 p.m., in accordance with the Registration Schedule printed on page viii of this catalog. *No student will be permitted into the Armory before the time listed in the Registration Schedule.*

Students may register in "late registration" at the Registrar's Office on June 27. After June 27, exceptional cases may be admitted only after approval of the appropriate dean. The late registration fee, charged on and after June 27, is \$5.00.

REGISTRATION FOR ALL COLLEGES EXCEPT COLLEGE OF EDUCATION

Students in all colleges except the College of Education, will begin registration on June 26 by securing registration cards from the respective College offices. Registration cards must be approved (signed) by both the student's adviser and Dean. Graduate students secure the approval of the graduate Dean. After approval, registrations are completed at the Armory, where students secure section assignments for all courses for which more than one section is being offered, receive bills, pay fees, and submit all forms to the Registrar's representatives. Until this is done registration is neither complete nor official.

General Information

REGISTRATION: COLLEGE OF EDUCATION ONLY

All Education advisers will be located in the south basement wing of the Armory. Students will be admitted only through the south-west door of the Armory and only according to the alphabetical schedule posted on page viii of this catalog. Students then proceed to the room in which their respective advisers are located (nearby rooms in the Armory basement).

Registration cards must be approved (signed) by both the student's adviser and the Dean of the College of Education. Graduate students must in addition receive the approval of the Dean of the Graduate School. Graduate students carrying the official graduate school matriculation card may obtain the graduate dean's approval (signature) in the Armory. Graduate students not carrying the official graduate school matriculation card must report to the Graduate School office, Room T-214 in the Skinner Building before proceeding to the upper floor of the Armory to complete registration. After approval, registrations are completed on the first floor of the Armory, where students secure section assignments for all courses for which more than one section is being offered, receive bills, pay fees, and submit all forms to the Registrar's representatives. Until this is done, registration is neither complete nor official.

LENGTH OF CLASS PERIOD

Classes during the 1961 summer session will meet on the following time schedule:

8:00 — 9:20
9:30 — 10:50
11:00 — 12:20
12:30 — 1:50

On this schedule 3-credit courses will meet 5 days each week and 2-credit courses will meet 4 days as indicated for each 2-credit course.

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 domiciled in this State for at least one year.

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

Adult students are considered to be residents if at the time of their registration they have been domiciled in Maryland for at least one year provided such residence has not been acquired while attending any school or college in Maryland or elsewhere. Time spent on active duty in the armed services while sta-

tioned in Maryland will not be considered as satisfying the one year period referred to above except in those cases in which the adult was domiciled in Maryland for at least one year prior to his entrance into the armed service and was not enrolled in any school during that period.

The word domicile as used in this regulation shall mean the permanent place of abode. For the purpose of this rule only one domicile may be maintained.

TUITION AND FEES

UNDERGRADUATE STUDENTS

General tuition fee, per credit hour	\$12.00
Nonresidence fee	15.00
Must be paid by all students who are not residents of Maryland.	
*Application fee (see explanation below)	10.00
Matriculation fee	10.00
Payable only once, upon admission to the University. Every student must be matriculated.	
Infirmary fee	1.00
Recreation fee	1.00
Required of all students registered in the Summer School.	

GRADUATE STUDENTS

General tuition fee, per credit hour	\$12.00
Matriculation fee	10.00
Payable only once, upon admission to the Graduate School.	
Recreation fee	1.00
Required of all students registered in the Summer School.	
Infirmary fee (voluntary)	1.00
The Infirmary services are available to graduate students who elect to pay at the time of registration the fee of \$1.00 for the Summer Session.	
Testing fee (new graduate students in the College of Education only)	5.00
There is no non-residence fee for graduate students.	

MISCELLANEOUS INFORMATION

Auditors pay the same fees as regular students.

The graduation fee is \$10.00 for bachelors' and masters' degrees, and \$50.00 for doctors' degrees.

*The application fee for the undergraduate summer session applicant partially defrays the cost of processing applications for admission to this division of the University. If a new applicant enrolls for the term for which he applied, the fee is accepted in lieu of the matriculation fee. Applicants who have been previously enrolled with the University of Maryland at College Park or Baltimore, or at one of its off-campus centers are not required to pay the application fee since they have already paid the matriculation fee.

General Information

A fee of \$3.00 is charged for each change in program after June 30. If such change involves entrance to a course, it must be approved by the instructor in charge of the course entered. Courses cannot be dropped after July 16. All changes must be approved by the appropriate dean and filed in the Office of the Registrar.

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

Laboratory courses in chemistry carry laboratory fees of \$10.00 and \$20.00; in addition the student is charged for any apparatus which cannot be returned to the stock room in perfect condition. Other laboratory fees are stated in connection with individual courses.

Physical education fee charged each student registered for any physical activity course, \$6.00.

Late registration fee, \$5.00.

FEE FOR NURSERY SCHOOL

Children 4 years of age..... \$15.00

WITHDRAWAL AND REFUND OF FEES

Any student compelled to leave the University at any time during the Summer Session must file in the Office of the Registrar an application for withdrawal, bearing the proper signatures. If this is not done, the student will not be entitled, as a matter of course, to a certificate of honorable dismissal, and will forfeit his right to any refund to which he would otherwise be entitled. The date used in computing refunds is the date the application for withdrawal is filed in the Office of the Registrar.

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

Students withdrawing from the University will receive a refund of all charges, less the matriculation fee in accordance with the following schedule:

<i>Period from Date Instruction Begins</i>	<i>Percentage Refundable</i>
One week or less.....	60%
Between one and two weeks.....	20%
Over two weeks.....	0

No refunds of fixed charges, lodging, tuition, laboratory fees, etc., are allowed when courses are dropped, unless the student withdraws from the University.

LIVING ACCOMMODATIONS AND MEALS

Housing accommodations are available at the following cost per term, on the basis indicated:

Regular Residence Halls	Single Room	Double Room
Women	\$55	\$45
Men	\$45	\$35

Since most of the rooms in the residence halls are double rooms there is no definite guarantee that a request for a single room can be granted. The availability of single rooms will be determined by the number of persons requesting rooms for the Summer Session.

The Dining Room will operate entirely on the cafeteria plan and meals will be served at a minimum cost with a choice of foods.

THE UNIVERSITY RESIDENCE HALLS WILL NOT BE OPEN FOR OCCUPANCY UNTIL 2:00 P.M. SUNDAY, JUNE 25, AND THEY WILL CLOSE AT NOON ON SATURDAY, AUGUST 5.

Early application for a reservation is advisable, as only those who have made reservations will be assured that rooms are ready for occupancy upon the arrival of the student. Rooms will not be held later than noon on Tuesday, June 27. For reservations write to: Housing Office, Annapolis Hall.

Students attending the Summer School and occupying rooms in the residence hall will provide themselves with towels, pillows, pillow cases, sheets, blankets, bureau scarfs, desk blotter, and wastebasket (there is a laundry rental plan available). Trunks for the men's halls should be marked with student's name and addressed to Men's Residence Halls. Trunks for women's dormitories should include the name of the hall to which the student has been assigned. Trunks sent by express *must* be prepaid. Cleanliness and neatness of rooms is the responsibility of the student.

Listings of off-campus rooms, apartments and houses are available in the Housing Office, Annapolis Hall.

Students occupying off-campus housing will maintain the same standards as required of those in the University residence halls and fraternity houses.

All housing occupied by students, other than those living at home, are subject to inspection by representatives of the University in order to determine their desirability as living accommodations. Students desiring meals may obtain them at the University Dining Hall or in the many local restaurants located within walking distance of the campus.

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 undergraduate students in the Summer Session, and also for those graduate students who elect to pay the \$1.00 fee. Students who are ill should report promptly to the University Infirmary, in person. Serious emergencies may be reported by phone to Ext. 326. Doctor's Office hours are: Week days, 10 a.m. to 12 noon; week ends, 11.00 a.m. to 12 noon. A nurse is on duty 24 hours per day.

General Information

PARKING OF AUTOMOBILES

For the use of students, staff members, and employees, several parking lots are provided. Students may park in lots A, B, and D. All other lots are reserved for faculty and staff members. The University rules forbid the parking of cars on any of the campus roads. These rules are enforced by campus police.

LIBRARY FACILITIES

The new \$2.5 million library building located in a prominent position at the west end of the main quadrangle was opened for service in January, 1958. The almost 200,000 square feet of floor space allow for greatly improved library service and accommodations for study. Two large reading rooms are air-conditioned for student convenience.

The building will ultimately house 1,000,000 volumes and seat 2,000 readers. The 200 carrels and individual studies provide excellent facilities for graduate students and faculty.

Library facilities outside the main building include the Engineering and Physical Sciences Library located in the Mathematics Building, the Chemistry Library, and collections in the various departments of the College of Agriculture.

The University System of Libraries has in its collections 450,000 volumes in addition to thousands of government publications and uncatalogued materials. Over 5,000 periodicals and 176 newspapers are received. The libraries are able to supplement their services to graduate students and faculty by borrowing material from other libraries through interlibrary loan. Also within a short distance from College Park are located the unexcelled library facilities of the Library of Congress, Department of Agriculture, Office of Education and other agencies of the Federal Government.

UNIVERSITY BOOKSTORE

For the convenience of students, the University maintains a Students' Supply Store, located in the Student Union Building, where students may obtain at reasonable prices textbooks, stationery, classroom materials and equipment.

The bookstore operates on a cash basis.

NURSERY SCHOOL

A Nursery School for children 4 years of age operates from 8:00 a.m. to 10:50 a.m. in Building AA for the duration of the Summer Session as a laboratory for courses in childhood education. This school is open to children of the community and to children whose parents are students or teachers in the Summer Session. The enrollment must be limited to a number that can be accommodated in the room available. Applications may be obtained from the Childhood Education Department, University of Maryland, College Park, Maryland after May 1, 1961.

The tuition fee for each child is \$15.00 for the session.

FOR ADDITIONAL INFORMATION

Detailed information concerning the American Civilization Program, fees and expenses, scholarships and awards, student life, and other material of a general nature, may be found in the University publication titled *An Adventure in Learning*. This publication may be obtained on request from the Office of University Relations, North Administration Building, University of Maryland at College Park. A detailed explanation of the regulations of student and academic life, may be found in the University publication titled, *University General and Academic Regulations*. This is mailed in September and February of each year to all new undergraduate students.

Requests for course catalogs for the individual schools and colleges should be directed to the deans of these respective units, addressed to:

COLLEGES LOCATED AT COLLEGE PARK:

Dean
(College in which you are interested)
The University of Maryland
College Park, Maryland

PROFESSIONAL SCHOOLS LOCATED AT BALTIMORE

Dean
(School in which you are interested)
The University of Maryland
Lombard and Greene Streets
Baltimore 1, Maryland

CONFERENCES, INSTITUTES, WORKSHOPS, SPECIAL COURSES AND LECTURES

University-Wide Lecture Series

The 1961 Summer School will sponsor a series of lectures during the six-week period from June 26 to August 4. These lectures are being planned by a University-wide committee with the hope of selecting exciting topics and obtaining outstanding lecturers that will be of interest to all summer school students regardless of college or department.

All summer school students and faculty members as well as other interested persons are cordially invited to attend. No admission charge will be made. For further information please contact the Summer School office on the College Park campus.

Television Workshop

Each summer the Department of Speech offers a television workshop (Speech 149—3 hours, see listing under Speech and Dramatic Art) which is primarily designed for the classroom teacher.

The workshop provides an opportunity to (1) learn the fundamental principles of instructional television (2) to develop presentational techniques (3) to further professional skills and competence.

The air-conditioned studios are located in Woods Hall, and the latest in professional broadcast-type equipment is utilized.

Enrollment is limited. Inquiries may be sent to Professor George F. Batka, Director, Radio and Television, Department of Speech, University of Maryland, College Park, Maryland.

Typewriting Demonstration For Business Education Teachers

The College of Education offers the business teacher registered for B.Ed. 101 (see page 30) during the Summer Session an opportunity to observe pupils at work in a typewriting class. These observations will aid the classroom teacher in: (1) designing purposeful classroom activities involving development of the basic typewriting skills, (2) planning with the pupil the organization of an effective set of "work" habits, (3) analyzing through case studies the methods of dealing with the various aspects of individual pupil progress, (4) applying the principles of the psychology of skills to the teaching of typewriting, and (5) developing improved methods for course construction, selection of instructional materials, and measuring pupil achievement.

Business Educator's Conference on Office Practice and Machines

The Business Educator's Conference scheduled from June 26 to July 7 is designed to explore the implications of modern office machine procedures in

relation to developing a more effective business education program in the secondary schools.

Leaders in the field of business education, as well as users of the business equipment, will be used extensively as consultants.

Specifically, the participants will have opportunities to:

1. Study the office procedures and machines used in actual business situations.
2. Observe demonstrations of office machines which utilize paper tape and punched cards.
3. Learn the operation of latest models of office machines.
4. Prepare teaching aids, laboratory materials, subject matter units, classroom and laboratory organization plans, and other phases of the program needed by individual teachers.
5. Acquire a broader understanding of the important concepts and facts relating to the education of the office worker.

This workshop is listed under "Course Offerings" as Ed. 189-4. Two hours of undergraduate or graduate credit may be earned. Workshop lectures, seminars, demonstrations, field trips, laboratory work, interest groups and conferences will be scheduled throughout the two-week period. The workshop will be housed in the new air-conditioned Business Administration Building.

Applications for the workshop should be made and directed to: Dr. Arthur Patrick, College of Business and Public Administration, College Park, Maryland.

Workshops in Music

Through the cooperation of the Department of Music, the College of Education, and University College, two workshops in music will be offered during the 1961 Summer Session, directed by nationally known leaders in their respective fields. Participants registered in one of the courses listed below will meet in the afternoon for a minimum of 30 class hours during a two-week period, and may receive two semester hours of credit. The workshops are so designed that registration for four additional hours in other courses during the regular six-week session is possible.

The regular procedures for admission to the University, listed elsewhere in this catalog, apply also for admission to the Workshops. The courses may be counted for graduate credit only if prior admission to the Graduate School has been obtained; note the deadline of June 1 for admission to that school. Rooms may be reserved in the campus dormitories for the period of the workshops, and meals will be available in the University at nominal cost.

WORKSHOP IN CHORAL MUSIC

The Choral Workshop, directed by Margaret Hillis, is offered during the period July 10 to July 21. Participants will register for Mus. Ed. 175, Methods

and Materials in Vocal Music for the High School. In the first week, July 10-14, a series of lectures, conferences, and discussions of choral problems and readings of new choral music will be held. In the second week, July 17-21, a mixed chorus of selected high-school students will rehearse and present a public concert. Adult participants will assist in the rehearsals and take part in other professional activities.

WORKSHOP IN BAND MUSIC

The Band Workshop, directed by James Neilson, is offered during the period July 10 to July 21. Participants will register for Music 161, Conducting. The workshop will consist of lectures and demonstrations of all phases of instrumental conducting (both wind and string), including baton techniques, score preparation, rehearsal techniques, style, and interpretation. Daily laboratory sessions will be held in connection with rehearsals of a concert band and a string ensemble, both composed of selected high school students. The band and string ensemble, who will be in residence for the two-week period, will present a public concert on July 21.

Copies of a brochure containing detailed information about the workshops in music may be obtained by addressing the Department of Music. The fees applicable to these workshops, including registration, dormitory room, and supplementary fee of \$5.00, can be calculated by referring to pages 7-8 of this catalog.

Workshops in Special Education

THE EDUCATION OF CHILDREN WITH LEARNING IMPAIRMENTS

This workshop will consider the theoretical background and the methods, curricula and materials employed in the approach to the various learning problems of children.

Opportunities for observation, participation and consultation in program planning, curriculum organization, and the use of methods and materials will be provided in seven sub-divisions according to the primary learning problem involved: (1) Mentally Handicapped (Educable) (2) Mentally Deficient (Trainable) (3) Learning Disabilities (Central Nervous System Disturbances) (4) Disturbances in Emotional/Social Development (5) Disturbances in Language Development (6) Reading Difficulties and (7) Motor Handicapped.

This workshop will meet daily from 9:00-3:00, June 26 to July 14. Three units of undergraduate or graduate credit may be earned.

ADMINISTRATION AND SUPERVISION OF SPECIAL EDUCATION PROGRAMS

This workshop will consider the areas of primary concern to administrators and supervisors in determining Special Education needs, and in establishing and carrying out educational program modifications.

The workshop will utilize a number of resource consultants with experience at various levels and the various facets of the overall problem.

This workshop will meet daily from 9:00-3:00, June 26 to July 14. Three units of undergraduate or graduate credit may be earned.

THE EDUCATION OF CHILDREN WITH SUPERIOR INTELLECTUAL
ABILITY

This workshop will be concerned with the characteristics, identification, program planning and implementation for gifted children at both the elementary and the secondary level.

Emphasis will be placed on modifications and their rationale in the educational planning for gifted children. A survey of the kinds of administrative and curricular approaches will be included. Stress will be placed upon application of these to individual teaching situations along with appropriate methodology, resource material, etc.

Opportunities for observation and participation with groups of gifted children in demonstration classes will be provided. Four sections are planned (1) Primary (grades 1-3) (2) Intermediate (grades 4-5) (3) Junior High (grades 7-8) and (4) Senior High (grades 10-11).

This workshop will meet daily from 9:00-3:00, July 17 to August 4. Three units of undergraduate or graduate credit may be earned.

Workshops in Human Development

SIX-WEEK WORKSHOP

The Institute for Child Study, College of Education, offers a six-week human development workshop each summer providing opportunities for (1) study and synthesis of scientific knowledge about human behavior; (2) experience in the analysis of case records; (3) preparation of study group leaders for in-service child study programs; (4) planning in-service child study programs for teachers or other human relations workers; (5) planning preservice teacher education courses and laboratory experiences for prospective teachers; (6) examination of implications of scientific knowledge about human development and behavior for school organization, curriculum development, guidance services, club leadership, and other programs and procedures designed to foster the mental health and optimal development of children, youth, and adults.

The workshop is designed for teachers and administrators who have been actively engaged in the Child Study Program sponsored by the Institute, for persons who are interested in participating in such a program, and for persons in other fields where human relations are a vital factor.

This workshop will run from June 26 to August 4. Workshop lectures, laboratory groups and seminars will be scheduled between 8:00 a.m. and 12:00

p.m. Special lectures, interest groups and conferences are scheduled from 1:30 to 3:00 p.m.

Additional details are available in the descriptions of H.D. Ed. 112-117 and H.D. Ed. 212-217 listed under "Course Offerings." Inquiries should be addressed to Director of Summer Workshops, Institute for Child Study, University of Maryland, College Park, Maryland.

CHILD STUDY LEADERS WORKSHOP

For leaders and prospective leaders of child study groups who cannot attend the full six weeks workshop, a two-week workshop will be held on the University campus from June 26 to July 7. Each day's activities will include a *lecture-discussion period* centering around major scientific concepts explaining growth, development, and behavior; *laboratory periods* for analyzing case record material at the first, second, or third year level of the program (participants will choose the year level of the group they expect to lead); *reading* and *special interest* periods. Two hours credit can be earned for *full time* participation in one of these workshops.

ADMINISTRATORS' CONFERENCE ON IMPLICATIONS

For superintendents, supervisors and principals who are interested in exploring the implications of human development principles for school operation, a workshop (2 credit hours) will be held at the University from July 10 to July 21. This work conference will examine recent scientific research findings and theory regarding human growth, learning and behavior and will consider the implications of this knowledge for educational practice, including such problems as grouping for effective learning, marking, curriculum control, teaching processes, home-school interaction, the development and use of cumulative records, and mental health problems.

WORKSHOP ON APPLICATIONS OF HUMAN DEVELOPMENT PRINCIPLES IN CLASSROOMS

For people who have had three or more years of child study experience either in workshops or in groups during the school year, a workshop (2 credit hours) will be held at the University from July 10 to July 21. Classroom practices will be examined in the light of human development principles, and procedures will be studied for possible beyond-third-year action research projects during the school year.

WORKSHOP ON HUMAN DEVELOPMENT AND RELIGIOUS EDUCATION

A workshop in human development (2 credit hours) for persons in the field of religious education will be held on the university campus from July 24 through August 4. This workshop will examine scientific knowledge about human development, learning, behavior and adjustment and will consider the implications of this knowledge for religious educational practice in vacation, weekday, and Sunday schools operated by church groups. The workshop will

be entirely non-denominational and any person responsibly concerned with religious education can appropriately enroll regardless of the nature of his faith.

The daily schedules will be similar to those of the six weeks workshop. *Only full time participants can be accepted.* These two-week workshops may be taken for either graduate or undergraduate credit.

Student desiring graduate credit and not previously enrolled in the Graduate School *must have their applications for admission and transcripts in the office of the Graduate School not later than June 1, 1961.*

Those interested should contact, as soon as possible, Director of Summer Workshops, Institute for Child Study, University of Maryland, College Park, Maryland.

Education in Family Finance Workshop

During the Summer Session of 1961 the College of Education, the College of Business and Public Administration, and the College of Home Economics are cooperating with the National Committee for Education in Family Finance to offer a laboratory course designed to help educators improve their classroom instruction in personal and family money management.

Objectives: The workshop will center about such areas as: budgeting and financial planning, savings, investment, banks and banking, insurance, home ownership, taxation, wills and estates, social security and pension plans, and credit. To explore ways in which educators can help prepare young people to deal with financial problems in these areas, the participants will have an opportunity to develop (1) broad understandings of important concepts and facts relating to family financial security, (2) leadership skills needed to improve and expand programs of education in family finance, and (3) materials which may be used in solving their own curricular and instructional problems.

Participation: School systems are encouraged to send teams of participants numbering up to three. Persons in the following positions are especially invited to apply for acceptance: junior high, senior high, and college teachers in social studies, core, mathematics, homemaking, business education, basic business, and family life education; supervisors; guidance counselors; principals; curriculum directors; superintendents of schools; representatives of state departments of education; and staff members of teacher education institutions.

Staff: In addition to full-time staff members, a wealth of resource people from the University, from business, and from governmental agencies will be utilized as they apply to the projects undertaken.

Schedule: The six-week workshop will extend from June 26 to August 4, 1961. Sessions will be scheduled for a minimum of six hours per day, Monday through Friday.

Credit: Six hours of credit will be earned in the workshop. Participants will register through course Ed. 189-1 Workshops, Clinics, and Institutes: Edu-

cation in Family Finance. The credit may be applicable to advanced degree requirements. If graduate credit is desired, application for admission to the Graduate School must be made before June 1.

Scholarships: Forty scholarships covering either board and room in campus facilities or tuition and lunch will be granted. Interested persons should make application on a special form which will be available upon request. Each applicant must be recommended by his superintendent or principal. Early application is encouraged so as to be assured a place in the workshop.

All correspondence concerning application or information concerning the workshop should be addressed to: Dr. Robert G. Risinger, College of Education, University of Maryland, College Park, Maryland.

Workshop on Teaching Conservation of Natural Resources

The College of Agriculture will cooperate with the Conservation Education Division of the Maryland Department of Research and Education in developing this workshop devoted to the study of the State's basic wealth, its natural resources. Basic source information will be available, specimens will be collected, pictures will be taken in different resource regions, teaching aids will be evaluated, and effective methods of teaching conservation and natural resources will be studied. The workshop will carry six semester hours of graduate credit.

State and federal workers in conservation of natural resources will be used extensively as consultants in their specialties. Field trips will be taken to all the natural regions of the State. Students will be able to observe first hand the resources problems and current practices. Adequate opportunity will be provided for students to analyze problems as a group and develop logical solutions.

The workshop will be held on the College Park campus of the University of Maryland June 26 to August 4, 1961. Registration will be limited to 30 persons.

Institute of Acarology

The Institute of Acarology provides a unique opportunity for entomologists, parasitologists, zoologists and advanced students in the field of biology to study the mites and ticks. The recent important discoveries of the role of the Acarina in the fields of public health and agriculture have emphasized the need for an understanding of all phases of knowledge concerned with mites and ticks. Their part in the epidemiology of scrub typhus, "Q" fever, haemorrhagic fever, and other diseases, as well as their increased destruction of plants that has followed the introduction of the newer insecticides have brought them to the attention of an increasing number of biologists. Three courses (see page 66) involving lecture, laboratory and field work will be offered in the Department of Zoology, University of Maryland. Students may also register for a special problem in acarology (Zool. 208).

The National Institutes of Health, through a program of training grants, have made it possible for The Institute of Acarology to offer financial assistance to individuals who would otherwise be unable to attend the Institute, especially

those from other continents. Two stipends of \$800 each for six weeks are available for those individuals from other countries as well as a number of \$150 stipends for three weeks for those from North America. The domestic stipends will cover costs such as tuition, books, dormitory room and board while in attendance. Application forms for these training grants may be requested from: D. George Anastos, The Institute of Acarology, Department of Zoology, University of Maryland, College Park, Maryland.

National Science Foundation Summer Institute For High School Teachers of Science

The College of Agriculture, the College of Arts and Sciences and the College of Education are cooperating to offer a program of courses designed for junior and senior high school teachers of science. These courses combine in various ways to provide curricula for the participants of a seven-week Institute for teachers of science. This Summer Institute has the support of the National Science Foundation. It is designed primarily to enable junior and senior high school teachers to improve their knowledge of the subjects they teach. Credit earned in this Summer Institute and in similar related science courses may accumulate up to one-half of the total credit-hour requirement for the Master of Education degree.

A National Science Foundation grant makes it possible for the 1961 Summer Institute to provide financial assistance for about 75 participants at the standard N.S.F. rate of \$75 per week plus \$15 per week for each dependent (to a maximum of four). This stipend will be tax free to students enrolled for credit toward a degree. A travel allowance of 4 cents per mile for a single round trip from the participant's home to the Institute will also be paid. All tuition and fee charges will be paid by the N.S.F. grant.

The Summer Institute covers the general fields of the Biological Sciences and the Physical Sciences. Basic to the program will be two seminars covering recent developments in the Biological Sciences and the Physical Sciences. These seminars are listed in the Summer Session catalog as Zoology 199 and Physics 199, respectively. Each will meet once a week during the regular six-week summer session, and daily during the seventh week, and will count as one credit hour. Participants in the Institute will be expected to register for both seminars.

The following courses are included in the program. Courses especially prepared for teachers are indicated by an asterisk (*).

Biological Sciences

- Bot. 1
- *Bot. 102
- *Ent. S121
- Microb. 1
- Zool. 1
- *Zool. 102
- Zool. 104
- *Zool. 199
- *Zool. 208

Physical Sciences

- *Chem. 1
- Chem. 3
- Chem. 19
- Chem. 37
- Chem. 38
- *Chem. 111
- *Phys. 122-A
- Phys. 130, 131
- *Phys. 150
- *Phys. 160A
- *Phys. 199

These courses are described in detail in this catalog under the headings of the respective department. In addition to the courses specifically listed, participants may register in the regular Summer Session offerings in mathematics or other appropriate fields. A maximum of 7 credit hours may be taken. Stipends will be available only to those participants scheduling at least 6 credit hours in the above courses, or in other courses specifically approved by the Director of the Institute.

Inquiries should be sent to: Dr. J. R. C. Brown, Director of the N.S.F. Summer Institute, Department of Zoology, University of Maryland, College Park, Maryland.

Institute for Teachers of Mathematics in Junior High School

The Department of Mathematics of the College of Arts and Sciences with the financial support of the National Science Foundation is offering a six-week Summer Institute for junior high school teachers of mathematics. Its purpose is to assist the teachers in improving the quality of teaching of mathematics at the junior high school level. The Institute should also give the teachers a better understanding of current curricular developments and make it possible for them to interpret these developments for junior high school programs.

Participants of the Institute who are graduate students in the College of Education may obtain graduate credit for the six hours of course work completed in connection with the Institute.

Mathematics 182—Foundations of Algebra, and Mathematics 199—Summer Institute for Teachers of Science and Mathematics Seminar, are required of each participant. For more information on the courses see the listings under the Department of Mathematics. In addition there will be a demonstration class in which experimental material for grades seven and/or eight will be taught. A seminar meeting three afternoons a week will provide for discussion of the materials in the demonstration class and associated teaching problems.

Financial assistance in the form of a National Science Foundation grant will be available to about 30 participants at the standard N.S.F. rate of \$75 per week plus \$15 per week for each dependent (to a maximum of four). This stipend will be tax free to students enrolled for credit toward a degree. A travel allowance of 4 cents per mile for a single round trip from the participant's home to the Institute will also be paid. All tuition and fee charges will be paid by the N.S.F. grant.

Participants are expected to have had at least two years experience teaching mathematics at the junior high school level and to have been appointed to a junior high school position for 1961-62.

Inquiries should be addressed to: Professor Stanley B. Jackson, Director, Summer Institute for Mathematics Teachers, Department of Mathematics, University of Maryland, College Park, Maryland.

Workshops on Teaching Elementary School Science

The College of Education will sponsor two three-week workshops (June 26-July 14) (July 17-Aug. 4) in science for elementary supervisors, principals and teachers who have special responsibility for science in their school systems. A survey of subject matter, of methods of teaching, and consideration of the problems of curriculum construction and selection of teaching materials will be considered. There will be field trips, visiting consultants and first-hand experience with science materials.

Applications should be directed before June 20 to Glenn O. Blough, College of Education, College Park. The workshop will be in daily session from 9:30 a.m. to 3:30 p.m. Three hours of undergraduate or graduate credit may be earned. Applications for graduate credit must be submitted to the Graduate School prior to June 1. Not open to students who have previously taken Sci. Ed. 105. These workshops are listed under "Course Offerings" as Ed. 189-17. Students may not enroll for both workshops.

Summer Institute in Counseling and Guidance Training

The National Defense Education Act provides for summer Institutes in Counseling and Guidance Training. The Institute this summer is an advanced counseling practicum, with a didactic correlate. Enrollees will counsel intellectually able high school students under the supervision of counseling psychologists, and the didactic content will be on such topics as able students, testing, and the psychology of life choices. Institute activities are for the full day.

Enrollees will be counselors in Maryland secondary schools. Tuition and other fees are exempted. Enrollees from public schools will receive a \$75 weekly stipend, with an additional \$15 for each dependent. Enrollment of public school counselors is through superintendent's nomination only. Private, non-profit secondary school counselors may also apply to Dr. R. H. Byrne, College of Education.

Counselor Education II

The College of Education in cooperation with Maryland School Superintendents, The State Department of Education and The George Washington University will sponsor a seven week program for the preparation of secondary school counselors. The program will be held on the University campus from June 26 to August 11, 1961.

Lectures, seminars and practicum will be scheduled between 8:30 a.m. and 3:00 p.m. The content of the program will include the course content of Ed. 162, Mental Hygiene in the Classroom, Ed. 253, Occupational Information: Theory and Practice, and Ed. 261, Practicum in School Counseling.

Students enrolled in this program will receive seven hours credit. Each applicant must be recommended by his superintendent or principal. All correspond-

ence concerning this program should be addressed to Dr. George L. Marx, College of Education, University of Maryland, College Park, Maryland.

Workshop on Use of Community Resources

The Workshop on use of Community Resources will be offered for persons who teach in kindergarten or in grades one to twelve, inclusive, for three weeks, June 26 to July 14. It is designed to help teachers learn to utilize community resources to strengthen a sound program of teaching and learning. The workshop is being offered at the request of the Washington Area School Study Council, a voluntary association of school systems and administrators in the Washington area. The Smithsonian Institution, which has cooperated with the Council over a period of years in a project designed to make its resources more meaningful to teachers and children, will receive special attention as an excellent example of a valuable community resource. The workshop will require full-time work of all participants. Meetings will be held from 9:30 a.m. to 3:30 p.m. throughout the workshop period. In addition to teachers designated by the Council schools, a limited number of other persons will be allowed to register. A student may earn three semester hours of undergraduate or graduate credit.

Further information may be secured by writing to: Director of the Summer Session, University of Maryland, College Park, Maryland.

Workshop on Human Relations in Educational Administration

This workshop is concerned with the development of leadership teams capable of providing in-service programs in human relations in local school systems. In addition to basic theory, the workshop will center on the practice and acquisition of specific human relations skills.

Preference in enrollment will be given to teams representing Maryland school systems which have participated in the Workshop in the past, and to teams of four persons designated by other Maryland school systems and including in their membership: (1) a school superintendent, an assistant superintendent or someone else with equivalent rank; (2) a full-time supervising secondary school principal; (3) a full-time supervising elementary school principal, and (4) a full-time supervisor, counselor, psychologist, or other professional person who spends full-time in a service position in the school system. Prerequisite for all participants: a **master's degree**.

Enrollment in the workshop will be limited. Applications for team participation from local school systems will be processed in the order received. If more than one application is received at the same time, the Director of the Workshop will make the final decision.

The workshop will meet daily from 9:00 a.m. to 3:00 p.m. throughout the summer session. A student may earn six semester hours of graduate credit.

Inquiries should be addressed to Dr. Clarence A. Newell, Professor of Educational Administration.

Workshop on The Public Transportation of School Children

This workshop, directed by T. Wesley Pickel, is offered during the first three weeks of the summer session, June 26 to July 14. The workshop will serve as the means to consider the problems of school bus transportation, solutions employed, and a review of research in this field. It is organized specifically in accord with the requirements for State of Maryland certification for the position of Supervisor of Public School Transportation.

The workshop will meet from 9:00-3:00 daily, Monday through Friday. Three semester hours of credit may be earned.

COURSE OFFERINGS

An "S" before a course number denotes that the course is offered in Summer School only. An "S" after a course number indicates a regular course modified for summer school offering.

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 20. Minimum enrollments for upper level undergraduate courses and graduate courses will be 15 and 10 respectively.

AGRICULTURAL ECONOMICS

A. E. 198. *Research Problems. (2 cr. max.)*

To be arranged. With the permission of the instructor, students will work on any research problems in agricultural economics. There will be occasional conferences for the purpose of making reports on progress of work. (Staff.)

A. E. 301. *Special Problems in Farm Economics. (1-4)*

To be arranged. 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. (Staff.)

A. E. 399. *Research.*

Credit according to work accomplished. 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 instructional staff. (Staff.)

AGRICULTURAL ENGINEERING

For Advanced Undergraduates and Graduates

Agr. Engr. 198. *Special Problems in Farm Mechanics. (1-3)*

Prerequisite, approval of Department. Not acceptable for majors in agricultural engineering. Problems assigned in proportion to credit registered for. (Gienger.)

For Graduates

Agr. Engr. 301. *Special Problems in Agricultural Engineering. (1-6)*

Work assigned in proportion to amount of credit. (Green.)

Agr. Engr. 399. *Research (1-6)*

Credit according to work accomplished. (Green.)

AGRICULTURAL AND EXTENSION EDUCATION

R. Ed. 170 A-B. *Workshop Teaching Conservation of Natural Resources (3,3)*

Daily 9:30 a.m.-12:00 noon and 1:00 p.m.-3:00 p.m. Fee, \$25.00. This workshop is devoted to a study of the State's basic wealth, its natural resources, natural resource problems and practices pertinent to local, state, national and world welfare. (Staff.)

Agricultural and Extension Education, Agronomy

R. Ed. 198. Special Problems in Agricultural Education. (1-3)

Arranged. Prerequisite, approval of staff. Credit in accordance with amount of work planned. A course designed for advanced undergraduates for problems in teaching vocational agriculture. (Staff.)

R. Ed. 215. Supervision of Student Teaching. (1)

Arranged. (Given in accordance with demand, but not more often than alternate years.) The role of the supervising teacher in checking progress, supervising and grading student teachers. Particular emphasis will be given to the region-wide program in training teachers of vocational agriculture, including the evaluation of beginning teachers. (Cardozier, Smith.)

R. Ed. S250 A-B. Critique in Rural Education. (1, 1)

Part B. Arranged. Prerequisite, approval of staff. Current problems of teaching agriculture are analyzed and discussed. Students are required to make investigations, prepare papers and make reports. (Cardozier.)

R. Ed. 301. Field Problems in Rural Education. (1-3)

First and second semesters. Summer session. Prerequisite, six semester hours of graduate study. Problems accepted depend upon the character of the work of the student and the facilities available for study. Periodic conferences required. Final report must follow accepted pattern for field investigations. (Staff.)

R. Ed. 302. Seminar in Rural Education. (1)

Prerequisite, approval of staff. Problems in the organization, administration and supervision of the several agencies of rural education. Investigations, papers, and reports. (Smith.)

R. Ed. 399. Research. (1-6)

Arranged. Credit hours according to work done. (Staff.)

AGRONOMY

Agron. 198. Special Problems in Agronomy. (1)

For advanced undergraduates only. Prerequisite, Agron. 10, 107, 108 or permission of instructor. A detailed study, including a written report of an important problem in agronomy. (Staff.)

Agron. 208. Research Methods. (2)

Prerequisite, permission of staff. Development of research viewpoint by detailed study and report on crop research of the Maryland Experiment Station or review of literature on specific phases of a problem. (Staff.)

Agron. 399. Research in Agronomy.

Credit according to work done. (Staff.)

ANIMAL HUSBANDRY

A. H. 198. Special Problems in Animal Husbandry. (1-2) (4 cr. max.)

Work assigned in proportion to amount of credit. Prerequisite, permission of instructor. A course designed for advanced undergraduates in which specific problems relating to animal husbandry will be assigned. (Staff.)

Animal Husbandry, Art, Botany

A. H. 301. Special Problems in Animal Husbandry. (1-2) (4 cr. max.)

Work assigned in proportion to amount of credit. Prerequisite, permission of instructor. Problems will be assigned which relate specifically to the character of the work the student is pursuing. (Staff.)

A. H. 399. Research in Animal Husbandry.

Credit to be determined by amount and character of work done. With the approval of the Head of the Department, students will be required to pursue original research in some phase of animal husbandry, carrying the same to completion, and report the results in the form of a thesis. (Staff.)

ART

Art 20. Art Appreciation. (2)

M.T.Th.F. 8:00. A-302. An introduction to the technical and aesthetic problems of the artist. The student becomes acquainted with the elements that go into a work of the visual arts. He is made aware of the underlying structure that results in the "wholeness" of an art work. He will see examples (original and reproductions) of masterpieces of art. (Lembach.)

BOTANY

Bot. 1. General Botany. (4)

Five lectures, daily, 8:00-8:50, A-1. Five laboratory periods, E-212; section 1, daily, 9:00-10:50; section 2, 11:00-12:50; section 3, 1:00-2:50. Laboratory fee, \$6.00. General introduction to botany touching briefly on all phases of the subject. Emphasis is on the fundamental biological principles of the higher plants. (Brown, assistants.)

Bot. 102. Plant Ecology. (3)

Five lectures, daily, 11:00, E-116; three laboratory periods, MWF, 1:00-3:50. Prerequisite, Bot. 1 and permission of instructor. Laboratory fee, \$5.00. A study of plants in relation to their environments. Plant successions and formations of North America are treated briefly and local examples studied. (Brown.)

Bot. 113. Plant Geography. (2)

Offered 1963.

Bot. 151S. Teaching Methods in Botany. (2)

Offered 1962.

Bot. 153S. Field Botany. (2)

Offered 1963.

Bot. 399. Research.

Credit according to work done. A minimum of 6 credit hours is required for the M.S. degree, and an additional minimum of 12 hours is required for the Ph.D. degree. Students must be qualified to pursue with profit the research to be undertaken. (Staff.)

BUSINESS ORGANIZATION AND ADMINISTRATION

B. A. 20. *Principles of Accounting.* (3)

Five periods a week. Daily 8:00-9:20; Q104. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorships, corporations and partnerships. (Wright.)

B. A. 21. *Principles of Accounting.* (3)

Five periods a week. Daily 8:00-9:20; Q122. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorships, corporations and partnerships. (Edelson.)

B. A. 111. *Intermediate Accounting.* (3)

Five periods a week. Daily 8:00-9:20; Q110. Prerequisite, B.A. 21. A comprehensive study of the theory and problems of valuation of assets, application of funds, corporation accounts and statements, and the interpretation of accounting statements. (Lee.)

B. A. 130. *Elements of Business Statistics I.* (3)

Five periods a week.

Section 1—Daily, 8:00, Q103.

(Nelson.)

Section 2—Daily, 9:30, Q103.

(Anderson.)

Prerequisite, junior standing. Laboratory fee, \$3.50. This course is devoted to a study of the fundamentals 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. *Business Finance.* (3)

Five periods a week. Daily 8:00-9:20; Q-133. Prerequisite, Economics 140. This course deals with principles and practices involved in the organization, financing, and reconstruction of corporations; the various types of securities, and their use in raising funds, apportioning income; risk and control; intercorporate relations; and new developments. Emphasis on solution of problems of financial policy faced by management. (Calhoun.)

B. A. 159. *Marketing Principles and Organization.* (3)

Five periods a week. Daily 9:30-10:50; Q228. Prerequisite, Economics 32 or 37. 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. (Gentry.)

B. A. 160. *Personnel Management.* (3)

Five periods a week. Daily 9:30-10:50; Q104. Prerequisite, Economics 100. 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, and elimination of employment hazards. (Sylvester.)

B. A. 181. *Business Law.* (3)

Five periods a week. Daily 8:00-9:20; Q131. Prerequisite, senior standing. Required

Business Organization and Administration, Chemistry

in all Business Administration curriculum. Legal aspects of business relationships, contracts, negotiable instruments, agency, partnerships, corporations, real and personal property and sales. (Dawson.)

B. A. 262. *Seminar in Contemporary Trends in Labor Relations.* (3)
Arranged. (Sylvester.)

B. A. 399. *Thesis.*
Arranged.

CHEMISTRY

All laboratory courses in chemistry (except Chem. 214—\$20.00) carry a laboratory fee of \$10.00; in addition the student is charged for any apparatus which cannot be returned to the stock room in perfect condition.

Chem. 1. General Chemistry. (4)
Five lectures and five three-hour laboratory periods per week. Lecture, 11:00 C-130. Laboratory, 1:00, 2:00, 3:00. Prerequisite, 1 year high school algebra or equivalent. (Gordon.)

Chem. 3. General Chemistry (4)
Five lectures and five three-hour laboratory periods per week. Lecture, 11:00, C-132. Laboratory, 1:00, 2:00, 3:00. Prerequisite, Chem. 1. (Boyd.)

Chem. 19. Elements of Quantitative Analysis. (4)
Five lectures and five three-hour laboratory periods per week. Lecture 8:00, C-215. Laboratory, 9:00, 10:00, 11:00. Prerequisite, Chem. 1 and 3. (Stuntz.)

Chem. 37. Elementary Organic Chemistry. (2)
Five lectures per week. 8:00, C-134. Prerequisite, Chem. 35. (Veitch.)

Chem. 38. Elementary Organic Laboratory. (2)
Five three-hour laboratory periods per week. 9:00, 10:00, 11:00, C-221. Prerequisite, Chem 36. (Veitch.)

**Chem. 111. Chemical Principles* (4)
Five lectures and five three-hour laboratory periods per week. Lecture, 8:00, C-132; laboratory, 9:00, 10:00, 11:00, C-107. Prerequisite, Chem. 1 and 3, or equivalent. Not open to students seeking a major in the physical sciences, since the course content is covered elsewhere in their curriculum. A course in the principles of chemistry with accompanying laboratory work consisting of simple quantitative experiments. (Credit applicable only toward degree in College of Education.) (Jaquith.)

Chem. 192, 194. Glassblowing Laboratory. (1, 1)
Two four-hour laboratory periods a week. M., W., 1:00, 2:00, 3:00, 4:00, C-B3. (Carruthers.)

Chem. 399. Research.
(Staff.)

* Intended for teachers.

CLASSICAL LANGUAGES AND LITERATURES

Latin 102. Tacitus. (3)

Five periods a week. Daily 9:30-10:50, A-8. Lectures and readings on Greek and Roman historiography before Tacitus and on the author as a writer of history. The reading of selections from the Annals and Histories. Reports. (Avery.)

DAIRY

Dairy S101. Advanced Dairy Production. (1)

An advanced course primarily designed for teachers of vocational agriculture and county agents. It includes a study of the newer discoveries in dairy cattle nutrition, breeding and management. (Davis.)

Dairy 301. Special Problems in Dairying. (1-5) (4 cr. max.—M.S.; 8 cr. max. Ph.D.)

Prerequisite, permission of professor in charge of work. Credit in accordance with the amount and character of work done. 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. (Staff.)

Dairy 399. Research. (1-6)

Credit to be determined by the amount and quality of work done. Original investigation by the student of some subject assigned by the major professor, and completion of the assignment and the preparation of a thesis in accordance with requirements for an advanced degree. (Staff.)

ECONOMICS

Econ. 5. Economic Developments. (2)

Four periods a week. 12:30, M. T. Th. F.; Q-111. No prerequisite. An introduction to modern economic institutions—their origins, development and present status. Emphasis on development in England, Western Europe and the United States. (Staff.)

Econ. 31. Principles of Economics. (3)

Daily 8:00; Q-111. Prerequisite, sophomore standing. A general analysis of the functioning of the economic system, with special emphasis on national income analysis. 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. (Staff.)

Econ. 32. Principles of Economics. (3)

Daily 9:30; Q-111. Prerequisite, Econ. 31. A general analysis of the functioning of the economic system, with special emphasis on resource allocation. 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. (Staff.)

Econ. 37. Fundamentals of Economics. (3)

Daily 8:00; Q-112. Prerequisite, sophomore standing. Not open to students who have credit in Econ. 31 and 32. Not open to freshmen or to B.P.A. students. A survey of the general principles underlying economic activity. This is the basic course in economics for the American Civilization Program for students who are unable to take the more complete course provided in Econ. 31 and 32. (Staff.)

Economics, Education

Econ. 140. Money and Banking. (3)

Daily 8:00; Q-113. Prerequisite, Econ. 32 or 37. A study of the organization, functions, and operation of our monetary, credit, and banking system; the relation of commercial banking to the Federal Reserve System; the relation of money and credit to prices; domestic and foreign exchange and the impact of public policy upon banking and credit.

Econ. 160. Labor Economics. (3)

Daily 11:00; Q-111. 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 organization, collective bargaining.

EDUCATION

BUSINESS EDUCATION

B. Ed. 101. Problems in Teaching Office Skills. (2)

Daily, 8:00; Q-7. Problems in development of occupational competency, achievement tests, standards of achievement, instructional materials, transcription, and the integration of office skills. Observation period for methods of teaching typewriting, at 9:00, or 10:00. (O'Neill.)

B. Ed. 200. Administration and Supervision of Business Education. (2)

Four Weeks, July 10 through August 4. Daily 9:30-10:50; Q-108. Major emphasis on departmental organization, curriculum, equipment, budget-making, guidance, placement and follow-up, visual aids and the in-service training of teachers. For administrators, supervisors, and teachers of business subjects.

B. Ed. 255. Principles and Problems of Business Education. (2)

Four Weeks, July 10 through August 4. Daily 11:00-12:20, Q-108. Principles and practices in business education; growth and present status; vocational business education; general business education relation to consumer education and to general education.

Business Educator's Conference on Office Practice and Machines. (2)

Two Weeks, June 26 through July 7. See Ed. 189-4 in this catalog.

Education in Family Finance Workshop. (6)

Six Weeks, June 26 through August 4. See Ed. 189-1 in this catalog.

CHILDHOOD EDUCATION

C. Ed. 110. Child Development III. (3)

Daily, 8:00; AA-8. Developmental growth of the child from birth to five years; observation in the University Nursery School. Open to students in other colleges of the University. (Broome.)

C. Ed. 115. Children's Activities and Activities Materials. (3)

Daily, 9:30; AA-9. Prerequisites, C. Ed. 100, 101, or 110. Laboratory fee, \$5.00. Storytelling, selection of books for pre-school children; the use, preparation and presentation of such raw materials as clay, paints (easel and finger), blocks, wood, and scrap materials for nursery school and kindergarten. (Stant.)

C. Ed. 140. Curriculum, Instruction, and Observation—Early Childhood Education (Nursery School and Kindergarten). (3)

Daily, 8:00; AA-9. Prerequisites, C. Ed. 100, 101, or 110. Philosophy of early childhood education; observation of the developmental needs at various age levels, with emphasis upon the activities, materials, and methods by which educational objectives are attained. (Stant.)

C. Ed. 145. Guidance in Behavior Problems. (3)

Daily, 11:00; AA-8. Development of an appreciation and understanding of young children from different home and community backgrounds; study of individual and group problems. (Breckbill.)

C. Ed. 149. Teaching Nursery School. (4)

To be arranged. Daily 8:00-12:20. Admission to student teaching depends upon approval of the teaching staff of the department. An academic average of 2.3 is required. Teaching experience in the University Nursery School. Fee, \$30.00. (Laadt.)

ELEMENTARY-SECONDARY EDUCATION

Ed. 52. Children's Literature (3)

Daily 9:30; T-211. A study of literary values in prose and verse for children.

(Bryan.)

Ed. 121. The Language Arts in the Elementary School. (3)

Section 1— 8:00 Daily, T-5

(Schwarz.)

Section 2— 9:30 Daily, T-5

(Schwarz.)

Section 3—11:00 Daily, T-5

(Kern.)

Concerned with the teaching of spelling, handwriting, oral and written expression, and creative expression. Special emphasis given to skills having real significance to pupils.

Ed. 122. The Social Studies in the Elementary School. (3)

Section 1— 8:00 Daily

(Griffin.)

Section 2— 9:30 Daily

(O'Neill.)

Section 3—11:00 Daily

(Griffin.)

Consideration given to curriculum, organization, methods of teaching, evaluation of newer materials, and utilization of environmental resources.

Ed. 124. Arithmetic in the Elementary School. (3)

Section 1— 8:00 Daily, T-103

(Schindler.)

Section 2— 9:30 Daily, T-103

(Schindler.)

Section 3—11:00 Daily, T-103

(Dunlap.)

Emphasis on materials and procedures which help pupils sense arithmetical meanings and relationships. Helps teachers gain a better understanding of the number system and arithmetical processes.

Ed. 125. Art in Elementary Schools. (2)

Section 1— 8:00; M.T.Th.F., H-102

(Longley.)

Section 2— 9:30; M.T.Th.F., A-302

(Lembach.)

Section 3—11:00; M.T.Th.F., A-302

(Lembach.)

Concerned with art methods and materials for elementary schools. Include laboratory experiences with materials appropriate for elementary schools. Enrollment limited to 25 per section.

Note: Teachers who need an art fundamentals course to meet certification requirements, may fulfill that requirement with Pr. Arts 1 or Art 20. Pr. Arts 1 is listed under Home Economics. See page 53 for the course description.

Ed. 127. Teaching in Elementary Schools. (6)

Daily, 9:00-3:00; AR-32. An overview of elementary school teaching designed for individuals without specific preparation for elementary school teaching or for individuals without recent teaching experience. (Hemp.)

Applications for enrollment must be mailed to the College of Education before June 14, 1961. Enrollment will be limited to 25 persons.

Ed. 130. The Junior High School. (3)

Daily, 9:30; A-12. A general overview of the junior high school. Purposes, functions, and characteristics of this school unit; a study of its population, organization, program of studies, methods, staff, and other similar topics, together with their implications for prospective teachers. (Cramer.)

Ed. 133. Methods of Teaching Social Studies in Secondary School. (3)

Daily, 8:00; T-211. Designed to give practical training in the everyday teaching situations. Use of various lesson techniques, audio and visual aids, reference materials, and testing programs and the adaption of teaching methods in individual and group differences. Present tendencies and aims of instruction in the social studies. (La Follette.)

Ed. 134. Materials and Procedures for the Secondary School Core Curriculum. (3)

Daily, 11:00; A-12. Fee, \$1.00. This course is designed to bring practical suggestion to teachers who are in charge of core classes in junior and senior high schools. Materials and teaching procedures for specific units of work are stressed. (Cramer.)

Ed. 137. Methods of Teaching Mathematics and Science in Secondary Schools. (3)

Section 1—Science; Daily, 9:30, Q-112 (Staff.)
Section 2—Math; Daily, 11:00, Q-112. (Staff.)

Laboratory fee, \$2.00. Considers such topics as objectives, selection, organization, and presentation of subject matter, appropriate classroom methods and procedures, instructional materials and evaluation of learning experiences in the areas of mathematics, the physical sciences, and the biological sciences.

Ed. 141. Methods of Teaching English in Secondary Schools. (3)

Daily, 11:00; T-211. Content and method in teaching the English language arts. (Bryan.)

Ed. 142. Oral-aural Method in Teaching Foreign Languages. (3)

Daily, 9:30; A-212. Prerequisite, 20 academic hours in a particular language and approval of adviser. Graduate credit allowed by special arrangement and adviser's approval. Designed for high school teachers. Methods in making and using tape recordings, using electronic laboratories, developing oral-aural skills and direct approach to language teaching are emphasized. (Rovner.)

Ed. 143. Foreign Language Methods in Elementary Schools. (3)

Daily, 9:30; A-209. Prerequisite, 20 academic hours or equivalent in a particular language and adviser's approval. Registration limited and based upon approval of adviser. Methods and techniques for developmental approach to the teaching of modern foreign languages in elementary schools. Use of realia, development of oral-aural skills and understanding of young children in language development are stressed.

(Mendeloff.)

Ed. 145. Principles and Methods of Secondary Education. (3)

Daily, 11:00; G-205. This course is concerned with the principles and methods of teaching in junior and senior high schools.

(Breckbill.)

Ed. 147. Audio-Visual Education. (3)

Section 1—Daily, 8:00; P-306

(Maley.)

Section 2—Daily, 11:00; P-306

(Schramm.)

Laboratory fee, \$1.00. Sensory impression in their relation to learning, projection apparatus, its cost and operation; slides, film-strips, and films; physical principles underlying projection; auditory aids to instruction; field trips; pictures, models, and graphic materials, integration of sensory aids with organized instruction. Recommended for all education students.

Ed. 150. Educational Management. (3)

M. T. Th. F., 11:00; G-205. Constructing and interpreting measures of achievements.

(Evans.)

Ed. 151. Statistical Methods in Education. (3)

Section 1—Daily, 9:30; Q-132.

Section 2—Daily, 11:00; Q-132.

Designed as a first course in statistics for students in education. Emphasis is upon educational applications of descriptive statistics, including measures of central tendency, variability and association.

(Johnson.)

Ed. 153. The Teaching of Reading. (3)

Section 1—Primary and intermediate grades—9:30, Daily; R-112.

(Bennett.)

Section 2—Primary and intermediate grades—11:00, Daily; R-202.

(Bennett.)

Section 3—Junior and Senior High Schools—11:00, Daily; Q-113.

(Ramsay.)

Concerned with fundamentals of development reading instruction, including reading readiness, uses of experience records, procedures in using basal readers, the improvement of comprehension, teaching reading in all areas of the curriculum, uses of children's literature, the program in word analysis, and procedures for determining individual needs.

Ed. 154. Remedial Reading Instruction. (3)

Daily, 8:00; AR-33. For supervisors and teachers who wish to help retarded readers.

Concerned with causes of reading difficulties, the identification and diagnosis of retarded pupils, instructional materials, and teaching procedures. Prerequisite, Ed. 153 or the equivalent.

(Massey.)

Ed. 155. Laboratory Practice in Reading for Elementary and Secondary Schools. (3)

Daily, 9:30, and arranged; AR-33. Prerequisite, Ed. 154. A laboratory course in which each student has one or more pupils for analysis and instruction. At least one class meeting per week to diagnose individual cases and to plan instruction.

(Massey.)

Education

Application for enrollment should be mailed to Dr. Will J. Massey, College of Education, before June 1, 1961.

Ed. 160. Educational Sociology. (3)

Daily, 11:00; T-10. 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. (La Follette.)

Ed. 161. Principles of Guidance. (3)

Daily, 9:30; R-103. Overview of principles and practices of guidance-oriented education. (Gardner.)

Ed. 162. Mental Hygiene in the Classroom. (3)

Section 1—Daily, 8:00; T-10 (Mershon.)

Section 2—Daily, 9:30, T-10 (Mershon.)

Section 3—Daily, 11:00; O-101 (Chenault.)

The practical application of the principles of mental hygiene to classroom problems.

Ed. 188. Special Problems in Education. (1-3)

Prerequisite, consent of instructor. Available only to mature students who have definite plans for individual study of approved problems. Course cards must have the title of the problem and the name of the faculty member who has approved it. (Staff.)

Ed. 189. Workshops, Clinics, and Institutes.

Ed. 189-1. Education in Family Finance. (6)

Daily, 8:00-3:00; Q-107. June 26 to August 4, 1961. The course is especially designed for junior, senior high school, and college teachers and other educators interested in developing and improving classroom instruction in personal and family money management. Activities of the total workshop will include lectures by staff and consultants, small group work, study of individual problems, field trips and evaluation of available materials. For a detailed description of the workshop see page 17. Daily application is recommended. (Risinger.)

Ed. 189-4. Business Educator's Conference on Office Practice and Machines. (2)

Daily, 9:00-3:00. June 26 to July 7, 1961. For business educators who are interested in developing further their understandings in modern office machines, and in the materials and methods for teaching such courses as office machines, office practice, clerical practice and secretarial practice. See also page 13 for more details.

Ed. 189-6. Industrial Arts Curriculum Workshop. (2)

Daily, 1:00; P-221. June 26 to July 14, 1961. This workshop is intended to deal with trends and factors affecting curriculum construction with special emphasis on Industrial Arts. (Harrison.)

Ed. 189-11. Use of Community Resources. (3)

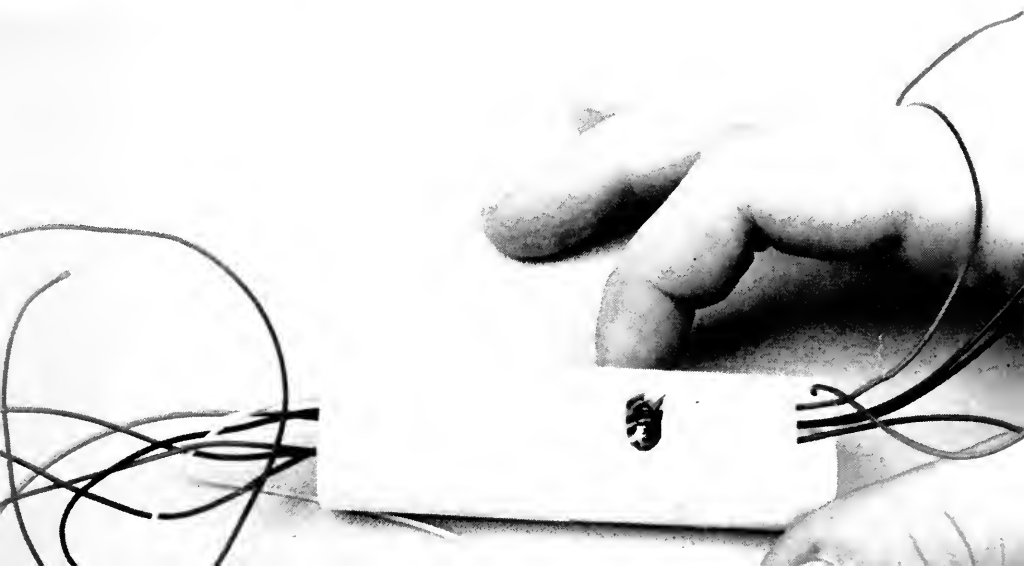
Daily, 9:30-3:30; AR-22. June 26 to July 14, 1961. This workshop is offered for persons who teach in kindergarten or in grades one to twelve, inclusive. It is designed to help teachers learn to utilize community resources to strengthen a sound program



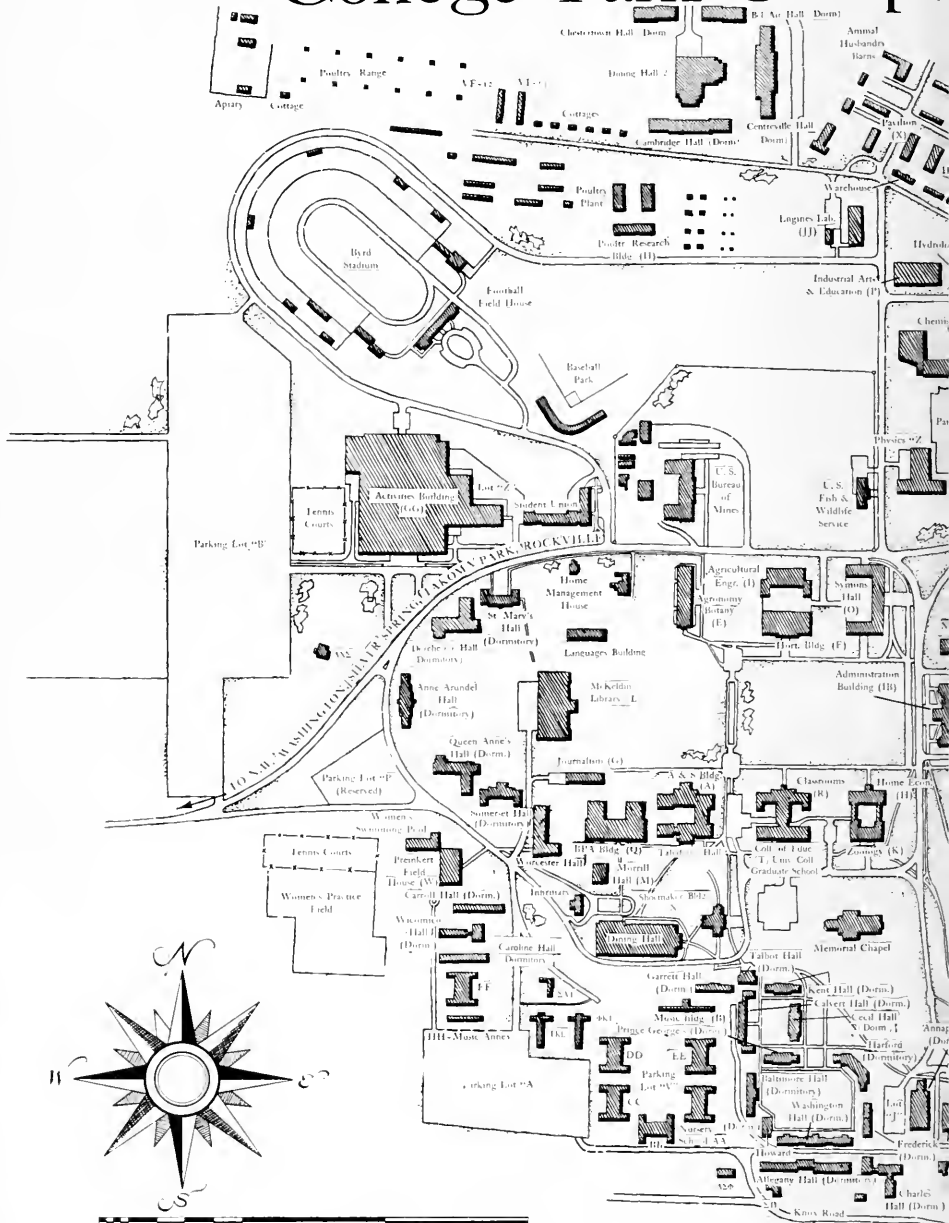
University Theatre—Summer Theatre

Orientation to the Campus

Our technological world

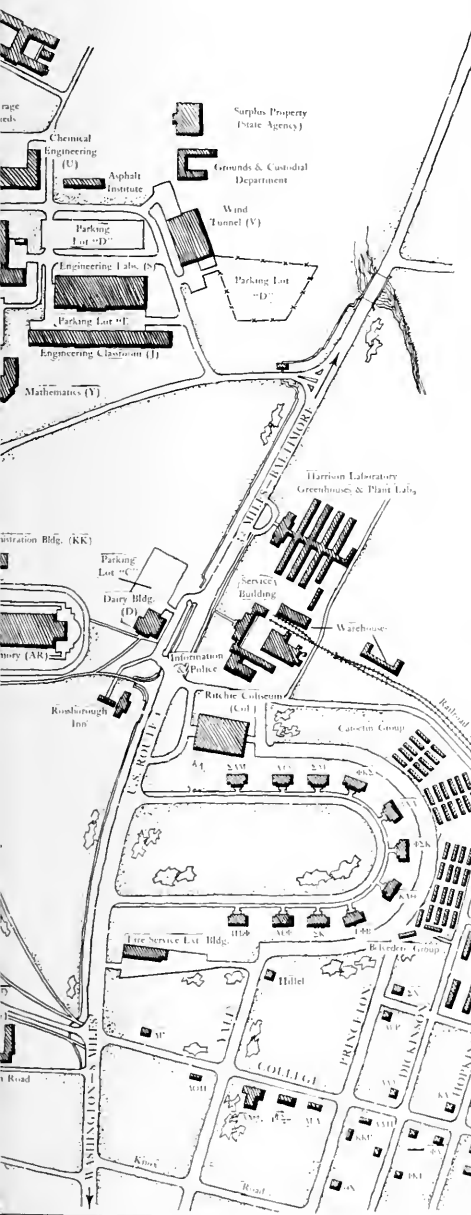


UNIVERSITY OF College Park Campus



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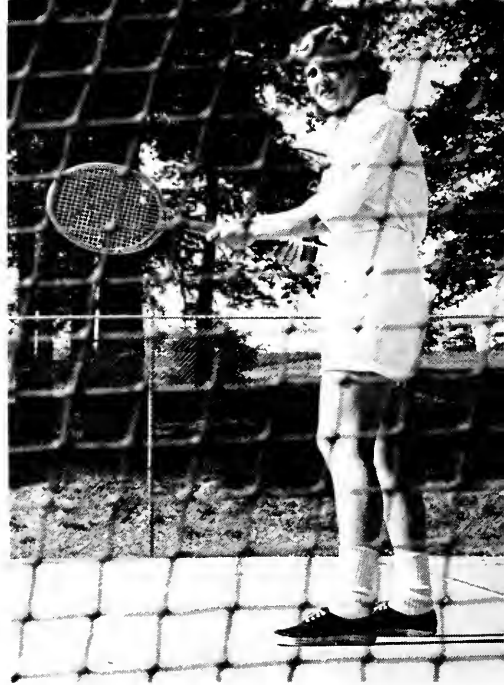
BUILDING CODE LETTERS FOR CLASS SCHEDULES

A	Arts and Sciences—Francis Scott Key Hall
AA	Nursery School —Tahaferro Hall
AR	Armory
B	Muse
IB	Administration
C	Chemistry
CC	Psychology
Col	Coliseum
D	Dairy—Turner Laboratory
DD	Psycho-Pharmacology Laboratory
E	Acronomy—Botany—H. J. Patterson Hall
EE	Counseling Center
F	Horticulture—Holzapfel Hall
H	Temporary Classroom
G	Journalism
GG	Col. Student Activities Building
H	Home Economics
I	Agricultural Engineering—Shriver Laboratory
II	Poultry—Jull Hall
J	Engineering Classroom Building
JJ	Engines Research Laboratory—Molecular Physics)
K	Zoology—Nivester Hall
KK	North Administration Building
L	Library—M. Koldin Hall
M	Morrill Hall
N	Shoemaker Building
O	Agriculture—Symons Hall
P	Industrial Arts and Education—J. M. Patterson Bldg.
Q	Business & Public Administration
R	Classroom Building—Woods Hall
S	Engineering Laboratories
T	Education—Skinner Building
U	Chemical Engineering
V	Wind Tunnel
W	Prentick Field House
X	Judging Pavilion
Y	Mathematics
Z	Physics

Surorities Not Shown
Alpha Xi Delta

Fraternities Not Shown
Alpha Epsilon Pi
Zeta Beta Tau
Phi Kappa Gamma
Tau Epsilon Phi

Nursery school



Recreation

Practicum in counseling techniques



of teaching and learning. The Smithsonian Institution will receive special attention as an excellent example of a valuable community resource. (Brinton, Kendall.)

Ed. 189-17. Teaching Elementary School Science. (3)

Daily, 9:30-3:30; T-119. June 26 to July 14, and July 17 to August 4, 1961. Two three-week workshops in science especially designed for elementary supervisors, principals and teachers who have special responsibility for science in their school system. (Blough, Dodd.)

Ed. 189-26. Human Relations in Educational Administration. (6)

Daily, 9:00-3:00; Q-129-130; throughout the summer session. Prerequisite, a master's degree. Enrollment limited. This workshop is concerned with the development of leadership teams capable of providing in-service programs in human relations in local school systems. Preference in enrollment will be given to teams designated by Maryland school systems. (Newell, Bowie.)

Ed. 189-27. The Public Transportation of School Children. (3)

Daily, 9:00, R-101. June 26 to July 14, 1961. This workshop will serve as the means to consider the problems of school bus transportation, solutions employed, and a review of research in this field. Enrollment limited.

Ed. 189-28. The Administration and Supervision of Special Education Programs. (3)

Daily, 9:00 to 3:00, AR-29. June 26 to July 14. This workshop will consider the areas of primary concern to administrators and supervisors in determining Special Education needs, and in establishing and carrying out educational program modification. (Staff.)

Ed. 189-29. The Education of Children with Learning Impairments. (3)

Daily, 9:00-3:00. To be arranged off-campus. June 26 to July 14. This workshop will demonstrate techniques and materials in reaching children with learning disabilities resulting from disturbances in the receptivity of stimuli, within the process of learning and the expression of what has been learned. (Hebeler.)

Ed. 189-30. The Education of Children with Superior Intellectual Ability. (3)

Daily, 9:00-3:00. To be arranged off-campus. July 17 to August 4. This workshop will be concerned with the characteristics, identification, survey of special programs and teaching techniques, curriculum and material for children who are gifted in the elementary and secondary level. (Hebeler.)

Ed. 189-33. Child Study Leaders. (2)

Daily, 8:00-3:00; J-8A. June 26 to July 7, 1961. This workshop is designed primarily for leaders or prospective leaders to acquaint them with principles and procedures of the child study program. All three year levels of the program will be covered. See also page 16. (Prescott.)

Ed. 189-34. Administrators' Conference on Implications of Human Development Principles. (2)

Daily, 8:00-3:00; J-8A, July 10 to July 21, 1961. This Administrators' Conference is open to superintendents of schools, supervisors and principals. It will examine recent scientific research findings and theory regarding human growth, learning and behavior and will consider the implications of this knowledge for educational practice,

Education

including such problems as grouping for effective learning, marking, curriculum control, teaching purposes, home-school interaction, the development and use of cumulative records, and mental health problems. See also page 16. (Prescott.)

Ed. 189-35. Application of Human Development Principles in Classrooms. (2)
Daily, 8:00-3:00, J-11. July 24 to August 4, 1961. This workshop is open to persons persons who have been in the child study program for three years or more. Its purpose is to consider classroom practices in the light of human development principles. See also page 16. (Prescott.)

Ed. 189-36. Human Development and Religious Education. (2)
Daily, 8:00-3:00, J-10. July 24 to August 4, 1961. This workshop is open to persons who are responsible for planning and organizing programs of religious education. The workshop will be entirely non-denominational and will focus on examining scientific knowledge about human development, learning, behavior, and adjustment and considering the implications of this knowledge for religious educational practice and church school programs. (Prescott.)

Ed. 189-41. Counseling and Guidance Training Institute. (6)
June 26 to August 4. Daily, 8.00 to 4:00, Q-213. See page 21-22 for description. (Byrne.)

Ed. 189-43. Counselor Education II
Daily, 8:30 to 3:00. June 26 to August 11. Enrollment limited to representatives of sponsoring local units. Second of a two-summer sequence designed to prepare counselors. Prerequisites, Ed. 250, Ed. 161, and Ed. 260 or equivalent. Students enroll for Ed. 253, Ed. 261, and Ed. 162 for a total of (7) hours each. (Marx.)

Ed. 202. The Junior College. (2)
Daily, 8:00; M.T.Th.F.; T-219. The philosophy and development of the junior college in the United States with emphasis on curriculum and administrative controls. (Kelsey.)

Ed. 203. Problems in Higher Education. (3)
Daily, 9:30; T-219. A study of present problems in higher education. (Kelsey.)

Ed. 205. Comparative Education (3)
Daily, 11:00; T-219. A study of historical changes in ways of looking at national school systems, and of problems in assessing their effectiveness. (Wiggin.)

Ed. 210. The Organization and Administration of Public Education. (3)
Daily, 8:00; G-109A. The basic course in school administration. The course deals with the organization and administration of school systems—at the local, state, and federal levels, and with the administrative relationships involved. (Roesch.)

Ed. 211. The Organization, Administration, and Supervision of Secondary Schools. (3)
Daily, 8:00; G-109B. The work of the secondary school principal. The course includes topics such as personnel problems, supervision, school-community relationships, student activities, schedule making, and internal financial accounting. (J. P. Anderson.)

Ed. 214. School Plant Planning. (2)
Daily, 9:30, M. T. Th. F.; Q-115. An orientation course to which the planning of school buildings is developed as educational designing with reference to problems of site, building facilities, and equipment. (van Zwoll.)

Ed. 216. Public School Supervision. (3)

Daily, 11:00; Q-110. Deals with recent trends in elementary and high school supervision; the nature and function of supervision; planning supervisory programs; evaluation and rating; participation of teachers and other groups in policy development; school workshops; and other means for the improvement of instruction.

(J. P. Anderson.)

Ed. 217. Administration and Supervision in Elementary Schools. (3)

Daily, 11:00; Q-115. Problems in organizing and administering elementary schools and improving instruction.

(Benthul.)

Ed. 219. Seminar in Educational Administration and Supervision. (2)

M.T.Th.F., 9:30; G-109A. Prerequisite, at least four hours in educational administration and supervision or consent of instructor. A student may register for two hours and may take the seminar a second time for an additional two hours.

(Roesch.)

Ed. 220. Pupil Transportation. (2)

M.T.Th.F., 8:00-9:30, R-101. July 17 to August 4, 1961. Includes consideration of the organization and administration of state, county, and district pupil transportation service with emphasis on safety and economy. The planning of bus routes; the selection and training of bus drivers, and maintenance mechanics; the specification of school buses; and procurement procedures are included. (Students may also register for Ed. 188. One credit with Haggerty.)

(Haggerty.)

Ed. 225. School Public Relations. (3)

Daily, 8:00; Q-115. A study of the interrelationships between the community and the school. Public opinion, propaganda, and the ways in which various specified agents and agencies within the school have a part in the school public relations program are explored.

(van Zwoll.)

Ed. 229. Seminar in Elementary Education. (2)

M.T.Th.F., 11:00; T-20. Primarily for individuals who wish to write seminar papers. Enrollment should be preceded by at least 12 hours of graduate work in education.

(O'Neill.)

Ed. 234. The School Curriculum. (2)

M.T.Th.F., 9:30; Q-133. A foundations course embracing the curriculum as a whole from early childhood through adolescence, including a review of historical developments, an analysis of conditions affecting curriculum change, an examination of issues in curriculum making, and a consideration of current trends in curriculum design.

(Benthul.)

Ed. 235. Principles of Curriculum Development. (3)

Daily, 9:30; Q-114. Curriculum planning, improvement, and evaluation in the schools; principles for the selection and organization of the content and learning experiences; ways of working in classroom and school on curriculum improvement.

(Staff.)

Ed. 241. Problems in the Teaching of Reading. (3)

Elementary Schools—9:30; Daily; Q-113.

Implications of current theory and results of research for the teaching of reading. Attention is given to all areas of developmental reading instruction, with special emphasis on persistent problems. Prerequisite, Ed. 153 or equivalent.

(Ramsey.)

Education

Ed. 243. *Problems of Teaching Arithmetic in Elementary Schools.* (2)

M.T.Th.F., 8:00; T-20. Implications of current theory and results of research for the teaching of arithmetic in elementary schools. (Dunlap.)

Ed. 244. *Problems of Teaching Language Arts in Elementary Schools.* (2)

M.T.Th.F., 9:30; T-12. Implication of current theory and results of research for the language arts in the elementary schools. (Kinn.)

Ed. 245. *Introduction to Research.* (2)

Section 1—M.T.W.F., 11:00; Q-133. (Hovet.)

Section 2—W.T.W.Th., 12:30; G-205 (Evans.)

Intensive reading, analysis, and interpretation of research; applications to teaching fields; the writing of abstracts, research reports, and seminar papers.

Ed. 247. *Seminar in Science Education.* (2)

M.T.Th.F., 8:00; Q-132. An opportunity to pursue problems in curriculum making, course of study development, or other science teaching problems. Class members may work on problems related directly to their own school situations. (Ury.)

Ed. 250. *Analysis of the Individual.* (3)

Daily, 9:30; O-32. Collecting and interpreting non-standardized pupil appraisal data; synthesis of all types of data through case study procedures. Prerequisites, Ed. 161, Ed. 151, Ed. 263, or permission of instructor. (Jordan.)

Ed. 253. *Occupational Choice: Theory and Information.* (2)

Section 1—M.T.Th.F., 11:00; O-30. (Gardner.)

Section 2—M.T.Th.F., 12:30; U-15. (Staff.)

Research and theory related to occupational and educational decisions; school programs of related information and other activities in occupational decisions.

Ed. 254. *Organization of Guidance Programs.* (2)

M.T.Th.F., 8:00; O-32. Instilling the guidance point of view and implementing guidance practices. All guidance courses except Seminar are prerequisites. (Jordan.)

Ed. 255. *Advanced Laboratory Experiences in Reading Instruction.* (3)

Daily, 9:30 and arranged. Ed. Annex. Prerequisites, 21 crs. applicable to Master's program in Corrective and Remedial Reading, including Ed. 154, Ed. 150, and Ed. 141 or Ed. 244. A. Diagnostic Techniques. Each participant will assist in diagnosing pupils with reading disabilities and in recommending instructional procedures for them. Applications for enrollment must be mailed to Dr. Massey, College of Education, before June 1. (Massey.)

Ed. 260. *School Counseling: Theoretical Foundations and Practice.* (3)

Daily, 9:30; O-101. Exploration of counseling theories and the practices which stem from them. Ed. 161, Ed. 250, Ed. 253 are prerequisite. (Tarwater.)

Ed. 261. *Practicum in Counseling.* (2)

Section 1—M.T.Th.F., 8:00, O-101. (Staff.)

Section 2—M.T.W.Th.F., 8:30-3:00. (Marx.)

Section 3. (Chenault.)

Section 4—8:30-3:00. (Staff.)

Section 5—8:30-3:00. (Staff.)

Sequence of supervised counseling experiences of increasing complexity limited to 6 applicants in advance. Two hour class plus laboratory. Prerequisites, Ed. 260 and permission of instructor.

Ed. 262. Measurement in Pupil Appraisal. (3)

Daily, 8:00; O-30. Study of group tests typically employed in school testing programs; discussion of evidence relating to the measurement of abilities. Prerequisite, Ed. 150. (McLaughlin.)

Ed. 269. Seminar in Guidance. (2)

M.W.Th.F., 11:00; O-32. Registration only by approval of instructor. Final guidance course. Students study and conduct research. (Tarwater.)

Ed. 281. Source Materials in Education. (2)

M.T.Th.F., 9:30; T-20. Bibliography development through a study of source materials in education, special fields of education, and for seminar papers and theses. (Wiggin.)

Ed. 288. Special Problems in Education. (1-6)

Arranged. Master of education or doctoral candidates who desire to pursue special research problems under the direction of their advisers may register for credit under this number. *Course card must have the title of the problem and the name of the faculty member under whom the work will be done.* (Staff.)

Ed. 290. Doctoral Seminar. (1)

Arranged. Prerequisite, passing the preliminary examination for a doctor's degree in Education, or recommendation of a doctoral adviser. Analysis of doctoral projects and theses, and of other on-going research projects. A doctoral candidate may participate in the Seminar during as many University sessions as he desires, but may earn no more than three semester hours of credit in the Seminar. An Ed.D. candidate may earn in total no more than nine semester hours, and a Ph.D. candidate, no more than eighteen semester hours, in the Seminar and in Ed. 399. (Johnson.)

Ed. 399. Research—Thesis. (1-6)

First and second semesters; summer session. Students who desire credit for a master's thesis, a doctoral dissertation, or a doctoral project should use this number. (Staff.)

HOME ECONOMICS EDUCATION

H. E. Ed. 102. Problems in Teaching Home Economics. (3)

Daily, 8:00-9:20; T-102. Prerequisite, consent of instructor. A study of the managerial aspects of teaching and administering a homemaking program; the physical environment, organization, and sequence of instructional units, resource materials, evaluation, home projects. (Spencer.)

H. E. Ed. 200. Seminar in Home Economics Education. (2)

June 26-July 14, Daily, 9:30-12:00; T-102. (Spencer.)

HUMAN DEVELOPMENT EDUCATION

(In addition to the courses listed below, see Ed. 189-33, -34, -35.)

H. D. Ed. 100. Principles of Human Development I. (3)

Daily, 8:00; J-317. This course gives a general overview of the scientific principles

Education

that describe human development, learning and behavior and relate these principles to the task of the school. Intensive laboratory work with case records is an integral part of this course. Ordinarily, H. D. Ed. 100 and H. D. Ed. 101 are not taken concurrently. (Goering.)

H. D. Ed. 101. Principles of Human Development II. (3)

Daily, 9:30; J-317. Continuation of H. D. Ed. 100, which is a prerequisite. *These two courses, H. D. 100 and H. D. 101, are designed to meet the usual certificate requirements in educational psychology.* (Perkins.)

H. D. Ed. 112, 114, 116. Scientific Concepts in Human Development I, II, III. (3, 3, 3)

H. D. Ed. 113, 115, 117. Laboratory in Behavior Analysis I, II, III. (3, 3, 3)

Summer workshop courses for undergraduates. In any one summer, concept and laboratory courses must be taken concurrently. For further description, see Six-Week Human Development Workshop, page 15.

H. D. Ed. 200. Introduction to Human Development and Child Study. (3)

Section 1—8:00 Daily, J-318. (Perkins.)

Section 2—9:30 Daily, J-392. (Waetjen.)

This course offers a general overview of the scientific principles which describe human development and behavior and makes use of these principles in the study of individual children. When this course is offered during the academic year, each student will observe and record the behavior of an individual child through the semester and must have one half-day a week free for this purpose. The course is basic to further work in child study and serves as a prerequisite for advanced courses where the student has not had field work or at least six weeks of workshop experience in child study. When this course is offered during the summer intensive laboratory work with case records will be substituted for the study of an individual child.

H. D. Ed. 201. Biological Bases of Behavior. (3)

Daily, 9:30; J-318. H. D. Ed. 200 or its equivalent must be taken before H. D. Ed. 201 or concurrently. Emphasizes that understanding human life, growth and behavior depends on understanding the ways in which the body is able to capture, control and expend energy. Application throughout is made to human body processes and implications for understanding and working with people. (Goering.)

H. D. Ed. 202. Social Bases of Behavior. (3)

Daily, 8:00; J-320. H. D. Ed. 200 or its equivalent must be taken before H. D. Ed. 202 or concurrently. Analyzes the socially inherited and transmitted patterns of pressures, expectations and limitations learned by an individual as he grows up. These are considered in relation to the patterns of feeling and behaving which emerge as the result of growing up in one's social group. (Matteson.)

H. D. Ed. 203. Integrative Bases of Behavior. (3)

Daily, 9:30; J-320. H. D. Ed. 200 or its equivalent, H. D. Ed. 201 and H. D. 202, are prerequisite. Analyzes the organized and integrated patterns of feeling, thinking, learning and behavior which emerge from the interaction of basic biological drives and potentials with one's unique experience growing up in a social group. (Peck.)

H. D. Ed. 210. Affectional Relationships and Processes in Human Development. (3)

Daily, 8:00; J-321. H. D. Ed. 200 or its equivalent must be taken before or concurrently. Describes the normal development, expression and influence of love in infancy, childhood, adolescence and adulthood. It deals with the influence of parent-child relationships involving normal acceptance, neglect, rejection, inconsistency, and over-protection upon health, learning, emotional behavior and personality adjustment and development. (Peck.)

H. D. Ed. 211. Peer-Culture and Group Processes in Human Development. (3)

Daily, 9:30; J-321. H. D. Ed. 200 or its equivalent must be taken before or concurrently. Analyzes the processes of group formation, role-taking and status-winning. It describes the emergence of the "peer-culture" during childhood and the evolution of the child society at different maturity levels to adulthood. It analyzes the developmental tasks and adjustment problems associated with winning, belonging and playing roles in the peer group. (Matteson.)

H. D. Ed. 212, 214, 216. Advanced Scientific Concepts in Human Development, I, II, III. (3, 3, 3)

H. D. Ed. 213, 215, 217. Advanced Laboratory in Behavior Analysis, I, II, III. (3, 3, 3)

Summer workshop courses for graduates providing credit for as many as three workshops. In any one summer, concept and laboratory courses must be taken concurrently. For further description, see Six-Week Human Development Workshop, page 15.

H. D. Ed. 218. Workshop in Human Development. (6)

Prerequisites, H. D. Ed. 212, 213, 214, 215, 216, 217. Summer workshop in human development for graduate students who have had three workshops and wish additional workshop experience. This course can be taken any number of times, but cannot be used as credit toward a degree. (Goering.)

H. D. Ed. 221. Learning Theory and the Educative Process. (3)

Daily, 8:00; J-322. Prerequisites, H. D. Ed. 100 and 101 or equivalent. Provides a systematic review of the major theories of learning and their impact on education. Considers factors that influence learning. (Waetjen.)

H. D. Ed. 270. Seminars in Special Topics in Human Development. (2-6)

Arranged. Prerequisites, consent of instructor. An opportunity for advanced students to focus in depth on topics of special interest growing out of their basic courses in human development. (Staff.)

INDUSTRIAL EDUCATION

The technical courses which are offered are intended for industrial arts teachers, arts and crafts teachers, education for industry majors, and adult education leaders.

The professional courses are open to industrial arts teachers and supervisors, to vocational-industrial teachers and supervisors, to school administrators and to other graduate students whose planned programs include work in this area.

Ind. Ed. 1. Mechanical Drawing. (2)

Daily, 8:00; P-208. Laboratory fee, \$5.00. This course constitutes an introduction to

Education

orthographic multiview 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, demonstrating conventional representation and single stroke letters. (Jacobsen.)

Ind. Ed. 2. Elementary Woodworking. (2)

Daily, 9:30; P-218. Laboratory fee, \$5.00 This is a woodworking course which involves primarily the use of hand tools. (Schramm.)

Ind. Ed. 21. Mechanical Drawing. (2)

Daily, 8:00; P-208. Prerequisite, Ind. Ed. 1. Laboratory fee, \$5.00. A course dealing with working drawings, machine design, pattern layouts, tracing and reproduction. Detail drawings followed by assemblies are presented. (Jacobsen.)

Ind. Ed. 22. Machine Woodworking I. (2)

Daily, 9:30; P-218. Prerequisite, Ind. Ed. 2. Laboratory fee, \$5.00. 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. (Schramm.)

Ind. Ed. 28. Electricity I. (2)

Daily, 11:00; P-212. Laboratory fee, \$5.00. 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. (Staff.)

Ind. Ed. 48. Electricity II. (2)

Daily, 11:00; P-212. Laboratory fee, \$5.00. Principles involved in a-c and d-c electrical equipment, including heating measurements, motors and controls, electro-chemistry, the electric arc, inductance and reactance, condensers, radio, and electronics. (Staff.)

Ind. Ed. 124 a, b. Organized and Supervised Work Experience.

Arranged. (Three credits for each internship period, total: 6 credits). This is a work experience sequence planned for students enrolled in the curriculum, "Education for Industry." The purpose is to provide the students with opportunities for first-hand experiences with business and industry. The student is responsible for obtaining his own employment with the coordinator advising him as regards the job opportunities which have optimum learning value. The nature of the work experience desired is outlined at the outset of employment and the evaluations made by the student and the coordinator are based upon the planned experiences. The time basis for each internship period is 6 forty-hour weeks or 240 work hours. Any one period of internship must be served through continuous employment in a single establishment. Two internship periods are required. The two internships may be served with the same business or industry. The completion for credit of any period of internship requires the employer's recommendation in terms of satisfactory work and work attitudes. More complete details are found in the handbook prepared for the student of this curriculum. (Staff.)

Ind. Ed. 150. Training Aids Development. (3)

Daily, 8:00; P-306. Study of the aids in common use as to their source and application. Special emphasis is placed on principles to be observed in making aids useful to shop teachers. Actual construction and application of such devices will be required. (Maley.)

Ind. Ed. 165. Modern Industry. (3)

Daily, 8:00; P-300. This course provides an overview of manufacturing industry in the American social, economic, and culture pattern. Representative basic industries are studied from the viewpoints of personnel and management organization, industrial relations, production procedures, distribution of products, and the like. (Harrison.)

Ind. Ed. 168. Trade or Occupational Analysis. (2)

M. T. Th. F., 9:30; P-221. This course should precede Ind. Ed. 169. Provides a working knowledge of occupational and job analysis, which is basic in organizing vocational-industrial courses of study. (Jacobsen.)

Ind. Ed. 169. Course Construction. (2)

M. T. Th. F., 11:00; P-221. Surveys and applies techniques of building and reorganizing courses of study for effective use in vocational and occupational schools. (Jacobsen.)

Ind. Ed. 214. School Shop Planning and Equipment Selection. (3)

Daily, 9:30; P-205. This course deals with principles involved in planning a school shop and provides opportunities for applying these principles. Facilities required in the operation of a satisfactory shop program are catalogued and appraised. (Tierney.)

Ind. Ed. 216. Supervision of Industrial Arts. (2)

M. T. Th. F., 12:30; P-221. (Tierney.)

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

Arranged. This is a course offered by arrangement for persons who are conducting research in the areas of industrial arts and vocational education. (Staff.)

Ind. Ed. 241. Content and Method of Industrial Arts. (3)

Daily, 11:00; P-221. Various methods and procedures used in curriculum development are examined and those suited to the field of Industrial Arts education are applied. Methods of and devices for industrial arts instruction are studied and practiced. (Maley.)

Ind. Ed. 248. Seminar in Industrial Arts and Vocational Education. (2)

Arranged. (Staff.)

Ed. 147. Audio-Visual Education. (3)

See details under Ed. listing.

Section 1—Daily, 8:00; P-306.

Section 2—Daily, 11:00; P-306.

(Maley.)

(Schramm.)

Ed. 189-6. Industrial Arts Curriculum Workshop. (2)

Daily, 1:00-3:00; P-221. June 26 to July 10, 1961. See details under Ed. listing. (Harrison.)

MUSIC EDUCATION

Mus. Ed. 128. Music for the Elementary Classroom Teacher. (3)

Daily, 9:30-10:50; B-7. Prerequisite, Music 16 or consent of instructor. A study of the group activities and materials through which the child experiences music. The course is designed to aid music specialists and classroom teachers. It includes an outline of objectives and a survey of instructional methods. (Henke.)

Education

Mus. Ed. 132. Music in the Secondary School. (3)

Daily, 11:00-12:20; B-9. A study of the vocal and instrumental programs in the secondary school. A survey of the needs in general music, and the relationship of music to the core curriculum. (Henke.)

Mus. Ed. 175. Methods and Materials in Vocal Music for the High School. (2)

Daily, 2:00-5:00, July 10-21 only. Lib. 405. Offered as part of a Workshop in Choral Music for a two week period. Supplementary fee, \$5.00. Lectures, conferences, and discussions of problems of repertoire, diction, tone production, interpretation, and reading of new music. A chorus composed of selected high-school students will be available for demonstrations in the second week of the workshop. (Staff.)

Mus. Ed. 200. Research Methods in Music and Music Education. (3)

Daily, 9:30-10:50; B-1. The application of methods of research to problems in the fields of music and music education. The preparation of bibliographies and written exposition of research projects in the area of the student's major interest. (Grentzer.)

SCIENCE EDUCATION

Sci. Ed. 105. Science in the Elementary Schools. (3)

Daily, 8:00; T-119. Laboratory fee, \$2.00. General science content and teaching materials for practical use in classrooms. Includes experiments, demonstrations, constructions, observation, field trips, and use of audio-visual materials. Emphasis is on content and method related to science units in common use. (Dodd.)
Enrollment limited to 35 persons.

Ed. 189-17. Workshops, Clinics, and Institutes: Teaching Elementary School Science. (3)

Section 1—Daily, 9:30-3:30; T-119, June 26-July 14.

Section 2—Daily, 9:30-3:30; T-119, July 17-August 4.

SPECIAL EDUCATION

Sp. Ed. 170. Introduction to Special Education. (3)

Daily, 8:00; R-112. Designed to give an understanding of the needs of all types of exceptional children, stressing preventive and remedial measures. (Staff.)

Sp. Ed. 171. Characteristics of Exceptional Children. (3)

Daily, 11:00; R-112. A study of psychological characteristics of retarded children, including discovery, analysis of causes, testing techniques, case studies, and remedial educational measures. (Staff.)

Ed. 189-28. Workshops, Clinics, and Institutes: The Administration and Supervision of Special Education Programs. (3)

(Staff.)

Ed. 189-29. Workshops, Clinics, and Institutes: The Education of Children with Learning Impairments. (3)

(Hebeler.)

Ed. 189-30. Workshops, Clinics, and Institutes: The Education of Children with Superior Intellectual Ability. (3)

(Hebeler.)

ENGINEERING

C. E. 110. Surveying I. (3)

June 12 to June 24, 1961, inclusive. Daily, all day, J-103, J-104. Prerequisite, junior standing or consent of department. Principles and methods of making plane and topographic surveys. Use, care, and adjustment of instruments. Consistent accuracy and systematic procedures in field work, computations, and mapping are emphasized for obtaining desired objectives. Open only to students who were enrolled in the College of Engineering during the academic year 1960-61. (Garber, Staff.)

C. E. 111. Surveying II. (3)

June 12 to June 24, 1961 inclusive. Daily, all day, J-103, J-104A. A continuation of C. E. 110 with emphasis on elementary problems of obtaining essential field data preliminary to design and locating points, lines, and grades for selected engineering construction. Open only to students who were enrolled in the College of Engineering during the academic year 1960-61. (Garber, Staff.)

Dr. 2. Engineering Drawing. (2)

Section 1—Daily, 10, 11; J-303.

Section 2—Daily, 7, 8 p.m.; J-303.

Prerequisite, Dr. 1. Lettering, use of instruments, orthographic projection, auxiliary views, revolution, sections, pictorial representation, dimensioning, fasteners, technical sketching and working drawings. (Staff.)

E. E. 1. Basic Electrical Engineering. (4)

Five lectures and one four-laboratory a week. Lecture daily, 7:30 a. m.; J-10. Laboratory, Saturday, 9:00, 10:00, 11:00, 12:00; S-107-A. Prerequisites, Math. 21, Phys. 21 or concurrent registration. Required of sophomores in electrical engineering. Laboratory fees, \$4.00. Basic concepts of electrical potential, current, power, and energy; d-c circuit analysis by the mesh-current and nodal methods; network theorems, magnetic field concepts; ferro-magnetic circuits. (Staff.)

ENGLISH

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

Eng. 1 is the prerequisite of Eng. 2.

(Barnes, Staff.)

Eng. 1—

Section 1—Daily, 8:00; A-14.

Section 2—Daily, 9:30; A-14.

Section 3—Daily, 11:00; A-14.

Eng. 2—

Section 1—Daily, 8:00; A-17.

Section 2—Daily, 9:30; A-17.

Section 3—Daily, 11:00; A-17.

Eng. 3, 4. Composition and World Literature. (3, 3)

Prerequisite, Eng. 2 or 21.

(Staff.)

English, Entomology

Eng. 3—

Section 1—Daily, 9:30; A-18.

Section 2—Daily, 9:30; O-236.

Section 3—Daily, 11:00; A-18.

Eng. 4—

Section 1—Daily, 8:00; A-207.

Section 2—Daily, 9:30; A-207.

Section 3—Daily, 11:00; A-207.

Eng. 116. Shakespeare. (3)

Daily, 9:30; A-133. Prerequisites, Eng. 4 or 6 and junior standing. The Roman history plays, the great tragedies, and the dramatic romances. (Zeeveld.)

Eng. 151. American Literature. (3)

Daily, 11:00; A-133. Prerequisite, Eng. 4 or 6 and junior standing. American prose and poetry since 1850. (Gravelly.)

Eng. 156. Major American Writers. (3)

Daily, 11:00; F-104. Prerequisites, Eng. 4 or 6 and junior standing. The study of two writers, one 19th century and one 20th century; close analysis of the form and technique of their important works. (Lutwack.)

Eng. 157. Introduction to Folklore. (3)

Daily, 9:30; F-104. Prerequisites, Eng. 4 or 6 and junior standing. Historical background of folklore studies; types of folklore with particular emphasis on folktales and folksongs, and on American folklore. (Cooley.)

Eng. 160. Advanced Expository Writing. (3)

Daily, 8:00; A-133. Prerequisites, Eng. 4 or 6 and junior standing. Special attention to problems relevant to the teaching of composition. (Herman.)

Eng. 206. Seminar in Renaissance Literature. (3)

Arranged. Special topics in Shakespeare. (Zeeveld.)

Eng. 226. Seminar in American Literature. (3)

Arranged. Readings and special topics in some major figures of American literature. (Lutwack.)

Eng. 399. Thesis Research. (1-6)

Arranged. (Murphy, Staff.)

ENTOMOLOGY

**Ent. S121.—Entomology for Science Teachers. (4)*

Five lectures and five two-hour laboratory periods a week. Lecture, 8:00; O-120. Laboratory, 9:00, 10:00; O-200. This course will include the elements of morphology, taxonomy and biology of insects using examples commonly available to high school teachers. It will include practice in collecting, preserving, rearing and experimenting with insects insofar as time will permit. (Haviland.)

*Intended for teachers.

Ent. 198. Special Problems. (1-3)

Credit and prerequisites to be determined by the Department. Investigation of assigned entomological problems. (Staff.)

Ent. 301. Advanced Entomology.

Credit and prerequisite to be determined by the Department. To be arranged. Studies of minor problems in morphology, taxonomy and applied entomology, with particular reference to the preparation of the student for individual research. (Staff.)

Ent. 399. Research.

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

FOREIGN LANGUAGES

French 0. Intensive Elementary French. (0)

Daily, 11:00; A-228. Intensive elementary course in the French language designed particularly for graduate students who wish to acquire a reading knowledge. (Hall.)

French 2. Elementary French. (3)

Daily, 8:00; A-231. Second semester of first-year French. Elements of grammar; pronunciation and conversation; exercises in composition and translation. (Parsons.)

French 4 or 5. Intermediate Literary French (3) or French 6 or 7. Intermediate Scientific French. (3)

Daily, 9:30; A-130. Prerequisite, French 1 and 2, or equivalent. Students interested in second year French should consult with Foreign Language Department at time of registration. Arrangements will be made to meet needs of students interested in either the first or second semester or literary or scientific French. (Parsons.)

German 0. Intensive Elementary German. (0)

Section 1—Daily, 8:00; A-209.

Section 2—Daily, 8:00; A-212.

Intensive elementary course in the German language designed particularly for graduate students who wish to acquire a reading knowledge. (Anderson, Staff.)

German 2. Elementary German. (3)

Daily; 9:30; A-228. Second semester of first-year German. Elements of grammar; pronunciation and conversation; exercises in composition and translation. (Anderson.)

German 4 or 5. Intermediate Literary German (3) or German 6 or 7, Intermediate Scientific German. (3)

Daily, 12:30; A-228. Prerequisite, German 1 and 2, or equivalent. Students interested in second year German should consult with Foreign Language Department at time of registration. Arrangements will be made to meet needs of students interested in either the first or second semester of literary or scientific German. (Hering.)

Chinese 1. Elementary Chinese. (3)

Daily, 9:30; A-214. Conversation; pronunciation; drill in simple characters. (Chen.)

Foreign Languages, Geography

French 171. *Practical French Phonetics.* (3)

Daily, 8:00. First Semester. Pronunciation of modern French. The sounds and their production, the stress group, intonation. (Mendeloff.)

Spanish 2. *Elementary Spanish.* (3)

Daily, 8:00; A-228. Second semester of first-year Spanish. Elements of grammar; pronunciation and conversation; exercises in composition and translation. (Allen.)

Spanish 4 or 5. *Intermediate Spanish.* (3)

Daily, 11:00; A-212. Prerequisite, Spanish 1 and 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. (Allen.)

LANGUAGE COURSES FOR TEACHERS

The Summer School program for language teachers consists of refresher courses in language (French, German, or Spanish according to demand), and methods and demonstration courses both for elementary and high school teaching. The language laboratory will provide practice both in acquiring oral and aural skills as well as instruction in the preparation of tapes and their use in teaching.

Foreign Language 140. (*French, German, Russian, or Spanish*). *Oral Practice In Modern Foreign Languages.* (3)

Daily, 11:00; A-130. Development of fluency in modern foreign languages, stress on correct sentence structure and idiomatic expression. Especially designed for teachers, offering practice in speaking the language. (Alter.)

Ed. 142. *Oral-aural Method in Teaching Foreign Languages.* (3)

Daily, 9:30; A-212. (See description on page 33.) (Rovner.)

Ed. 143. *Foreign Language Methods in Elementary Schools.* (3)

Daily, 9:30; A-209. (See description on page 33.) (Staff.)

GEOGRAPHY

Geog. 40. *Principles of Meteorology.* (3)

Daily, 8:00; Q-210. First and second semesters. An introductory study of the weather. Properties and conditions of the atmosphere, and methods of measurement. The atmospheric circulation and conditions responsible for various types of weather and their geographic distribution patterns. Practical applications. (Curry.)

Geog. 103. *Geographic Concepts and Source Materials.* (3)

Daily, 9:30; Q-210. First semester. A comprehensive and systematic survey of geographic concepts designed exclusively for teachers. Stress will be placed upon the philosophy of geography in relation to the social and physical sciences, the use of the primary tools of geography, source materials, and the problems of presenting geographic principles. (Deshler.)

Geog. 120. *Economic Geography of Europe.* (3)

Daily, 11:00; Q-228. First semester. The natural resources of Europe in relation to agricultural and industrial development and to present-day economic and national problems. (Curry.)

Geog. 122. Economic Resources and Development of Africa. (3)

Daily, 12:30; Q-228. Second semester. The natural resources of Africa in relation to agricultural and mineral production; the various stages of economic development and the potentialities of the future. (Deshler.)

GOVERNMENT AND POLITICS

G. & P. 1. American Government. (3)

Five periods a week. This course is designed as the basic course in government for the American Civilization Program, and it or its equivalent is a prerequisite to all other courses in the Department. It is a comprehensive study of government in the United States—national, state, and local.

Section 1—Daily, 8:00; Q-114.

(Dillon.)

Section 2—Daily, 11:00; Q-114.

(O'Donnell.)

G. & P. 4. State Government and Administration. (3)

Five periods a week. Daily, 11:00; Q-122. Prerequisite, G. & P. 1. A study of the organization and functions of state government in the United States, with special emphasis upon the government of Maryland. (Dillon.)

G. & P. 10. The Governments of the Far East. (2)

Four periods a week. M.T.W.F., 8:00; Q-211. Prerequisite, G. & P. 1. A study of the governments of China and Japan. (Steinmeyer.)

G. & P. 101. International Political Relations. (3)

Five periods a week. Daily, 11:00; Q-211. Prerequisite, G. & P. 1. A study of the major factors underlying international relations, the influence of geography, climate, nationalism, and imperialism, and the development of foreign policies of the major powers. (Lee.)

G. & P. 154. Problems of World Politics. (3)

Five periods a week. Daily, 9:30; Q-131. Prerequisite, G. & P. 1. A study of governmental problems of international scope, such as causes of war, problems of neutrality, and propaganda. Students are required to report on readings from current literature. (Steinmeyer.)

G. & P. 178. Public Opinion. (3)

Five periods a week. Daily, 9:30; Q-211. Prerequisite, G. & P. 1. An examination of public opinion and its effect on political action, with emphasis on opinion formation and measurement, propaganda, and pressure groups. (O'Donnell.)

G. & P. 261. Problems of Government and Politics. (3)

Q-369. To be arranged.

(Byrd.)

G. & P. 399. Thesis. (1-6)

To be arranged.

(Staff.)

HISTORY

H. 5. *History of American Civilization.* (3)

Five periods a week.

Section 1—Daily, 8:00.	A-130.	(Morton.)
Section 2—Daily, 8:00.	A-228.	(Simpson.)
Section 3—Daily, 9:30.	A-231.	(Kretschmann.)
Section 4—Daily, 9:30.	A-228.	(Ellefson.)
Section 5—Daily, 11:00.	A-231.	(Staff.)
Section 6—Daily, 11:00.	A-228.	(Simpson.)

H. 6. *History of American Civilization.* (3)

Section 1—Daily, 8:00.	A-106.	(Wilson.)
Section 2—Daily, 8:00.	A-110.	(Rader.)
Section 3—Daily, 9:30.	A-106.	(Smart.)
Section 4—Daily, 9:30.	A-110.	(Rader.)
Section 5—Daily, 11:00.	A-209.	(Smart.)
Section 6—Daily, 11:00.	A-110.	(Wilson.)

H. 41. *Western Civilization.* (3)

Daily, 8:00; A-18. The course is designed to give the student an appreciation of the civilization in which he lives in its broader setting. The study begins with the collapse of classical civilization and comes to the present. (Brockmann.)

H. 42. *Western Civilization.* (3)

Daily, 9:30. A-111. This course is designed to give the student an appreciation of the civilization in which he lives in its broadest setting. The study begins with the collapse of classical civilization and comes to the present. (Weinstein.)

H. 61. *Far Eastern Civilization.* (3)

Daily, 9:30. G-109B. This course seeks to give the student an understanding of a great civilization radically different from our own and an appreciation of the complex problems of the Far East and of American policy there. The approach is interdisciplinary within an historical framework. (Farquhar.)

H. 115. *The Civil War* (3)

Daily, 8:00. A-12. Prerequisite, H. 5, 6, or the equivalent. Military aspects, problems of the Confederacy; political, social, and economic effects of the war upon American society. A tour of one selected battlefield is a required part of the course. (Clark.)

H. 118. *Recent American History.* (3)

Daily, 9:30. A-16. Prerequisites, H. 5, 6, or the equivalent. Party politics, domestic issues, foreign relations of the United States since 1890. First semester, through World War I. (Merrill.)

H. 151. *History of the Ancient Orient and Greece.* (3)

11:00; A-16. A survey of the ancient empires of Egypt, the Near East, and Greece, with particular attention to their institutions, life, and culture. (Brockmann.)

- H. 171. *Europe in the World Setting of the Twentieth Century.* (3)
Daily, 9:30. A-1. Prerequisites, H. 41, 42, or H. 53, 54. A study of political, economic, and cultural developments in twentieth century Europe with special emphasis on the factors involved in the two World Wars and their global impacts and significance. (Mathews)
- H. 202. *Historical Literature: American.* (1-6)
Arranged. Readings in the standard works and monographic studies to meet the requirements of qualified graduate students who need intensive concentration in American history. (Staff.)
- H. 208. *Seminar in Recent American History.* (3)
Arranged. Emphasis will be placed on the period since 1900. (Merrill.)
- H. 260. *Historical Literature: European.* (1-6)
Arranged. Readings in the standard works and monographic studies to meet the requirements of qualified graduate students who need intensive concentration in European history. (Staff.)
- H. 269. *Seminar in Nineteenth Century Europe.* (3)
Arranged. A seminar on problems in the history of western Europe during the nineteenth century. (Mathews.)
- H. 290. *Historical Literature: Asian.* (1-6)
Arranged. Readings in the standard works and monographic studies to meet the requirements of qualified graduate students who need intensive concentration in Asian history. (Staff.)
- H. 399. *Thesis Research.* (1-6)
Arranged.

HOME ECONOMICS

- Home Mgt. 152. *Experience in Management of the Home.* (3)
Prerequisite, H. Mgt. 150, 151. Residence in the Home Management House. Experience in planning, coordinating, and participating in the activities of a household composed of a faculty member and a group of students. A charge of \$40.00 for food and supplies is assessed each student. Students who board at the University may receive a pro-rata refund of the established charge if the Dining Hall card is turned in during the period of residence in the Home Management House. Students not living in dormitories are billed at the rate of \$5.00 per week for a room in the Home Management House. (Staff.)
- *H. E. 190. *Special Problems in Home Economics. (Current Trends and Developments in Interior Design-Home Furnishings, Family Life).* (1-3)
June 26-July 14, 9:30-12:30. Junior, senior, or graduate standing and consent of instructor. Problem may be in any area of home economics and will carry the name of the subject matter of the problem. (Lippeatt, Dales, Jones.)

*H. E. 190 and H. E. 290 offered concurrently.

Horticulture, Journalism and Public Relations

H. E. 201. *Methods of Research in Home Economics.* (3)

July 17-August 4, 1:00-3:30 p.m. Prerequisite, Statistics or tests and Measurements. (Ed. 151, Soc. 183, Agr. 100, or equivalent.) Application of scientific methods to problems in the field of home economics with emphasis on needed research of an inter-disciplinary nature. (Wilson.)

*H. E. 290. *Special Topics.* (1-6)

June 26-July 14. Credit as arranged. Concentrated study in areas of home economics, such as: Consumer Problems, Housing, Interior Design and Home Furnishings, Institution Administration, and Food Service. (Staff.)

H. E. 399. *Thesis Research.* (1-6)

Credit according to work accomplished. (Staff.)

Tex. & Clo. 232. *Economics of Textiles and Clothing.* (3)

July 17-August 4, 9:30-12:30. Study of interrelationship of developments in production, distribution, and consumption of textiles and clothing affecting consumers and the market. Analysis of consumption trends as related to patterns of family living and population changes. (Visiting Lecturer.)

Pr. Art 1. *Design.* (3)

Daily, 9:30. H-102. Art expression through materials such as opaque water color, wet clay, colored chalk, and lithograph crayon which are conducive to freeing techniques. Elementary lettering, action figures, abstract design, three-dimensional design and general composition study. Consideration of art as applied to daily living. (Longley.)

HORTICULTURE

Hort. S125. *Ornamental Horticulture.* (1)

Summer session only. A course designed for teachers of agriculture, home demonstration agents and county agents. Special emphasis will be given to the development of lawns, flowers, and shrubbery to beautify homes. (Link.)

Hort. 198. *Special Problems.* (2, 2) (4 cr. max.)

Credit arranged according to work done. For major students in horticulture or botany. Four credits maximum per student. (Staff.)

Hort. 399. *Advanced Horticultural Research.* (2, 12)

Credit granted according to work done. (Staff.)

JOURNALISM AND PUBLIC RELATIONS

Daily, 9:30; G-304. Prerequisites, at least average grade of "C" in Eng. 1 and 2, Daily, 9:30; G-304. Prerequisites, at least average grade of "C" in Eng. 1 and 2, ability to type 25 words a minute. Laboratory fee, \$3.00. Survey of journalism. Laboratory time spent in writing news-story exercises assigned by instructor. (Crowell.)

Journ. 173. *Scholastic Journalism.* (2)

M.W.Th.F., 11:00, G-304. Introduction to theory and practice in production of high school publications. For education majors who may advise a student publication. (Crowell.)

*H. E. 290 and H. E. 190 offered concurrently.

LIBRARY SCIENCE

L. S. S102. Catalogue and Classification. (3)

Eight lecture periods a week. Daily, 12:30 to 1:50, Library 100. Study and practice in classifying books and making dictionary catalog for school libraries. Simplified form as used in the Children's Catalog. Standard Catalog for High School Libraries and Wilson printed cards are studied. (Brown.)

L. S. S104. Reference and Bibliography for School Libraries. (4)

Five lectures and five two-hour laboratory periods a week. Daily, 8:00 and 9:30, Library 100. Evaluation, selection and use of standard reference tools, such as encyclopedias, dictionaries, periodical indexes, atlases and yearbooks, for school libraries. Study of bibliographical procedures and forms. (Brown.)

MATHEMATICS

Math. 0. Basic Mathematics. (0)

Daily, 8:00; Y-4. Recommended for students whose curriculum calls for Math. 5 or Math. 10 and who fail the qualifying examination for these courses. The fundamental principles of algebra. Charge made for equivalent of a three-credit course. (Steely.)

Math. 5. Business Algebra. (3)

Daily, 11:00; Y-2. Prerequisite, one unit of algebra. Open only to students in the College of Business and Public Administration, the College of Agriculture, the Department of Military Science, and the College of Education. Fundamental operations, fractions, ratio and proportion, linear equations, exponents, logarithms, percentage, trade discount, simple interest, bank discount, true discount, and promissory notes. (Shepherd.)

Math. 6. Mathematics of Finance. (3)

Daily, 9:30; Y-2. Prerequisite Math. 5 or equivalent. Required of students in the College of Business and Public Administration and open to students in the College of Arts and Sciences for elective credit only. Line diagrams, compound interest, simple interest, ordinary annuities, general annuities, deferred annuities, annuities due, perpetuities, evaluation of bonds, amortizations, and sinking funds. (Shepherd.)

Math. 10. Algebra. (3)

Section 1—Daily, 9:30; Y-4.

(Steely.)

Section 2—Daily, 9:30; Y-5.

(Mar.)

Prerequisite, one unit each of algebra and plane geometry. Fundamental operations, factoring, fractions, linear equations, exponents and radicals, logarithms, quadratic equations, progressions, permutations and combinations, probability.

Math. 11. Trigonometry and Analytic Geometry. (3)

Daily, 8:00; Y-5. Prerequisite, Math. 10 or equivalent. This course is not recommended for students planning to enroll in Math. 20. Trigonometric functions, identities, addition formulas, solution of triangles, coordinates, locus problems, the straight line and circle, conic sections, graphs. (Mar.)

Math. 18. Elementary Mathematical Analysis. (5)

Daily, 8:00, 9:00 and M. W. F., 1:00; Y-17. Prerequisite, high school algebra completed and plane geometry. Open to students in the physical sciences, engineering, and education. The elementary mathematical functions, specially algebraic, logarithmic, and exponential are studied by means of their properties, their graphical representations, the identities connecting them, and the solution of equations involving them. The beginning techniques of calculus, sequences, permutations and combinations and probability are introduced. (Ehrlich.)

Math. 19. Elementary Mathematical Analysis. (5)

Section 1—Daily, 8:00, 9:00 and M. W. F., 1:00; Y-18. (Zemel.)

Section 2—Daily, 8:00, 9:00 and M. W. F., 1:00; Y-19 (Staff.)

Section 3—Daily, 8:00, 9:00 and M. W. F., 1:00; Y-16. (Staff.)

Prerequisite, Math. 18 or equivalent. Open to students in the physical sciences, engineering, and education. A continuation of the content of Math. 18 including a study of the trigonometric and inverse trigonometric functions, determinants, the conic sections, solid analytic geometry, and an introduction to finding areas by integration.

Math. 20. Calculus. (4)

Daily, 10:00, 11:00; Y-17. Prerequisite, Math. 19 or equivalent. Open to students in engineering, education, and the physical sciences. Limits, derivatives, differentials, maxima and minima, curve sketching, curvature, kinematics, integration. (Henney.)

Math. 21. Calculus. (4)

Section 1—Daily, 8:00, 9:00, Y-14. (Dyer.)

Section 2—Daily, 8:00, 9:00, Y-15. (Fusaro.)

Prerequisite, Math. 20 or equivalent. Open to students in engineering, education, and the physical sciences. Integration with geometric and physical applications, partial derivative, space geometry, multiple integrals, infinite series.

Math. 64. Differential Equations for Engineers. (3)

Daily, 8:00; Y-122. Prerequisite, Math. 21 or equivalent. Required of students in most of the engineering curriculums. Differential equations of the first and second order with emphasis on their engineering applications. (Rosen.)

Math. 103S. Introduction to Modern Algebra. (2)

M. T. W. F., 9:30; Y-122. Prerequisite, Math. 21 or equivalent. The basic concepts of abstract algebra: Integral domains, divisibility, congruences; fields, ordered fields; the fields of rational numbers, of real numbers, of complex numbers; polynomial domains over a field, including classical results on the theory of polynomial equations with rational, real, or complex coefficients; unique factorization domains, irreducibility criteria; rings. (Rosen.)

Math. 116. Introduction to Complex Variable Theory. (3)

Daily, 8:00; Y-121. Prerequisite, Math. 21 or equivalent. Open to students in engineering and the physical sciences. Fundamental operations in complex numbers, differentiation and integration, sequences and series, power series, analytic functions, conformal mapping, residue theory, special functions. (Correl.)

Math. 181S. Foundations of Number Theory. (2)

M. W. Th. F., 11:00; Y-121. Prerequisite, one year of college mathematics or consent of instructor. Designed primarily for those enrolled in programs with emphasis in the teaching of mathematics and science. Not open to students seeking a major directly in the physical sciences, since the course content is usually covered elsewhere in their curriculum. Axiomatic development of the real numbers. Elementary number theory. (Correl.)

Math. 182. Foundations of Algebra. (3)

Daily, 8:00; Y-101. Prerequisite, participation in the N. S. F. Institute in Mathematics for Junior High School Teachers of Mathematics. Material background for experimental units for grades 7 and 8, from the Maryland Project and the School Mathematics Study Group, including such topics as: algebra, number systems, algebraic structures. (Lehner.)

Math. 199. National Science Foundation Summer Institute for Teachers of Science and Mathematics Seminar. (3)

Daily, 9:30; Y-101. Prerequisite, participation in the N. S. F. Institute in Mathematics for Junior High School Teachers of Mathematics. Material background for work in geometry in experimental units for grades 7 and 8 from Maryland Project and from School Mathematics Study Group. (Jackson.)

MICROBIOLOGY

**Microb. 1. General Microbiology. (4)*

Five lectures and five two-hour laboratory periods a week. Lecture, 8:00; F-101. Laboratory, 9:00, 10:00; T-311. Laboratory fee, \$11.00. The physiology, culture, and differentiation of bacteria. Fundamental principles of microbiology in relation to man and his environment. (Staff.)

Microb. 181. Microbiological Problems. (3)

Eight two-hour laboratory periods a week. To be arranged. Prerequisite, 16 credits in microbiology. Registration only upon consent of the instructor. Laboratory fee, \$11.00. This course is arranged to provide qualified majors in microbiology, and majors in allied fields, an opportunity to pursue specific microbiological problems under the supervision of a senior staff member of the Department. (Staff.)

Microb. 399. Research.

Prerequisite, 30 credits in microbiology. Laboratory fee, \$11.00. Credits according majors in allied fields, an opportunity to pursue specific microbiological problems under the supervision of a senior staff member of the Department. (Staff.)

MUSIC

Music 16. Music Fundamentals for the Classroom Teacher. (3)

Daily, 8:00; B-7. Open to students in elementary education or childhood education; other students take Music 7. (In the Summer Session, also open to classroom teachers.) Music 7 and 16 may not both be counted for credit. The fundamentals of music theory and practice, related to the needs of the classroom and kindergarten teacher, and organized in accord with the six area concept of musical learning. (Traver.)

*Intended for teachers.

Music, Applied Music

Music 20. *Survey of Music Literature.* (3)

Daily, 11:00; B-7. Open to all students except music and music education majors, and may be taken by students who qualify to select courses within Group II of the American Civilization Program. Music 1 and 20 may not both be taken for credit. A study of the principles upon which music is based, and an introduction to the musical repertoires performed in America today. (Traver.)

Music 161. *Conducting.* (2)

Daily, 2:00-5:00. July 10-21 only. Armory 21. Offered as part of a Workshop in Band Music for a two-week period. A laboratory course in conducting wind and string instrumental groups. Baton techniques, score reading, rehearsal techniques, style, and interpretation. A band and a string ensemble composed of selected high school students will be in residence for the two-week period, and will be available for demonstrations. (Neilson, Berman.)

Music 168. *Chamber Music.* (3)

Daily, 11:00; B-1. Prerequisite, Music 120, 121 or the equivalent. The history and literature of chamber music from the early Baroque period to the present. Music for trio sonata, string quartet and quintet, and combinations of piano and string instruments is studied. (Jordan.)

Music 201. *Seminar in Musicology.* (3)

Daily, 8:00; B-1. Prerequisites, Music 120, 121, or consent of instructor. The work of one major composer will be studied, with emphasis on musicological method. In the 1961 Summer Session, the course will deal with Beethoven. The course may be repeated for credit, since a different composer will be chosen each time it is offered. (Jordan.)

APPLIED MUSIC

A new student or one taking applied music for the first time at this University should register for Music X. He will receive the proper classification at the end of the Summer Session.

Every student taking an applied music course should, in addition to registering for the proper course number, indicate the instrument chosen by adding a section number as follows:

Sec. 1, Piano	Sec. 5, Cello
Sec. 3, Violin	Sec. 6, Bass
Sec. 4, Viola	

Music X, 12, 13, 52, 53, 112, 113, 152, 153. *Applied Music.* (2)

Hours to be arranged with instructor; B-4. Prerequisite, the next lower course in the same instrument. Three half-hour lessons and a minimum of ten practice hours per week. Special fee of \$40 for each course. (Meyer, Berman.)

PHILOSOPHY

Phil. 1. Philosophy for Modern Man. (3)

Daily, 11:00; M-105. Modern man's quest for understanding of himself and his world, with particular reference to American ideas and ideals. This course is one of a group of four courses within Elective Group I of the American Civilization Program. It may also be taken by students who qualify by tests to select substitute courses in the Program (provided the student has not taken the course as his Group I elective).
(Capitan.)

Phil. 41. Elementary Logic and Semantics. (3)

Daily, 9:30; M-105. No prerequisites. An introductory study of logic and language, intended to help the student increase his ability to employ language with understanding and to reason correctly. Topics treated include: the uses and abuses of language, techniques for making sound inferences, and the logic of science.
(Capitan.)

Phil. 292. Selected Problems in Philosophy. (1-3)

Hours arranged. Intensive study of selected topics in systematic philosophy under individual supervision.
(Garvin.)

Phil. 399. Research. (1-3)

Hours arranged.
(Garvin.)

PHYSICAL EDUCATION, RECREATION AND HEALTH

P. E. S10. Physical Education Activities. (1-6)

Section 1—Swimming (1), Daily, 3:10-4:00; Pool. (Husman.)

Section 2—Golf (1), Daily, 2:00-2:50; Riving Range. (Cronin.)

Section 3—Tennis (1), Daily, 2:00-2:50; Courts. (Husman.)

Fee, \$6.00. Instruction and practice in selected sports: tennis, badminton, golf, archery, swimming and square dance.

Note 1. Not available for credit by physical education majors.

Note 2. Non-majors in physical education may use this credit to fulfill graduation requirements in physical education.

P. E. 120. Physical Education for the Elementary School. (3)

Daily, 9:30-10:50; GG-Gym. This course is designed to orient the general elementary teacher to physical education. Principles and practices in elementary physical education will be presented and discussed and a variety of appropriate activities will be considered from the standpoint of their use at the various grade levels. (Humphrey.)

P. E. 160. Theory of Exercise. (3)

Daily, 9:30-10:50, GG-205. Prerequisite, Zool. 1, 14, and 15, and P. E. 100 or the equivalent. A study of exercise and its physiological and kinesiological bases. Special emphasis is placed upon the application of exercise to the development and maintenance of physical efficiency. Corrective therapy conditioning for athletics, the effects of exercise and training on the human organism, fatigue, staleness, relaxation, and the nature of athletic injuries are investigated.
(Staff.)

Physical Education, Recreation and Health

***P. E. 189. *Field Laboratory Projects and Workshop.* (1-6)**

A course designed to meet the needs of persons in the field with respect to workshops and research projects in special areas of knowledge not covered by regularly structured courses. (Staff.)

Note: The maximum total number of credits that may be earned toward any degree in Physical Education, Recreation, or Health Education under P. E., Rec., Hea., or Ed. 189 is six.

P. E. 196. *Quantitative Methods.* (3)

Daily, 8:00-9:20, GG-205. A course covering the statistical techniques most frequently used in research pertaining to Physical Education, Recreation, and Health Education. An effort will be made to provide the student with the necessary skills, and to acquaint him with the interpretations and practical applications of these techniques. (Eyler.)

P. E. 200. *Seminar in Physical Education, Recreation, and Health.* (1)

Tuesday, 12:30 p.m., GG-205. (Staff.)

P. E. 202. *Status and Trends in Elementary School Physical Education.* (3)

Daily, 11:00-12:20, GG-205. An analysis of the current status and implications for future trends in physical education at the elementary school level. Open to experienced persons in all phases of education. (Humphrey.)

P. E. 210. *Methods and Techniques of Research.* (3)

Daily, 8:00-9:20; W-131. A study of methods and techniques of research used in Physical Education, Recreation, and Health Education; an analysis of examples of their use; and practice in their application to problems of interest to the student. (Mohr.)

P. E. 288. *Special Problems in Physical Education, Recreation, and Health.* (1-6)

Arranged. Master or Doctoral candidates who desire to pursue special research problems under the direction of their advisers may register for 1-6 hours of credit under this number. (Staff.)

P. E. 289. *Research Thesis.* (1-5)

Arranged. Students who desire credits for a Master's thesis, a Doctoral dissertation, or a Doctoral project should use this number. (Staff.)

P. E. 290. *Administrative Direction of Physical Education, Recreation, and Health.* (3)

Daily, 11:00-12:20; W-131. This course is devoted to the analysis of administrative problems in the light of sound educational practice. Students concentrate their efforts upon their own on-the-job administrative problems and contribute to the solution of other class members' problems. (Deach.)

*Intended for teachers.

Hea. 105. Basic Driver Education. (3)

Daily, 8:00-9:20; GG-201. Prerequisites, Hea. 50, 70, 80. This course is a study of the place of the automobile in modern life and deals with the theory and practice of the following: traffic accidents and other traffic problems; objectives and scope of driver-education; motor vehicle laws and regulations, basic automobile construction and maintenance from the standpoint of safety; methods in classroom instruction; aids to learning and practice driving instruction. (Tompkins.)

Hea. 145. Advanced Driver Education. (3)

Daily, 9:30-10:50; GG-201. Prerequisites, Hea. 50, 70, 80, 105. Progressive techniques, supervision, and practice of advanced driver-education; comprehensive programming for traffic safety; psychology of traffic safety; improving the attitudes of young drivers; teaching to meet driving emergencies; program planning in driver-education; consumer education; resources and agencies; the teacher and driver-education; mastering and evaluating results; driver-education for adults; new developments in driver-education; insurance and liability, and the future of driver-education. (Tompkins.)

Hea. 170. The Health Program in the Elementary School. (3)

Daily, 12:30-1:50; GG-202. This course, designed for the elementary school classroom teacher, analyzes biological, sociological; nutritional and other factors which determine the health status and needs of the individual elementary school child. The various aspects of the school program are evaluated in terms of their role in health education. The total school health program is surveyed from the standpoint of organizing and administration, and health appraisal. Emphasis is placed upon modern methods and current materials in health instruction. (The State Department of Education accepts this course for biological science credit.) (Johnson.)

Hea. 240. Modern Theories of Health. (3)

Daily, 9:30-10:50; GG-202. This course is designed to review the developments in those scientific and medical areas upon which the concepts of modern health education are based. (Johnson.)

PHYSICS

Phys. 100. Advanced Experiments. (2)

Ten hours laboratory work per week. Hours arranged, Z-306. Prerequisite, consent of instructor. Limited to Physics majors. Laboratory fee, \$10.00. Selected experiments in electricity and magnetism, elementary electronics, and optics. (E. Stern and Staff.)

**Physics 122A. Properties of Materials. (3)*

Five one-and-one-half-hour lectures per week. Daily, 8:00, Z-115. This course is intended for high school teachers. The macroscopic behavior of the various states of matter will be explained in terms of molecular models. Thermodynamic, electrical, and magnetic properties of materials are discussed. The electronic, atomic, and molecular structure of various types of solids such as metals, semi-conductors, polymers, glass, and dielectrics are correlated with their bulk properties. The experimental techniques used in molecular structure determinations are described and the theory of molecular binding reviewed. Hydrodynamic and thermodynamic properties of various types of liquid are presented. Prerequisite, a college physics course (for example, Phys, 130, 131). (Myers.)

*Intended for teachers.

Physics

*Physics 130, 131. *Basic Concepts of Physics.* (2, 2)

Five two-hour lectures per week. Daily, 9-11 A. M.; C-130. Prerequisite, junior standing. Lecture demonstration fee, \$4.00. A primarily descriptive course intended mainly for students in the liberal arts and high school science teachers. This course does not satisfy the requirements of professional schools or serve as a substitute for other physics courses. The main emphasis in the course will be on the concepts of physics, their evolution, and their relation to other branches of human endeavor. This course is specially recommended for high school science teachers.

(Gutche and Staff.)

*Physics 150. *Special Problems in Physics: Basic Experiments.*

Two two-hour meetings a week. M, W, 3:00-4:50, Z-209. Prerequisite, a previous course in physics, and consent of instructor. Laboratory fee, \$10.00. This course is primarily intended for high school science teachers. It will consist of laboratory and demonstration experiments in physics. The primary purpose of the course will be to study important physical principles in these experiments. An important secondary purpose will be to acquaint high school teachers with characteristics and uses of experimental apparatus.

(Gutsche and Staff.)

Phys. 150. *Special Problems in Physics.*

Arranged. Credit according to work done. Hours and location arranged. Research or special study. Laboratory fee, \$10.00 per credit hour when appropriate. Prerequisite, major in physics and consent of Department Head.

*Phys. 160A. *Physics Problems.* (1, 2, or 3)

Credit according to work done. T, Th. 1, 2; C-132, 134. This course intended primarily for high school science teachers, introduces the student to the proper methods of presenting and solving basic problems in physics. The course consists of lectures and discussion sessions. Those problems which illustrate best the fundamental principles of physics are treated fully. The necessary mathematical methods are developed as needed.

(Staff.)

Phys. 190. *Independent Studies Seminar.* (Arranged)

Credit according to work done, each semester. Hours and location arranged. Enrollment is limited to students admitted to the Independent Studies Program in Physics.

(Faculty.)

*Phys. 199. *National Science Foundation Summer Institute for Teachers of Science Seminar.* (1)

One two-hour seminar each week, June 26 to August 4. T., 3:00-4:50. In addition, daily three-hour seminar August 7 to August 11. Daily, 1:30-4:30, C-132. Laboratory fee, \$5.00. Especially designed for high school teachers of science. Includes the fields of chemistry and physics. Experts in these fields will give lectures with emphasis upon contemporary research. Time will be available for discussion, and student participation will be encouraged. Research and laboratory techniques will be demonstrated. Open only to participants in the National Science Foundation Institute.

(Laster and Staff.)

Phys. 230. *Seminar: Arranged.* (1)

Two one and one-half hour classes per week. T., Th., 3:00-4:20, Z-115. Arranged.

(Faculty.)

*Intended for teachers.

Phys. 248. Special Topics in Modern Physics: Arranged. (2)

Three two-hour lectures per week. M. W. F., 3:00-5:00, Z-115. To be arranged.
(Arranged.)

Phys. 399. Research.

Credit according to work done. Hours and location arranged. Laboratory fee, \$10.00 per credit hour. Prerequisite, approved application for admission to candidacy or special permission of the Department Head. Thesis research conducted under approved supervision.

POULTRY

P. H. S111. Poultry Breeding and Feeding. (1)

Daily, 9:00. This course is designed primarily for teachers of vocational agriculture and extension service workers. The first half will be devoted to problems concerning breeding and the development of breeding stock. The second half will be devoted to nutrition.
(Staff.)

P. H. 205. Poultry Literature. (1-4)

Readings on individual topics are assigned. Written reports required. Methods of analysis and presentation of scientific material are discussed.
(Staff.)

P. H. 399. Poultry Research.

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.
(Staff.)

PSYCHOLOGY

Psych. 1. Introduction to Psychology. (3)

Five periods per week. Daily, 11:00; M-104. A basic introductory course intended to bring the student into contact with the major problems confronting psychology and the more important attempts at their solution.
(Herrmann.)

Psych. 21. Social Psychology. (3)

Five periods per week. Daily, 9:30; M-102. Prerequisite, Psych. 1. Personality and behavior as influenced by culture and interpersonal relations. Social influences on motivation, learning, memory, and perception. Attitudes, public opinion, propaganda, language and communication, leadership, ethnic differences, and group processes.
(Rosen.)

Psych. 106. Statistical Methods in Psychology. (3)

Five periods per week. Daily, 9:30-10:50; Q-122. Prerequisites, Psych. 1 and Math. 1, 5, or 10 or equivalent. A basic introduction to quantitative methods used in psychological research; measures of central tendency, of speed, and of correlation. Majors in psychology should take this course in the junior year.
(Anderson.)

Psych. 110. Educational Psychology. (3)

Five periods per week. Daily, 9:30-10:50; M-104. Prerequisite, Psych. 1 or equivalent. Researches on fundamental psychological problems encountered in education. Measurement and significance of individual differences; learning, motivation, transfer of training and the educational implications of theories of intelligence.
(Heermann.)

Psychology, Sociology

Psych. 131. Abnormal Psychology. (3)

Five periods per week. Daily, 11:00-12:20; M-102. Prerequisite, two courses in psychology. The nature, diagnosis, etiology, and treatment of mental disorders. (Rosen.)

Psych. 225. Practicum in Counseling and Clinical Procedures. (1-3)

Hours arranged. Prerequisite, Psych. 220 and consent of instructor. (Magoon, Pumroy.)

Psych. 288. Special Research Problems. (1-3)

Hours arranged. Prerequisite, consent of individual faculty supervisor. (Staff.)

Psych. 399. Research for Thesis. (1-6)

Hours arranged. (Staff.)

SOCIOLOGY

Soc. 1. Sociology of American Life. (3)

Daily, 8:00-9:20; R-103. Sociological analysis of the American social structure, metropolitan, small towns, and rural communities; population distribution, composition and change; social organization. (Hirzel.)

Soc. 5. Anthropology. (3)

Daily, 11:00-12:20; R-103. This course may be taken by students who qualify to select courses within Elective Group II of the American Civilization Program. Introduction to anthropology; origins of man; development and transmission of culture; backgrounds of human institutions. (Anderson.)

Soc. 51. Social Pathology. (3)

Daily, 12:30-1:50; R-110. Prerequisite, sophomore standing. Personal-social disorganization and maladjustment; physical and mental handicaps; economic inadequacies; programs of treatment and control. (Franz.)

Soc. 52. Criminology. (3)

Daily, 8-9:20; R-205. Prerequisite, sophomore standing. Criminal behavior and the methods of its study; causation; typologies of criminal acts and offenders; punishment, correction and incapacitation; prevention of crime. (Lejins.)

Soc. 121. Population. (3)

Daily, 11:00-12:20; R-110. Population distribution and growth in the United States and the world; population problems and policies. (Hirzel.)

Soc. 125. Cultural History of the Negro. (3)

Daily, 8:00-9:20; R-110. The cultures of Africa south of the Sahara and the cultural adjustments of the Negro in North and South America. (Anderson.)

Soc. 131. Introduction to Social Service. (3)

Daily, 8:00-9:20; R-204. General survey of the field of social-welfare activities; historical development; growth, functions and specialization of agencies and services, private and public. (McElhenie.)

Soc. 153. Juvenile Delinquency. (3)

Daily, 11:00-12:20; R-205. Juvenile delinquency in relation to the general problem of crime; analysis of factors underlying juvenile delinquency; treatment and prevention. (Lejins.)

Soc. 164. The Family and Society. (3)

Daily, 9:30-10:50; R-110. Prerequisite, Soc. 1 and Soc. 64 or equivalent. Study of the family as a social institution; its biological and cultural foundations, historic development, changing structure and function; the interactions of marriage and parenthood, disorganizing and reorganizing factors in present day trends. (Shankweiler.)

Soc. 166. Interviewing and Problem Solving in Social Work. (3)

Daily, 9:30-10:50; R-204. The principles of interviewing and other diagnostic techniques as applied to social problems with particular reference to family and child behavior. (McElhenie.)

SPEECH

Speech 1. Public Speaking. (3)

Prerequisite for advanced Speech courses. The preparation and delivery of short original speeches; outside readings; reports, etc. It is recommended that this course be taken during the freshman year. Laboratory fee, \$1.00.

Section 1—Daily, 8:00- 9:20; R-102

(Starcher.)

Section 2—Daily, 9:30-10:50; R-102

(Batka.)

Speech 7. Public Speaking. (2)

The preparation and delivery of speeches on technical and general subjects. Laboratory fee, \$1.00. M. T. W. F., 11:00-12:20; R-102. (Menser.)

Speech 105. Speech Handicapped School Children. (3)

Prerequisite, Speech 3 for undergraduates. The occurrence, identification and treatment of speech handicaps in the classroom. An introduction to Speech pathology. Daily, 9:30-10:50; R-109. (Dew.)

Speech 106. Clinical Practice (1-3)

Prerequisite, Speech 105. T. F. 12:30-1:50, laboratory arranged; R-109. A laboratory course dealing with the various methods of correction plus actual work in the clinic. Fee, \$1.00 per credit hour. (Conlon.)

Speech 111. Seminar. (3)

Prerequisites, senior standing and consent of instructor. Required of Speech majors. Present-day speech research. Hours arranged. (Strausbaugh.)

Speech 149. Television Workshop. (3)

Prerequisites, Speech 22, Speech 140, and Speech 148, or consent of instructor. Daily, 11:00-12:20; R-9. Two hour lecture, four hour laboratory. Laboratory fee, \$10.00. (Aylward.)

Speech 200. Thesis. (3, 6)

Credit in proportion to work done and results accomplished. (Hendricks.)

Speech, Zoology

Speech 201K. Seminar, Minor Research Problems. (1-3)

Prerequisites, 6 hours in speech pathology and consent of instructor. Hours arranged.
(Dew.)

Speech 211. Advanced Clinical Practice. (1-3)

Prerequisites, 12 hours in Speech Pathology and Audiology. T. F. 12:30-1:50; R-109. Arranged. Supervised training in the application of clinical methods in the diagnosis and treatment of speech and hearing disorders. Laboratory fee, \$1.00 per hour.
(Conlon.)

Speech 219. Speech Disorders of the Brain-Injured. (3)

Prerequisites, 6 hours in speech pathology and audiology and consent of instructor. Methods of evaluation and treatment of children and adults who have suffered injury to brain tissue, with subsequent damage to speech and language processes. Laboratory fee, \$3.00 Daily, 11:00-12:20; R-109.
(Hendricks.)

ZOOLOGY

†Zool. 1. *General Zoology. (4)*

Five lectures and five two-hour laboratory periods a week. Lectures, 8:00; K-310; laboratory, 9:00, 10:00; K-306. Laboratory fee, \$8.00. This course, which is cultural and practical in its aim, deals with the basic principles of animal life. Special emphasis is placed on human physiology.
(Grollman.)

Zool. 55S. *Development of the Human Body. (2)*

Four lecture periods a week. M. T. Th. F., 11:00-12:20; F-112. A study of the main factors affecting pre-natal and post-natal growth and development of the child with special emphasis on normal development.
(Staff.)

*Zool. 102. *General Animal Physiology. (4)*

Five lectures and five three-hour laboratory periods a week. Lecture, 8:00; K-208; laboratory, 9:00, 10:00, 11:00; K-208. Prerequisites, one year of zoology and one year of chemistry. Laboratory fee, \$8.00. The general principles of physiological functions as shown in mammals and lower animals.
(Staff.)

†Zool. 104. *Genetics. (3)*

Five lecture periods a week. Daily, 9:30-10:50; F-112. Prerequisite, one course in zoology or botany. A consideration of the basic principles of heredity.
(Staff.)

*Zool. 199. *National Science Foundation Summer Institute for Teachers of Science and Mathematics. Seminar. (1)*

One two-hour seminar each week. Th., 3:00, 4:00, C-132, June 26 to August 4, and daily seminar, 8:30, 9:30, 10:30, August 7 to August 11. Laboratory fee, \$5.00. An integrated discussion of recent advances and basic principles of biology. The program will include lectures by recognized authorities in various fields of biology, laboratory demonstrations, and organized discussion groups. Student participation will be encouraged. Open only to participants in the National Science Foundation Institute.
(Brown, Staff.)

*Zool. 208. *Special Problems in Zoology.*

Credit hours, and topics to be arranged. Laboratory fee, \$8.00.
(Staff.)

†Recommended for teachers.

*Intended for teachers.

Zool. 231S. Acarology. (3)

June 26 through July 14. Lectures, recitations, and laboratory daily, 9:00-12:00, 2:00-4:00; K-310 and K-104. Laboratory fee, \$8.00. An introductory study of the Acarina, or mites and ticks, with special emphasis on classification and biology. (Camin.)

Zool. 232S. Medical and Veterinary Acarology. (3)

July 17 through August 4. Lectures, recitations, and laboratory daily, 9:00-12:00, 2:00-4:00; K-310 and K-104. Laboratory fee, \$8.00. The recognition, collection, culture, and control of Acarina important to public health and animal husbandry with special emphasis on the transmission of diseases. (Camin.)

Zool. 233S. Agricultural Acarology. (3)

July 17 through August 4. Lectures, recitations, and laboratory daily, 9:00-12:00, 2:00-4:00, K-310 and K-22. Laboratory fee, \$8.00. The recognition, collection, culture, and control of acarine pests of crops and ornamentals. (Baker.)

Zool. 399. Research.

Credit to be arranged. Research on thesis project only. Laboratory fee, \$8.00. (Staff.)

THE FACULTY

SUMMER SESSION, 1961

JUNE 26 - AUGUST 4

DR. ORVAL L. ULRY, *Director*

- R. F. ALLEN, *Instructor of Foreign Languages*
B.A., University of Oklahoma, 1956; M.A., University of Maryland, 1958.
- JEAN V. ALTER, *Assistant Professor of Foreign Languages*
PH.D., University of Paris, 1951; PH.D., University of Chicago, 1958.
- GEORGE ANASTOS, *Professor of Zoology*
B.S., University of Akron, 1942; M.A., Harvard University, 1947; PH.D., 1949.
- CHARLES R. ANDERSON, *Instructor in Office Management and Techniques*
B.A., University of Maryland, 1957; M.ED., 1959.
- FRANK G. ANDERSON, *Assistant Professor of Sociology*
B.A., Cornell University, 1941; PH.D., University of New Mexico, 1951.
- HENRY ANDERSON, *Assistant Professor of Statistics*
B.A., University of London, 1939; M.B.A., Columbia University, 1948; PH.D., 1959.
- J. PAUL ANDERSON, *Assistant Professor of Education*
B.S., University of Minnesota, 1942; M.A., 1947; PH.D., 1960.
- NANCY S. ANDERSON, *Assistant Professor of Psychology*
B.A., University of Colorado, 1952; M.A., Ohio State University, 1953; PH.D., Ohio State University, 1956.
- ROBERT R. ANDERSON, *Assistant Professor of Foreign Languages*
B.A., University of Missouri, 1947; M.A., University of Illinois, 1949; PH.D., Ohio State University, 1958.
- VERNON E. ANDERSON, *Dean of the College of Education*
B.S., University of Minnesota, 1930; M.A., 1936; PH.D., University of Colorado, 1942.
- THOMAS G. ANDREWS, *Professor and Head, Department of Psychology*
B.A., University of Southern California, 1937; M.A., University of Nebraska, 1939; PH.D., University of Nebraska, 1941.
- WILLIAM T. AVERY, *Professor and Head, Department of Classical Languages and Literatures*
B.A., Western Reserve University, 1934; M.A., 1935; PH.D., 1937. Fellow of the American Academy in Rome, 1937-39.
- THOMAS J. AYLWARD, *Assistant Professor of Speech*
B.S., University of Wisconsin, 1947; M.A., 1949; PH.D., 1960.

- EDWARD W. BAKER, *Visiting Lecturer in Zoology*
B.S., University of California, 1936; PH.D., 1938.
- RONALD BAMFORD, *Dean of Graduate School, Professor and Head, Botany*
B.S., University of Connecticut, 1924; M.S., University of Vermont, 1926; PH.D.,
Columbia University, 1931.
- JACK C. BARNES, *Assistant Professor of English*
B.A., Duke University, 1939; M.A., 1947; PH.D., University of Maryland, 1954.
- GEORGE P. BATKA, *Associate Professor of Speech and Dramatic Art*
B.A., University of Wichita, 1938; M.A., University of Michigan, 1941.
- WILLIAM E. BENNETT, *Instructor in Education*
B.S., Georgia Teachers College, 1939; M.A., Teachers College, Columbia University,
1947.
- JOEL H. BERMAN, *Assistant Professor of Music*
B.S., Julliard School of Music, 1951; M.A., Columbia University, 1953; D.M.A., Uni-
versity of Michigan, 1961.
- WILLIAM E. BICKLEY, *Professor and Head of Entomology*
B.S., University of Tennessee, 1934; M.S., 1936; PH.D., University of Maryland, 1940.
- ALFRED C. BOYD, *Assistant Professor of Chemistry*
B.S., Canisius College, 1951; PH.D., Purdue University, 1957.
- GLENN O. BLOUGH, *Professor of Education*
B.A., University of Michigan, 1929; M.A., 1932; LL.D., Central Michigan College
of Education, 1950.
- E. LUCILLE BOWIE, *Associate Professor of Education, Institute for Child Study*
B.S., University of Maryland, 1942; M.A., Teachers College, Columbia University,
1946; ED.D., University of Maryland, 1957.
- GERALD S. BRINTON, *Chairman, Social Studies Department, Cedar Cliff High
School, Camp Hill, Pennsylvania. Visiting Lecture in Education*
B.S., State Teachers College, Shippenburg, Pennsylvania, 1940; M.A., University
of Maryland, 1951.
- ROBERT F. BROCKMANN, *Visiting Lecturer in History*
A.B., Indiana University, 1942; M.A., 1947; PH.D., 1950.
- ELEANOR A. BROOME, *Instructor in Childhood Education*
B.A., University of Maryland, 1943; M.ED., 1957.
- DALE W. BROWN, *Assistant Professor of Library Science*
A.B., David Lipscomb College, 1953; A.M., George Peabody College for Teachers,
1955.
- JOSHUA R. C. BROWN, *Associate Professor of Zoology*
B.A., Duke University, 1948; M.A., 1949; PH.D., 1953.

Faculty

- RUSSELL G. BROWN, *Associate Professor of Botany*
B.S., West Virginia University, 1929; M.S., 1930; PH.D., University of Maryland, 1934.
- MARIE D. BRYAN, *Associate Professor of Education*
B.A., Goucher College, 1923; M.A., University of Maryland, 1945.
- ELBERT M. BYRD, *Assistant Professor of Government and Politics*
B.S., American University, 1953; M.A., 1954; PH.D., 1959.
- RICHARD H. BYRNE, *Professor of Education*
B.A., Franklin and Marshall College, 1938; M.A., Columbia University, 1947; ED.D., 1952.
- GORDON M. CAIRNS, *Dean of Agriculture and Professor of Dairy Husbandry*
B.S., Cornell University, 1936; M.S., 1938; PH.D., 1940.
- CHARLES CALHOUN, *Professor of Finance*
A.B., University of Washington, 1925; M.B.A., 1930.
- JOSEPH H. CAMIN, *Visiting Lecturer in Zoology*
B.S., Ohio State University, 1946; M.S., 1947; PH.D., 1949.
- WILLIAM H. CAPITAN, *Instructor in Philosophy*
A.B., University of Michigan, 1954; M.A., University of Minnesota, 1958; PH.D., 1960.
- VIRGUS R. CARDOZIER, *Professor and Head of Agricultural and Extension Education*
B.S., Louisiana State University, 1947; M.S., 1950; PH.D., Ohio State University, 1952.
- JOHN CARRUTHERS, *Assistant Professor of Chemistry*
- CHUNJEN C. CHEN, *Instructor in Foreign Languages*
B.S., Cornell, 1919; M.S., University of Maryland, 1920.
- CHARLES B. CLARK, *Visiting Lecturer in History*
A.B., Washington College, 1934; A.M., Duke University, 1936; PH.D., University of North Carolina, 1941.
- SARA E. CONLON, *Assistant Professor of Speech and Dramatic Art*
B.A., University of Maryland, 1947; M.A., State University of Iowa, 1950.
- FRANKLIN D. COOLEY, *Associate Professor of English*
B.A., The Johns Hopkins University, 1927; M.A., University of Maryland, 1933; PH.D., The Johns Hopkins University, 1940.
- ELLEN CORREL, *Assistant Professor of Mathematics*
B.S., Douglas College (Rutgers University), 1951; M.S., Purdue University, 1953; PH.D., 1957.

- JOHN L. COULTER, *Assistant Professor of English*
 B.A., American University, 1934; M.A., University of North Carolina, 1936.
- ROSCOE CRAMER, *Visiting Lecturer in Education*
- FRANK H. CRONIN, *Associate Professor of Physical Education, Head Golf Coach*
 B.S., University of Maryland, 1946.
- ALFRED A. CROWELL, *Professor and Head, Department of Journalism and Public Relations*
 A.B., University of Oklahoma, 1928; M.S.J., Northwestern University, 1940.
- LESLIE CURRY, *Assistant Professor of Geography*
 B.A., University of Durham, 1949; M.A., Johns Hopkins University, 1951; PH.D., University of Auckland, 1959.
- RUTH J. DALES, *Visiting Lecturer*
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—The University is the rear guard and the advance agent of society. It lives in the past, the present and the future. It is the storehouse of knowledge; it draws upon this depository to throw light upon the present; it prepares people to live and make a living in the world of today; and it should take the lead in expanding the intellectual horizons and the scientific frontiers, thus helping mankind to go forward —always toward the promise of a better tomorrow.

—From "The State and the University,"
the inaugural address of
President Wilson H. Elkins,
January 20, 1955,
College Park, Maryland.

