

UNIVERSITY OF MARYLAND
BULLETIN

Vol. 14

March 30, 1960

No. 4

Summer School
at College Park

1960-1961



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

SUMMER SCHOOL

1960



UNIVERSITY OF MARYLAND

VOLUME 14

MARCH 30, 1960

NO. 3

University of Maryland Bulletin is published one time in February; three times in March and April; four times in May and June; two times in September, October, November, and December.

Re-entered at the Post Office in College Park, Maryland, as second class mail matter under the Act of Congress of August 24, 1912.

Digitized by the Internet Archive
in 2010 with funding from
Lyrasis Members and Sloan Foundation

CONTENTS

GENERAL

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

CONFERENCES, INSTITUTES,

WORKSHOPS, SPECIAL COURSES AND LECTURES

University-Wide Lecture Series	12	School Teachers of Science	18
Television Workshop	12	Institute for Teachers of Mathematics in Junior High School	19
Typewriting Demonstration for Business Education Teachers	12	Workshop in the Supervision of Student Teachers	20
Workshops in Music	13	Remedial Reading Instruction	21
Workshops in Special Education	14	Workshop on Teaching Elementary School Science	21
Workshops in Human Development	15	Summer Institute in Counseling and Guidance Training	21
Education in Family Finance Workshop	16	Workshop on Use of Community Resources	22
Workshop on Teaching Conservation of Natural Resources	17	Workshop on Human Relations in Educational Administration	22
Institute of Acarology	18		
National Science Foundation Summer Institute for High			

(continued on next page)

CONTENTS

COURSE OFFERINGS

Agricultural Economics	23	Geography	47
Agricultural Education and Rural Life	23	Government and Politics.....	47
Agronomy	25	History	48
Animal Husbandry	25	Home Economics	49
Art	25	Horticulture	50
Botany	25	Journalism and Public Relations..	51
Business Organization and Administration	26	Library Science	51
Chemistry	27	Mathematics	51
Classical Languages and Literatures	28	Microbiology	53
Dairy	28	Music	54
Economics	29	Philosophy	55
Education	29	Physical Education, Recreation and Health	55
Engineering	43	Physics	57
English	44	Poultry	59
Entomology	45	Psychology	59
Foreign Languages	46	Sociology	59
		Speech and Dramatic Art.....	61
		Zoology	62

The Faculty	64
-------------------	----

Photographs of several of the Summer School activities and a map of the campus are located in the center of the catalog. Use running headlines located at the top of each page as an additional aid in locating subject information.

UNIVERSITY CALENDAR

FALL SEMESTER 1959

JANUARY 1960

- 4 Monday—Christmas Recess Ends 8 a.m.
- 20 Wednesday—Pre-Examination Study Day
- 21-27 Thursday to Wednesday, inclusive—Fall Semester Examinations

SPRING SEMESTER 1960

FEBRUARY

- 1-5 Monday to Friday—Spring Semester Registration
- 8 Monday—Instruction Begins
- 22 Monday—Washington's Birthday Holiday

MARCH

- 25 Friday—Maryland Day

APRIL

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

MAY

- 18 Wednesday—Military Day
- 26 Thursday—Pre-Examination Study Day
- May 27- } Friday to Friday, inclusive—Spring Semester Examinations
- June 3 }
- 29 Sunday—Baccalaureate Exercises
- 30 Monday—Memorial Day, Holiday

JUNE

- 4 Saturday—Commencement Exercises

SUMMER SESSION 1960

JUNE 1960

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

JULY

- 9 Saturday—Classes as usual

AUGUST

- 5 Friday—Summer Session Ends

SHORT COURSES 1960

JUNE 1960

- 20-25 Monday to Saturday—Rural Women's Short Course

AUGUST

- 8-13 Monday to Saturday—4-H Club Week

SEPTEMBER

- 6-9 Tuesday to Friday—Firemen's Short Course

UNIVERSITY CALENDAR

FALL SEMESTER 1960

SEPTEMBER

- 12-16 Monday to Friday—Fall Semester Registration
- 19 Monday—Instruction Begins

NOVEMBER

- 23 Wednesday—Thanksgiving Recess Begins After Last Class
- 28 Monday—Thanksgiving Recess Ends 8 a.m.

DECEMBER

- 20 Tuesday—Christmas Recess Begins

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—Military Day
- 30 Tuesday—Memorial Day, Holiday

JUNE

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

SUMMER SESSION 1961

JUNE 1961

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

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

SUMMER SCHOOL REGISTRATION SCHEDULE

MONDAY, JUNE 27, 1960 *

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

SUMMER SCHOOL CALENDAR

June 28	Tuesday	Classes begin
July 4	Monday	Holiday (no classes)
July 9	Saturday	Classes as usual, Monday Schedule
Aug. 5	Friday	Close of Summer Session

*Dormitories will be open for occupancy on and after 2:00 P.M., Sunday, June 26, 1960.

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>	1960
The Baltimore Institute, 10 West Chase Street, Baltimore 1	
HARRY H. NUTTLE <i>Treasurer</i>	1966
Denton	
LOUIS L. KAPLAN <i>Assistant Secretary</i>	1961
5800 Park Heights Avenue, Baltimore 15	
ENOS S. STOCKBRIDGE <i>Assistant Treasurer</i>	1960
10 Light Street, Baltimore 2	
THOMAS W. PANGBORN	1965
The Pangborn Corporation, Pangborn Blvd., Hagerstown	
THOMAS B. SYMONS	1963
Suburban Trust Company, 6950 Carroll Avenue, Takoma Park	
C. EWING TUTTLE	1962
907 Latrobe Building, Charles and Read Streets, Baltimore 2	
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 nine years each, beginning the first Monday in June.

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

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

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, Dean of the Faculty

B.S., State Teachers College, California, 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.

Emeritus

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.

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 University, 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.
- WILBERT J. HUFF**, *Director, Engineering Experiment Station*
 B.A., Ohio Northern University, 1911; B.A., Yale College, 1914; PH.D., Yale Uni-
 versity, 1917; D.SC. (HON.), Ohio Northern University, 1927.
- 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 de 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.
- NORMA J. AZLEIN**, *Registrar*
 B.A., University of Chicago, 1940.

- 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.
- 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.
- GEORGE W. FOGG, *Director of Personnel*
B.A., University of Maryland, 1926; M.A., 1928.
- ROBERT J. MCCARTNEY, *Director of University Relations*
B.A., University of Massachusetts, 1941.
- GEORGE W. MORRISON, *Associate Director and Supervising Engineer Physical Plant (Baltimore)*
B.S., University of Maryland, 1927; E.E., 1931.
- HOWARD ROVELSTAD, *Director of Libraries*
B.A., University of Illinois, 1936; M.A., 1937; B.S.L.S., Columbia University, 1940.
- ADELE H. STAMP, *Dean of Women*
B.A., Tulane University, 1921; M.A., University of Maryland, 1924.
- 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.
- WILBERT J. HUFF, *Chairman of the Division of Physical Sciences*
B.A., Ohio Northern University, 1911; B.A., Yale College, 1914; PH.D., Yale University, 1917; D.SC., (HON.), Ohio Northern University, 1927.
- 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

GENERAL COMMITTEE ON EDUCATIONAL POLICY

Dr. Ronald Bamford (Graduate School), *Chairman*

COMMITTEE ON ADMISSIONS

Dr. Russell G. Brown (Agriculture), *Chairman*

COMMITTEE ON INSTRUCTIONAL PROCEDURES

Dr. Ronald Bamford (Graduate School), *Chairman*

COMMITTEE ON SCHEDULING AND REGISTRATION

Dr. Robert Rappleye (Agriculture), *Chairman*

COMMITTEE ON PROGRAMS, CURRICULA AND COURSES

Dr. Irvin C. Haut (Graduate School), *Chairman*

COMMITTEE ON SCHOLARSHIPS AND GRANTS-IN-AID

Dr. Paul Nystrom (Agriculture), *Chairman*

COMMITTEE ON FACULTY RESEARCH

Dr. Edward J. Herbst (Medicine), *Chairman*

COMMITTEE ON PUBLIC FUNCTIONS AND COMMENCEMENTS

Mr. B. James Borreson (Executive Dean for Student Life), *Chairman*

COMMITTEE ON LIBRARIES

Dr. Charles Murphy (Arts and Sciences), *Chairman*

COMMITTEE ON UNIVERSITY PUBLICATIONS

Dr. Charles A. Taff (Business and Public Administration), *Chairman*

COMMITTEE ON STUDENT LIFE AND ACTIVITIES

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

COMMITTEE ON STUDENT PUBLICATIONS AND COMMUNICATIONS

Dr. Franklin Cooley (Arts and Sciences), *Chairman*

COMMITTEE ON STUDENT DISCIPLINE

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

COMMITTEE ON RELIGIOUS LIFE

Professor Louis E. Otts (Engineering), *Chairman*

COMMITTEE ON STUDENT HEALTH AND WELFARE

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

COMMITTEE ON STUDENT EMPLOYMENT AND SELF-HELP

Dr. Warren R. Johnson (Physical Education), *Chairman*

COMMITTEE ON INTERCOLLEGIATE COMPETITION

Dr. Clyne S. Shaffner (Agriculture), *Chairman*

COMMITTEE ON PROFESSIONAL ETHICS, ACADEMIC FREEDOM AND TENURE

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

COMMITTEE ON APPOINTMENTS, PROMOTIONS AND SALARIES

Dr. William E. Bickley (Agriculture), *Chairman*

COMMITTEE ON FACULTY LIFE AND WELFARE

Dr. Guy B. Hathorn (Business and Public Administration), *Chairman*

COMMITTEE ON MEMBERSHIP AND REPRESENTATION

Dr. Joseph C. Biddix (Dentistry), *Chairman*

THE 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 1960, special emphasis has been placed upon broadening both the variety and the extent of offerings especially at the graduate level 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.

Academic Information

TERMS OF ADMISSION

All summer school students must be 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 June 6, 1960. 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 June 6, 1960. 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, 1960.

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

Academic Information

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 towards 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 and 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 appropriate bulletin for specific requirements. Advisers will assist students in planning to meet such requirements.

All students desiring graduate credit, whether for meeting degree requirements, for transfer to another institution, or for any other purpose, must be regularly matriculated and registered in the Graduate School.

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. 2, History of Modern Europe; 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 27, from 8:00 a.m. to 3:00 p.m., in accordance with the Registration Schedule printed on page vii of this catalog. *No student will be permitted into the Armory before the time listed in the Registration Schedule.*

REGISTRATION FOR ALL COLLEGES EXCEPT COLLEGE OF EDUCATION

Students in all colleges except the College of Education, will begin registration on June 27 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.

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 vii 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

General Information

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 1960 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 stationed 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.

A fee of \$3.00 is charged for each change in program after July 1. 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 15. All changes must be approved by the appropriate dean and filed in the Office of the Registrar.

*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 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 KINDERGARTEN

Children 5 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

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

Regular Dormitories	Single Room	Double Room
Women	\$55	\$45
Men	\$45	\$35

General Information

Since most of the rooms in the dormitories 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 DORMITORIES WILL NOT BE OPEN FOR OCCUPANCY UNTIL 2:00 P.M. SUNDAY, JUNE 26, AND THEY WILL CLOSE AT NOON ON SATURDAY, AUGUST 6.

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 28. For reservations write to Miss M. Margaret Jameson, Associate Dean of Women or Mr. C. O. Ensor, Assistant Director, Men's Dormitories.

Students attending the Summer School and occupying rooms in the dormitory 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 dormitories should be marked with student's name and addressed to Men's Dormitories. Trunks for women's dormitories should include the name of the dormitory 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 office of the Dean of Men, Room 222, North Administration Building.

Students occupying off-campus housing will maintain the same standards as required of those in the University dormitories 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 for those graduate students who elect to pay the \$1.00 fee. Students who are ill should report promptly to the University Infirmary, either in person or by phone (Extension 326).

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.

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 410,000 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.

KINDERGARTEN

A kindergarten for children 5 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, 1960.

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

FOR ADDITIONAL INFORMATION

Detailed information concerning 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 of each year to all undergraduate students, and again in February to all new undergraduate students not previously enrolled in the preceding fall semester.

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 1960 Summer School will sponsor a series of five lectures during the six-week period from June 27 to August 5. 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 29) 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.

TYPEWRITING DEMONSTRATION CLASS

This is a non-credit typewriting class for those who wish to learn the touch system and increase their basic typewriting skills. Any person who has completed grade seven may enroll for the class. The charge will be \$35.00 for the six-weeks period and no credit will be allowed for the work. No refunds will be made. Class meets in Room Q-143 9:00 to 11:00 Monday through Friday, June 27 to August 5.

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 1960 Summer Session, directed by nationally known leaders in their respective fields. Participants registered in one of the courses listed below will meet in the afternoons 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 Cafeteria at nominal cost.

WORKSHOP IN CHORAL MUSIC

The Choral Workshop, directed by Dr. Elaine Brown, is offered during the period July 5 to July 15. Participants will register for Mus. Ed. 175, Methods and Materials in Vocal Music for the High School. In the first week, July 5-9, a series of lectures, conferences, and discussions of choral problems and readings of new choral music will be held. In the second week, July 11-15, 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 5 to July 15. Participants will register for Mus. Ed. 180, Instrumental Seminar. The workshop will include a series of lectures, conferences, and discussions of problems and literature for the concert and marching bands, and a special section concerned with string instruction. In addition, in the second week (July 11-15) a concert band composed of selected high-school students will re-

Conferences, Institutes

hearse and present a public concert. Adult participants will assist in the rehearsals and take part in other professional activities.

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 7-9 of this catalog.

Workshops in Special Education

THE EDUCATION OF CHILDREN WITH LEARNING IMPAIRMENTS

This workshop will demonstrate methods, curriculum and materials for teaching 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.

Arrangements have been made to introduce and demonstrate the use of methods, curriculum and materials for children with learning impairments. Five major subdivisions have been planned to emphasize methods of teaching: (1) Disturbances in the Central Nervous System (2) Disturbance in Language Development (3) Mentally Handicapped (4) Mentally deficient (5) Disturbances in Emotional Development.

Seven demonstration classes including the above disabilities have been arranged. Actual student participation with children in the demonstration classes is anticipated. This workshop will meet daily from 9:00-3:00, June 27 to July 15. 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, survey of special programs and teaching methods, curriculum and material for children who are gifted on the elementary and secondary level.

In this workshop the major emphasis will be placed on the modifications that are necessary in educational planning for children with intellectual giftedness. A survey of the kinds of administrative and curricular changes that are being made for these children, and an effort to draw the most appropriate ideas from the existing planning to be used by teachers in their individual teaching situations. The following sections have been planned: (1) Primary grades 1-3 (2) Intermediate grades 4-6 (3) Secondary grades 7-9 (4) Underachievers grades 4-6. Demonstration classes and group leader for each of the four sections have been arranged.

This workshop will meet daily from 9:00-3:00, July 18 to August 5. Three units of undergraduate or graduate credits 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 27 to August 5. Workshop lectures, laboratory groups and seminars will be scheduled between 8:00 a.m. and 12:30 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, two two-week workshops will be held on the University campus. One will run from June 27 to July 8; the other from July 25 to August 5. Ordinarily participants would attend only one of these two workshops because they will be organized similarly.

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

Conferences, Institutes

workshop (2 credit hours) will be held at the University from July 11 to July 22. 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 11 to July 22. 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.

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, 1960.*

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 1960 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 27 to August 5, 1960. 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: Education 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 27 to August 5, 1960. 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 pages 62-63) involving lecture, laboratory and field work will be offered in the Department of Zoology, University of Maryland.

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 continents 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: Mrs. Allie M. Brown, 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 1960 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. 5
- Zool. 104
- *Zool. 110
- *Zool. 199
- *Zool. 208

Physical Sciences

- Chem. 3
- Chem. 19
- Chem. 37
- Chem. 38
- *Chem. 111
- *Phys. 118-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.

*Intended for teachers.

Conferences, Institutes

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 1960-61.

Inquiries should be addressed to: Professor R. A. Good, Director, Summer Institute for Mathematics Teachers, Department of Mathematics, University of Maryland, College Park, Maryland.

Workshop in the Supervision of Student Teachers

This workshop is offered for experienced and qualified teachers who are interested in the supervision of student teachers, or who anticipate having a student teacher in the future. The workshop will meet from June 27 to July 15, daily 9:30 a.m. to 3:30 p.m.

The workshop is designed to give participants a background understanding of the place of student teaching in the total program of teacher education. Particular attention will be given to such topics as: the selection of supervising teachers, the approval of applicants for student teaching, the role of the supervising teacher in the professional growth of a student teacher, responsibilities of other staff members in a school for enriching the student teaching experience, major trends in student teaching programs throughout the country, evaluation of student teaching, and university-public school joint responsibility for improving student teaching programs. Workshop meetings will consist of both formal sessions and informal discussions. Participants should plan to devote full time to the workshop. Enrollment will be limited to twenty-five. Further information concerning the workshop may be had by writing to Dr. McClure, College of Education. For further details see Ed. 189-7.

Remedial Reading Instruction

This workshop is primarily designed for teachers who are actively engaged in remedial reading instruction and for supervisors and principals who are responsible for setting up remedial classes and programs. However, diagnostic techniques and teaching procedures considered in the workshop are also practical for classroom teachers who wish to help pupils who are making unsatisfactory progress in reading. Attention will be given to reasons for poor progress in reading, materials and procedures for diagnosing difficulties, criteria for selecting pupils for special reading instruction, instructional materials, and teaching procedures.

The workshop will meet daily from 9:30-3:30 p.m. between June 27 and July 15. Three hours of either undergraduate or graduate credit may be earned. For further details see Ed. 189-15.

Workshop on Teaching Elementary School Science

The College of Education will sponsor a five-week workshop June 27 to July 29, 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 1 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. Five 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. This workshop is listed under "Course Offerings" as Ed. 189-17.

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 R. H. Byrne, College of Education.

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 27 to July 15. 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 of four persons designated by 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.

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. (2) (4 cr. max.)

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 EDUCATION AND RURAL LIFE

Summer courses in agricultural education and rural life are offered primarily for teachers of vocational agriculture, extension field agents and others interested in the professional and cultural development of rural communities. These courses are arranged to articulate with certain courses in agricultural economics and marketing, agronomy, animal husbandry, botany, dairy husbandry, horticulture, and poultry. Courses in both groups are offered in a cycle.

In 1960, one one-credit course will be offered per week for the last four weeks of Summer School. Students can take as many of these courses as they can arrange to attend. The schedule for each course will depend upon the nature of the material presented, but the total number of meetings per credit will be in accordance with graduate course standards. For example, in courses that are presented largely through the laboratory method the class will meet the greater part of each day. In courses where the lecture method is used, there will be a minimum of three hours of class each day, and the students will be expected to spend considerable time outside of classes in various kinds of assignments. Some courses will be a combination of lectures and laboratories in varying degrees.

Agricultural Education and Rural Life

By pursuing a program of three properly selected one-week courses successfully for eight consecutive summers and submitting a satisfactory thesis a student can earn a Master of Science degree with a major in agricultural education. The time required for this degree can be shortened by attending some full six-week Summer School sessions, by attending one or more full semesters, by taking University extension courses offered over the State, and by taking courses given in the evening and on Saturday on the campus. Minor credit can be taken in either agricultural or secondary education courses.

Teachers should register for these courses on the regular registration day or on a special date to be announced. Teachers registering for the field problems or research courses may register at the same time, but will work under the direction of an assigned member of the staff, rather than on the basis of one-week per credit.

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.)

R. Ed. 198. *Special Problems in Agricultural Education.* (1-3)
Arranged. 0-138. 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. S199A-B. *Seminar in Agricultural Education.* (1, 1)
Part A. Arranged. 0-138. Investigations, reports and papers on the organization and administration of agricultural education. (Staff.)

R. Ed. S209A-B. *Adult Education in Agriculture.* (1, 1)
Part A. Arranged. 0-138. Principles of adult education as applied to rural groups, especially young and adult farmers. Organizing classes, planning courses and instructional methods are stressed. (Smith.)

R. Ed. S250A-B.—*Critique in Rural Education.* (1, 1)
Part A. Arranged. 0-138. Current problems of teaching agriculture are analyzed and discussed. Students are required to make investigations, prepare papers and make reports. (Hopkins.)

R. Ed. 301. *Field Problems in Rural Education.* (1-3)
Arranged. 0-138. Prerequisite, six semester hours of graduate study. Problems accepted depend upon the character of the work of the students and the facilities available for study. Periodic conferences required. Final report must follow accepted pattern for field investigations. (Staff.)

R. Ed. 399. *Research.* (1-6)
Arranged. 0-138. 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.)

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.)

Agron. 399. Research in Agronomy

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.

ART

Art 20. Art Appreciation. (2)

M.T.Th.F. 8:00. 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, E116; five laboratory periods, E-238; laboratory section 1, daily, 9:00-10:50; laboratory section 2, daily, 12-30-2:20. Laboratory fee \$5.00. 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.)

Botany, Business Administration and Organization

Bot. 113. Plant Geography. (2)

Offered 1961.

Bot. 136. Plant and Mankind. (2)

Offered 1962.

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

Offered 1962. Laboratory fee, \$5.00.

Bot. 153S. Field Botany. (2)

Daily laboratory, 1-2:50; E-308. Laboratory fee, \$5.00. Prerequisite, Bot. 1 or General Biology. The identification of trees, shrubs, and herbs, emphasizing the native plants of Maryland. Manuals, keys, and other techniques will be used. Numerous short field trips will be made. Each student will make an individual collection. This course is especially designed for science teachers and is offered as a part of their graduate program. (Brown.)

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 & ADMINISTRATION

B. A. 20. Principles of Accounting. (4)

Ten periods a week. Daily 8:00 and 9:00; Q-28. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorships, corporations and partnerships. (Wedeborg.)

B. A. 21. Principles of Accounting. (4)

Ten periods a week. Daily 8:00 and 9:00; Q-29A. Prerequisite, sophomore standing. The fundamental principles and problems involved in accounting for proprietorships, corporations and partnerships. (Daiker.)

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

Five periods a week. Daily 8:00-9:20; Q-29. 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. (Edelson.)

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

Section 1—Daily, 8:00, Q-243.

(Nelson.)

Section 2—Daily, 9:30, Q-243.

(Anderson.)

Five periods a week. 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. *Financial Management.* (3)

Five periods a week. Daily 8:00-9:20; Q146. Prerequisite, Econ. 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. 150a. *Marketing Principles and Organization.* (3)

Five periods a week. Daily 9:30-10:50, Q-146. Prerequisite, Econ. 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. (Ashman.)

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

Five periods a week. Daily 9:30-10:50; Q-148. Prerequisite, Econ. 160. 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.* (4)

Ten periods a week. Daily 8:00 and 9:00; Q-30; Prerequisite, senior standing. Required in all business administration curriculums. 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.)

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. 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. (Rollinson.)

***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.)

*Recommended for teachers, undergraduate credit.

Chemistry, Classical Languages and Literatures, Dairy

*Chem. 37. *Elementary Organic Chemistry.* (2)

Five lectures per week. 8:00, C-134. Prerequisite, Chem. 35. (Woods.)

*Chem. 38. *Elementary Organic Laboratory.* (2)

Five three-hour laboratory periods per week. 9:00, 10:00, 11:00, C-221. Prerequisite, Chem. 36. (Woods.)

*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.)

*Chem. 192, 194. *Glassblowing Laboratory.* (1, 1)

Three three-hour laboratory periods per week. M., W., 7:00, 8:00, 9:00; S, 9:00, 10:00, 11:00; C-B3. (Carruthers.)

Chem. 399. *Research.*

CLASSICAL LANGUAGES AND LITERATURES

Latin 101. *Catullus and the Roman Elegiac Poets.* (3)

Five periods a week. Daily, 9:30-10:50, A-8. Lectures and readings on Catullus as a writer of lyric, an imitator of the Alexandrians, and as a writer of elegy, and on Tibullus, Propertius, and Ovid as elegists. The reading of selected poems of the four authors. 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.)

*Recommended for teachers.

ECONOMICS

Econ. 5. Economic Developments. (2)

Four periods a week. 12:30-1:50; M. T. Th. F.; Q-147. 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 8:00-9:20; Q-147. 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 9:30-10:50; Q-147. 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 8:00-9:20; Q-31. 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.)

Econ. 140. Money and Banking. (3)

Daily 8:00-9:20; Q-148. 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. (Shelby.)

Econ. 160. Labor Economics. (3)

Daily 11:00-12:20; Q-31. 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. (Dalton.)

EDUCATION

BUSINESS EDUCATION

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

Daily 8; Q-246. 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. See pages 12-13 for details. (O'Neill.)

Education

B. Ed. 256. *Curriculum Development in Business Education.* (6)

Daily 9-12; Q-246. This course is especially designed for graduate students interested in devoting the summer session to a concentrated study of curriculum planning in business education. Emphasis will be placed on the philosophy and objectives of the business education program, and on curriculum research and organization of appropriate course content. (Patrick.)

CHILDHOOD EDUCATION

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

Daily 8:00; AA-7. Developmental growth of the child from birth to five years; observation in the University Kindergarten. 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, 9:30; AA-7. Development of an appreciation and understanding of young children from different home and community backgrounds; study of individual and group problems. (Broome.)

C. Ed. 159. *Teaching Kindergarten.* (4)

Daily, 8:00-12:20; AA-16. 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 Kindergarten. Fee, \$30.00. (Kappler.)

ELEMENTARY-SECONDARY EDUCATION

Ed. 52. *Children's Literature.* (3)

Daily, 9:30; F-104. A study of literary values in prose and verse for children. (Bryan.)

Ed. 102. *History of Education in the United States.* (3)

Daily, 8:00; T-211. A study of the origin and development of the chief features of the present system of education in the United States. (Wiggin.)

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

Section 1— 8:00, Daily; T-5. (Moore.)

Section 2— 9:30, Daily, T-5. (Kinn.)

Section 3—11:00, Daily, T-5. (Kinn.)

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— 9:30 Daily, T-10.

(O'Neill.)

Section 2—11:00 Daily, A-16.

(Griffin.)

Section 3—12:30 Daily, A-16.

(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— 9:30 Daily, R-103.

(Grossnickle.)

Section 2—11:00 Daily, O-120.

(Wells.)

Section 3—12:30 Daily, O-120.

(Wells.)

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— 9:30, M. T. Th. F., A-302.

(Lembach.)

Section 2—11:00, M. T. Th. F., A-302.

(Lembach.)

Concerned with art methods and materials for elementary schools. Includes laboratory experiences with materials appropriate for elementary schools. Art 20 and Pr. Art 1 are offered for teachers who need credit in art fundamentals to satisfy certification requirements.

Applications for enrollment must be mailed to College of Education office before June 15, 1960. Enrollment will be limited to 25 persons per section.

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 15, 1960. 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. (Voydat.)

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

Daily, 8:00; T-12. 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 to individual and group differences. Present tendencies and aims of instruction in the social studies. (Broadhead.)

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

Daily, 11:00; T-219. Fee, \$1.00. This course is designed to bring practical suggestions 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. (Vars.)

Education

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

Section I—Science; Daily, 9:30, T-102.

(Wessels.)

Section 2—Math; Daily, 8:00; T-10.

(Wessels.)

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-102. 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.

(Bingham.)

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.

(Alter.)

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

Daily, 9:30; T-211. This course is concerned with the principles and methods of teaching in junior and senior high schools.

(Vars.)

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

Daily, 8:00; P-306. Laboratory fee, \$1.00. Sensory impressions 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.

(Maley.)

Ed. 150. Educational Measurement. (2)

M. T. Th. F., 11:00; A-8. Constructing and interpreting measures of achievements.

(Jacobs.)

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

Section 1—Daily, 9:30; Q-140.

Section 2—Daily, 12:30; T-5.

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. (Cimino.)
 Section 2—Intermediate and secondary grades—12:30, Daily; R-102 (Schaefer.)
 Section 3—Primary and intermediate grades—11:10, Daily; R-102 (Cimino.)

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. Applications for enrollment must be mailed to the College of Education before June 15, 1960. Enrollment will be limited to 30 persons. (Roberts.)

Ed. 160. Educational Sociology. (2)

Daily, 11:00; T-12. 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. (Broadhead.)

Ed. 161. Principles of Guidance. (3)

Daily, 9:30; O-30. Overview of principles and practices of guidance-oriented education. (Saylor.)

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

Section 1—Daily, 8:00; T-20.

Section 2—Daily, 9:30; T-20.

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

(Denecke.)

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; G-110. June 27 to August 5, 1960. 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 16. Early application is recommended. (Risinger.)

Education

Ed. 189-7. Supervision of Student Teachers. (3)

Daily, 9:30-3:30; AR-29. June 27 to July 15, 1960. For experienced and qualified teachers who are interested in the supervision of student teachers, or who anticipate having a student teacher in the future. (McClure.)

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

Daily, 9:30-3:30; AR-40. June 27 to July 15, 1960. 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 of teaching and learning. The Smithsonian Institution will receive special attention as an excellent example of a valuable community resource. (Brinton.)

Ed. 189-15. Remedial Reading Instruction. (3)

Daily, 9:30-3:30; AR-33. June 27 to July 15, 1960. This workshop is primarily designed for teachers who are actively engaged in remedial reading instruction and for supervisors and principals who are responsible for setting up remedial classes and programs. Also of value for classroom teachers. Enrollment limited to 30. (Roberts.)

Ed. 189-17. Teaching Elementary School Science. (5)

Daily, 9:30-3:30; T-103. June 27 to July 29, 1960. A five-week workshop 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; AR-20; 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 of four persons designated by Maryland school systems. (Newell, Bowie.)

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

Daily, 9:00-3:00. To be arranged. June 27 to July 15. This workshop will demonstrate techniques and materials in teaching 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. (Haring.)

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

Daily, 9:00-3:00. To be arranged. July 18 to August 5. This workshop will be concerned with the characteristics, identification, survey of special programs and teaching techniques, curriculum and material for children who are gifted on the elementary and secondary level. (Haring.)

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

Daily, 8:00-3:00; J-8A. June 27 to July 8, 1960. 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 15. (Staff.)



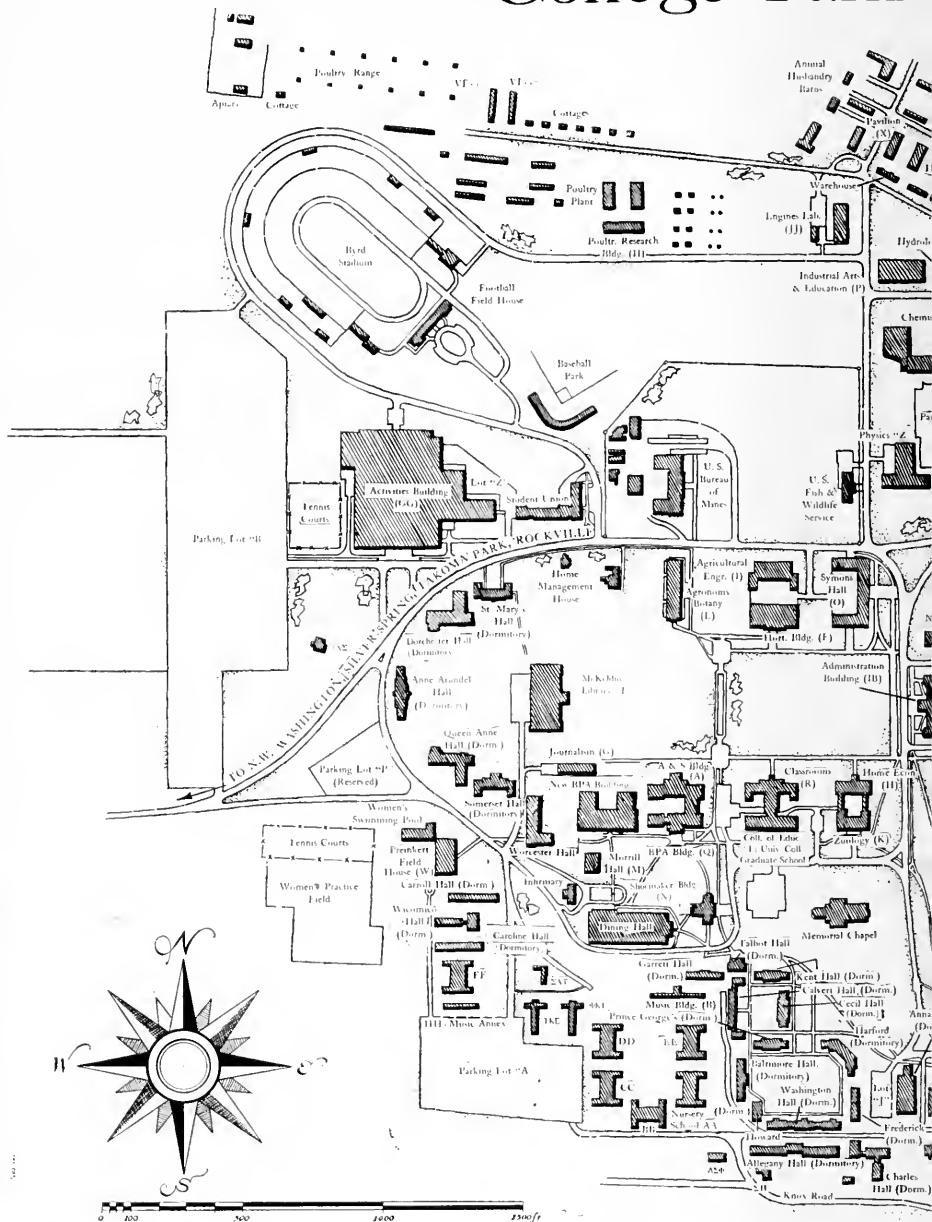
Summer School, College Park Campus.

*Individual laboratory experiences
in the sciences.*

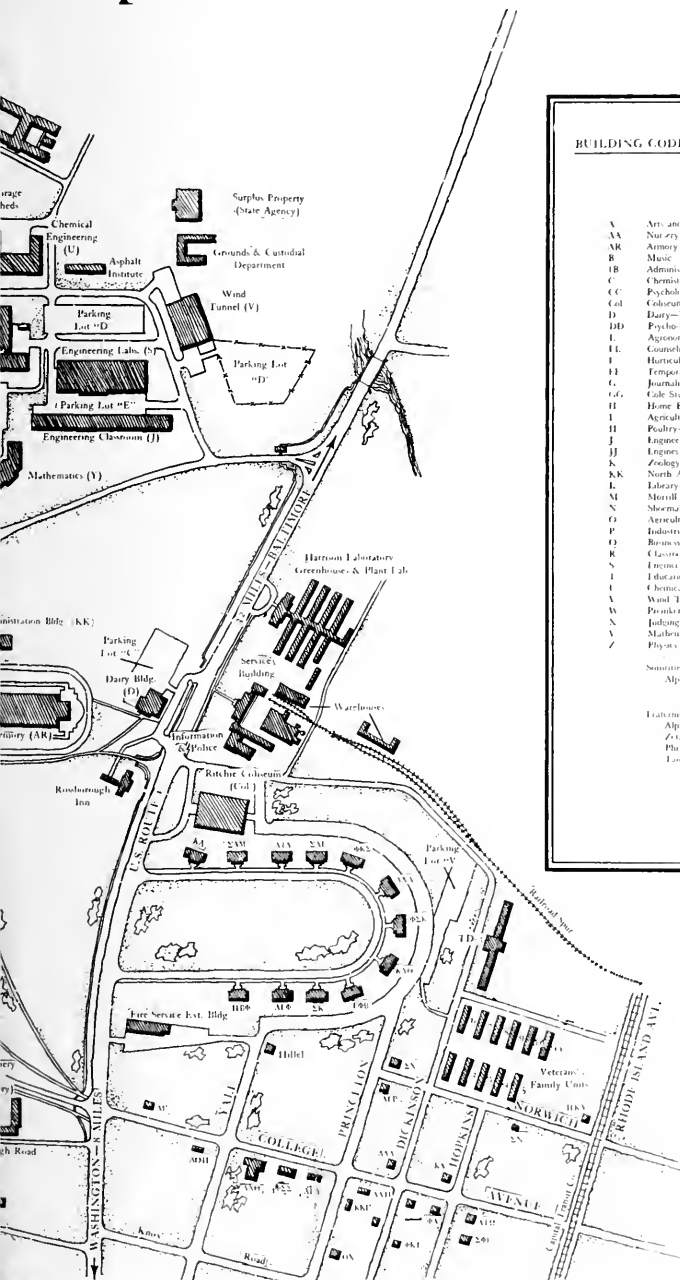
*High-school Band and Choral workshops. Summer
program, Music Education.*



UNIVERSITY OF College Park



MARYLAND Campus



BUILDING CODE LETTERS FOR CLASS SCHEDULES

- A Arts and Sciences—Eugene Scott Key Hall
- AA Nursery School
- AK Armory
- B Music
- IB Administration
- C Chemistry
- CC Psychology
- Col Coliseum
- D Dairy—Turner Laboratory
- DD Psycho-Pharmacology Laboratory
- E Agronomy—Botany—H. J. Patterson Hall
- EL Counseling Center
- F Horticulture—Hedzogl Hall
- FI Temporary Classroom
- Gal Gal
- G.C. Cole Student Activities Building
- H Home Economics
- I Agricultural Engineering—Shover Laboratory
- II Poultry—Jull Hall
- J Engineering Classroom Building
- JJ Engine Research Laboratory (Molecular Physics)
- K Zoology—Schaefer Hall
- KK North Administration Building
- L Library—McKiddin Hall
- M Merrill Hall
- N Shoemaker Building
- O Agriculture—Symons Hall
- P Industrial Arts and Education—J. M. Patterson Bldg.
- PO Business & Public Administration—Lathrop Hall
- R Classroom Building—Wood Hall
- S Engineering Laboratories
- T Education—Summer Building
- U Chemical Engineering
- V Wood Tunnel
- W Parkers Field House
- X Building Pavilion
- Y Mathematics
- Z Physics

Seminars: Not Shown
Alpha No. D.D.s

Exhibitions: Not Shown
Alpha Epitaph, P.
Zeta Beta Tau,
Phi Kappa Gamma,
Lambda Upsilon Phi

Coast
Defense
Training Bldg.

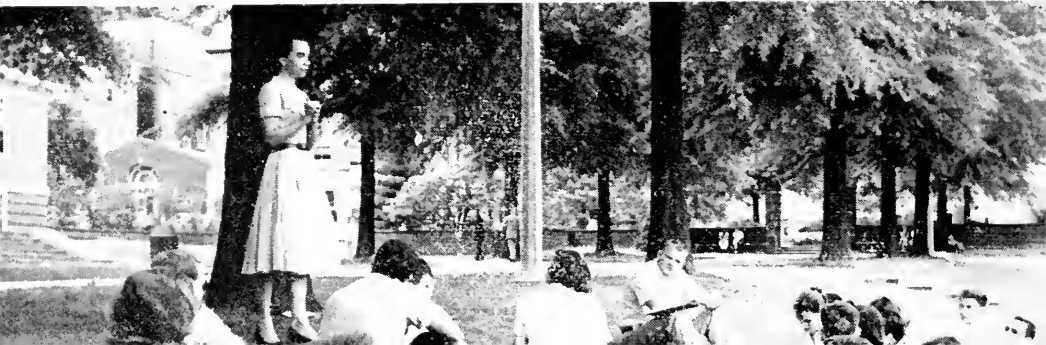


Learning the why and how of Educational Television.



Enjoying creative expression.

A challenging classroom knows no boundaries.



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

Daily, 8:00-3:00; J-8A. July 25 to August 5, 1960. Similar to the above-mentioned workshop, except for dates. Persons can participate in either one but not in both of these workshops for child study leaders. See also Page 15. (Staff.)

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

Daily, 8:00-3:00; J-8A. July 11 to July 22, 1960. 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, 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 pages 15-16. (Staff.)

Ed. 189-35. Application of Human Development Principles in Classrooms. (2)

Daily, 8:00-3:00; J-11. July 11 to July 22, 1960. This workshop is open only to 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. (Staff.)

Ed. 189-41. Counseling and Guidance Training Institute. (6)

June 27 to August 5. Daily, 8:00 to 4:00. See page 21 for description. (Byrne.)

Ed. 189-42. Counselor Education I. (8)

June 27 to August 19. Daily, 8:30 to 3:00. Enrollment limited to representatives of sponsoring counties. First of a two-summer sequence designed to prepare counselors. (Marx.)

Ed. 210. The Organization and Administration of Public Education. (3)

Daily, 8:00; O-32. 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. (Rogers.)

Ed. 211. The Organization, Administration, and Supervision of Secondary Schools. (3)

Daily, 8:00; A-6. 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. (Voydat.)

Ed. 212. School Finance and Business Administration. (3)

Daily, 9:30; F-101. An introduction to principles and practices in the administration of the public school finance activity. Sources of tax revenue, the budget, and the function of finance in the educational program are considered. (Rogers.)

Ed. 216. Public School Supervision. (3)

Daily, 12:30; T-10. 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. (Shaffer.)

Education

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

Daily, 9:30; F-103. Problems in organizing and administering elementary schools and improving instruction. (Schaefer.)

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

M. T. Th. F., 11:00; F-101. 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. 235. Principles of Curriculum Development. (3)

Daily, 9:30; N-203. 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. (Shaffer.)

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

M. T. Th. F., 8:00; R-202. Implications of current theory and results of research for the teaching of arithmetic in elementary schools. (Grossnickle.)

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

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

Ed. 245. Introduction to Research. (2)

Section 1—M. T. W. F., 8:00; T-13.

Section 2—M. T. W. Th., 12:30; T-12.

Implications of experimental practices, the proposals of eminent writers and the results of research for the improvement of teaching on the secondary level. (Jacobs.)

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

M. T. Th. F., 8:00; T-102. An opportunity to pursue special 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. (Ulry.)

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

Daily, 8:00; O-101. Knowing students through use of numerous techniques. Ed. 161 desirable as prior course. (Tarwater.)

Ed. 253. Guidance Information. (2)

M. T. Th. F., 11:00; O-101. Ed. 161 desirable as prior course. How to find, file, and use information needed by students for making choices, plans, and adaptations in schools, occupations, and in inter-personal relations. (Saylor.)

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

Daily, 9:30; O-32. Exploration of counseling theories and the practices which stem from them. Ed. 161, Ed. 250, Ed. 253 are prerequisite. (Tarwater.)

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

Daily, 11:00; O-32. Prerequisite, Ed. 260. Limited to 15 applicants in advance, who will have one or more pupils available for counseling. (Staff.)

Ed. 263. Aptitudes and Aptitude Testing. (2)

M. T. Th. F., 11:00; O-240. (Staff.)

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

M. T. Th. F., 11:00; F-103. 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)

T. Th., 11:00; R-101. Prerequisite, passing the preliminary examinations 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; T-219. 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. 202. Trends in the Teaching and Supervision of Home Economics. (3)

Daily, 9:30-12:30; T-219. Three weeks—June 27-July 15. Study of home economics programs and practices in light of current educational trends. Interpretation and analysis of democratic teaching procedures, outcomes of instruction, and supervisory practices. (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 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. (Staff.)

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. Ed. 100 and H. D. Ed. 101, are designed to meet the usual certificate requirements in educational psychology.* (Staff.)

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)

Daily, 8:00; J-318. 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 or 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. (Staff.)

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. (Staff.)

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. (Staff.)

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 behaving which emerge from the interaction of basic biological drives and potentials with one's unique experience growing up in a social group. (Staff.)

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. (Staff.)

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. (Staff.)

*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.

H. D. 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.

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. Ind. Ed. 9, "Industrial Arts in the Elementary School", is intended for elementary school teachers.

Education

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 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. 9. Industrial Arts in the Elementary School I. (2)

Daily, 11:00; P-214. Laboratory fee, \$5.00. A course for pre-service and in-service elementary school teachers covering construction activities in a variety of media suitable for classroom use. The work is organized on the unit basis so that the construction aspect is supplemented by reading and other investigative procedures.

(Jacobsen.)

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. 34. Graphic Arts I. (3)

Daily, 9:30; P-201-300. Laboratory fee, \$7.50. An introductory course involving experiences in letterpress and offset printing practices. This course includes typographical design, hand composition, proof reading, stock-preparation, offset plate making, imposition, lock-up, stock preparation, presswork, linoleum block cutting, paper marbelizing, and bookbinding.

(Schramm.)

Ind. Ed. 44. Graphic Arts II. (3)

Daily, 9:30; P-201-300. Prerequisite, Ind. Ed. 34. Laboratory fee, \$7.50. An advanced course designed to provide further experiences in letterpress and offset printing and to introduce other reproduction processes. Silk screen printing, dry point etching, mimeograph reproduction, and rubber stamp making are the new processes introduced in this course.

(Schramm.)

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.
(Merrill, Harrison.)

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. 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. 171. History of Vocational Education. (2)

M. T. Th. F., 11:00; P-221. An overview of the development of Vocational Education from primitive times to the present.
(Staff.)

Ind. Ed. 175. Recent Technological Developments in Products and Processes. (3)

Daily, 8:00; P-306. This course is designed to give the student an understanding of recent technological developments as they pertain to the products and processes of industry. The nature of the newer products and processes is studied as well as their effect upon modern industry and/or society.
(Merrill.)

Ind. Ed. 207. Philosophy of Industrial Arts Education. (3)

Daily, 9:30; P-221. This course is intended to assist the student in his development of a point of view in regard to industrial arts and its relationship with the total educational program. He should, thereby, have a "yardstick" for appraising current procedures and proposals and an articulateness for his own professional area.
(Harrison.)

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

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

MUSIC EDUCATION

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

Section 1—Daily, 9:30-10:50; B-7.
Section 2—Daily, 11:00-12:20; B-7.
(Henke.)
(Henke.)

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.

Education

Mus. Ed. 132. Music in the Secondary School. (2)

M. T. Th. F., 9:30-10:50; 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. (deVermond.)

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

Daily, 2:00-5:00, July 5-15 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. (Brown.)

Mus. Ed. 180. Instrumental Seminar. (2)

Daily, 2:00-5:00, July 5-15 only; Armory-21. Offered as part of a Workshop in Band Music for a two-week period. Supplementary fee, \$5.00. Lectures, conferences, and discussions of problems and literature for concert and marching bands; and a special section on string teaching. A survey of instructional materials and administrative problems will be included. A band composed of selected high-school students will be available for demonstrations in the second week of the Workshop. (Neilson.)

Mus. Ed. 201. Administration and Supervision of Music in the Public Schools. (3)

Daily, 9:30-10:50; B-1. The study of basic principles and practices of supervision and administration with emphasis on curriculum construction, scheduling, budgets, directing of in-service teaching, personnel problems, and school-community relationships. (Grentzer.)

SCIENCE EDUCATION

**Sci. Ed. 6. The Natural Sciences in the Elementary School. (2)*

M. T. Th. F., 9:30; T-119. Laboratory fee, \$2.00. Selecting, organizing, and teaching plant and animal materials. For teachers who need help in identifying and making effective use of living materials brought to the classroom, assisting pupils to find answers to their questions, and planning other worthwhile science experiences. (Fish.)

Sci. Ed. 105. Workshop in Science for 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. (Fish.)

Enrollment in each of the above courses will be limited to 35 persons. Applications for enrollment must be mailed to the College of Education before June 15, 1960.

*Recommended for teachers, undergraduate credit.

Ed. 189-17. *Workshops, Clinics, and Institutes: Teaching Elementary School Science.* (5)

T-103.

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. (Benoit.)

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. (Benoit.)

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

(Haring.)

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

(Haring.)

ENGINEERING

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

June 6 to 20, 1960, inclusive. Daily, all day; J-104, J-102. Prerequisite, junior standing or permission. Principles and methods of making plane and topographic surveys. Use, care, and adjustment of instruments. Consistent accuracy and systematic procedures in field work, computation, and mapping are emphasized for obtaining desired objectives. (Garber, staff.)

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

June 6 to 20, 1960, inclusive. Daily all day; J-104A, J-103. Prerequisite, C. E. 110. 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. (Garber, staff.)

Dr. 2. *Engineering Drawing.* (2)

Section I—Daily, 10, 11; J-303.

(Staff.)

Section II—Daily, 7, 8 p.m.; J-303.

(Staff.)

* Open only to students who were enrolled in the College of Engineering during the academic year 1959-60.

Engineering, English

June 27-August 5, 1960. Prerequisite, Dr. 1. Lettering, use of instruments, orthographic projection, auxiliary views, revolution, sections, pictorial representation, dimensioning, fasteners, technical sketching and working drawings.

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

Five lectures and one four-hour 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. (Thompson.)

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, 8:00-9:20; A-14.
- Section 2—Daily, 9:30-10:50; A-14.
- Section 3—Daily, 11:00-12:20; A-14.

Eng. 2—

- Section 1—Daily, 8:00-9:20; A-17.
- Section 2—Daily, 9:30-10:50; A-17.
- Section 3—Daily, 11:00-12:20; A-17.

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

Prerequisite, Eng. 2 or 21.

(Staff.)

Eng. 3—

- Section 1—Daily, 9:30-10:50; A-18.
- Section 2—Daily, 11:00-12:20; A-18.

Eng. 4—

- Section 1—Daily, 8:00-9:20; A-207.
- Section 2—Daily, 9:30-10:50; A-207.
- Section 3—Daily, 11:00-12:20; A-207.

Eng. 8. College Grammar. (3)

Daily, 9:30; A-133. Prerequisite, Eng. 2 or 21. An analytical study of Modern English grammar. (Harman.)

Eng. 104. Chaucer. (3)

Daily, 8:00; A-133. Prerequisites, Eng. 4 or 6 and junior standing. A literary and linguistic study of the Canterbury Tales, Troilus and Criseyde, and the principal minor poems. (Harman.)

Eng. 120. English Drama from 1660 to 1800. (3)

Daily, 9:30; A-6. Prerequisites, Eng. 4 or 6 and junior standing. The important dramatists from Wycherley to Sheridan, with emphasis upon the comedy of manners. (Ward.)

Eng. 129. Literature of the Romantic Period. (3)

Daily, 11:00; A-6. Prerequisites, Eng. 4 or 6 and junior standing. Emphasis will be on the poetry of Wordsworth, Coleridge, and Byron. (Smith.)

Eng. 143. Modern Poetry. (3)

Daily, 11:00; A-133. Prerequisites, Eng. 4 or 6 and junior standing. A study of some leading British and American poets of the twentieth century. (Fleming.)

Eng. 150. American Literature. (3)

Daily, 8:00; A-6. Prerequisites, Eng. 4 or 6 and junior standing. American poetry and prose to 1850. (Beall.)

Eng. 225. Seminar in American Literature. (3)

Arranged. Readings and special topics in some major figures of American literature of the 19th and 20th centuries. (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-T20. 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.)

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.)

* Intended for teachers.

FOREIGN LANGUAGES

French 0. Intensive Elementary French. (0)

Daily, 11:00; A-209. Intensive elementary course in the French language designed particularly for graduate students who wish to acquire a reading knowledge. (Lee.)

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. (Lee.)

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 of literary or scientific French. (Alter.)

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. (Hering.)

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.)

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. (Rovner.)

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. (Bingham.)

LANGUAGE COURSES FOR TEACHERS

The Summer School program for language teachers consists of refresher courses in language (French, German, or Spanish according to demand), a course on French cultural backgrounds, methods and demonstration courses both for elementary and high school teaching, and an introduction to language

Foreign Languages, Geography, Government and Politics

analysis in a course on European linguistics. 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.)

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

Daily, 9:30; A-212. (See description on page 32.) (Rovner.)

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

Daily, 9:30; A-209. (See description on page 32.) (Staff.)

French 162. French Civilization. (3)

Daily, 12:30; A-231. French life, customs, culture, traditions of present-day France. (Bingham.)

French (German, Spanish) 230. Introduction to European Linguistics. (3)

Daily, 9:30; A-231. Linguistic problems considered on the basis of several languages. (Anderson.)

GEOGRAPHY

Geog. 40. Principles of Meteorology. (3)

Daily, 8:00; N-203. 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. (Taylor.)

Geog. 111. Economic and Cultural Geography of South America. (3)

Daily, 11:00; N-203. A survey of natural environment and resources, economic development, and cultural diversity of the South American republics, with emphasis upon problems and prospects of the countries. (Taylor.)

Geog. 190. Political Geography. (3)

Daily, 9:30; N-128. Geographical factors in national power and international relations; an analysis of the role of "Geopolitics" and "Geostrategy," with special reference to the current world scene. (Patton.)

GOVERNMENT AND POLITICS

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

Section 1—Daily, 8:00; A-12. (Hathorn.)

Section 2—Daily, 11:00; A-12. (Staff.)

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 Depart-

Government and Politics, History

ment. It is a comprehensive study of government in the United States—national, state, and local.

G. & P. 3. Principles of Government and Politics. (3)

Daily, 9:30; Q-31. Prerequisite, G. & P. 1. A study of the basic principles and concepts of political science. Required of all G. & P. majors. Recommended for students interested in acquiring a broad knowledge of political science in general. (Staff.)

G. & P. 9. The Governments of Latin America. (2)

M. T. W. F., 11:00; Q-28A. Prerequisite, G. & P. 1. A comparative study of Latin American governments, with special emphasis on Argentina, Brazil, Chile, and Mexico. (Harrison.)

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

Daily, 8:00; A-16. 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. (Harrison.)

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

Daily, 9:30; A-16. 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. 174. Political Parties. (3)

Daily, 11:00; Q-140. Prerequisite, G. & P. 1. A descriptive and analytical examination of American political parties, nominations, elections, and political leadership. (Hathorn.)

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

To be arranged. (Alford.)

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

To be arranged. (Staff.)

HISTORY

H. 1. History of Modern Europe. (3)

Daily, 8:00; A-130. (Weinstein.)

H. 2. History of Modern Europe. (3)

Daily, 11:00; A-228. (Gordon.)

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

Section 1—Daily, 8:00; A-106. (Gatell.)

Section 2—Daily, 9:30; A-106. (Gatell.)

Section 3—Daily, 11:00; A-106. (Bates.)

Section 4—Daily, 12:30; A-106. (Staff.)

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

Section 1—Daily, 8:00; A-110.

(Eggert.)

Section 2—Daily, 9:30; A-110.

(Eggert.)

Section 3—Daily, 11:00; A-110.

(Fox.)

Section 4—Daily, 12:30; A-110.

(Murdoch.)

H. 121. *History of the American Frontier.* (3)

Daily, 8:00; E-131. Prerequisites, H. 5, 6 or the equivalent. The Trans-Allegheny West. The westward movement into the Mississippi Valley.

(Bates.)

H. 134. *The History of Ideas in America.* (3)

Daily, 9:30; E-131. Prerequisites, H. 5, 6 or the equivalent. An intellectual history of the American people embracing such topics as liberty, democracy, and social ideas.

(Fox.)

H. 164. *The Middle East.* (3)

Daily, 11:00; E-131. A survey of the historical and institutional developments of the nations of this vital area. The Islamic Empires and their cultures; impact of the west; breakup of the Ottoman Empire and rise of nationalism; present day problems.

(Rivlin.)

H. 191. *History of Russia.* (3)

Daily, 9:30; O-101. A history of Russia from the earliest times to the present day.

(Murdoch.)

H. 202. *Historical Literature.* (3)

Arranged. Assignments in selected fields of historical literature and bibliography for qualified graduate students who need intensive concentration.

(Rivlin.)

H. 250. *Seminar in European History.* (3)

(Gordon.)

H. 287. *Historiography: Techniques of Historical Research and Writing.* (3)

Arranged. An introduction to the professional study of history. Includes an examination of the sources and nature of historical knowledge, historical criticism, and synthesis. Required of all candidates for advanced degrees in history.

(Staff.)

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

Arranged. Credit proportioned to amount of work. Required of all candidates for degrees.

(Land, staff.)

HOME ECONOMICS

Home Mgt. 152. Experience in Management of the Home. (3)

Prerequisite, H. Mgt. 150, 151. Laboratory fee, \$10.00. 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.

(Smith.)

Home Economics, Horticulture

*Foods 104. *Advanced Foods.* (2-3)

June 27-July 15, 9:30-12:30. Prerequisite, Foods 52, 53; Chem. 31, 32, 33, 34, or consent of instructor. Laboratory fee, \$3.00. The physical and chemical behavior of the basic food constituents in food preparation and processing; study of recent advances in these fields. (Cox.)

*H.E. 190. *Special Problems in Home Economics.* (*Current Trends and Developments in Home Management; Nutrition Services; Textiles and Fashion*). (1-3)

July 18-August 5. Hours arranged. Junior, senior, or graduate standing and consent of instructor. Laboratory fee, \$3.00 per credit hour. Problem may be in any area of home economics and will carry the name of the subject matter of the problem. (Lippeatt, staff and consultants.)

Clo. 122. *Tailoring.* (2)

M. T. Th. F., 12:30-3:00. Prerequisite, Clo. 21. Laboratory fee, \$3.00. Construction of tailored garments, requiring professional skill. (Mitchell.)

Clo. 127. *Apparel Design.* (3)

Daily, 12:30-3:00. Prerequisite, Clo. 120. Laboratory fee, \$3.00. The art of costuming; trade and custom methods of clothing design and construction; advanced work in draping, pattern design and/or tailoring with study of the interrelationship of these techniques. (Heagney.)

Cr. 102. *Creative Crafts.* (2-4)

Daily, 9:30-12:00. Prerequisites, Pr. Art 1 and consent of instructor. Laboratory fee, \$3.00. Interests of persons enrolled will determine the crafts to be pursued. Suggested: block printing, wood burning, crayon decoration, paper sculpture, clay modeling, metalry, weaving. Excellent for teachers, directors of recreation centers, and persons who desire an introduction to recreational crafts. (Longley.)

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

Daily, 8:00-9:20. Laboratory fee, \$3.00. Art expression through materials such as opaque water color, wet clay, colored chalk and lithograph crayon which are conducive to free techniques. Elementary lettering, action figures, abstract design, three-dimensional design and general composition study. Consideration of art as applied to daily living. (Longley.)

HORTICULTURE

Hort. S124. *Tree and Small Fruit Management.* (1)

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

Hort. 198. *Special Problems.* (2)

Credit arranged according to work done. For major students in horticulture or botany. (Staff.)

Hort. 399. *Advanced Horticultural Research.* (2-6)

Credit granted according to work done. (Staff.)

*It will not be possible to register for either of the blocked courses and courses running the entire 6 weeks of summer session.

JOURNALISM AND PUBLIC RELATIONS

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.)

Journ. 197 or Public Relations 197. Supervised Internship. (0)

Arranged. Prerequisites: To be taken following the junior year as a major in this department, upon permission of instructor. At least six weeks of organized, supervised study, experience, and on-the-job training in journalism or in public relations. (Crowell.)

LIBRARY SCIENCE

L.S. 101S. School Library Administration. (3)

Eight lecture periods a week. Daily, 9:30-10:50, Library-100. The organization and maintenance of effective library service in the modern school. Planning and equipping library quarters, purpose of the library in the school, standards, instruction in the use of books and libraries, training student assistants, acquisition of materials, repair of books, publicity, exhibits, and other practical problems. (Hobson.)

L.S. 103S. Book Selection for School Libraries. (3)

Eight lecture periods a week. Daily, 12:30-1:50, Library-100. Principles of book selection as applied to school libraries. Practice in the effective use of book selection aids and in the preparation of book lists. Evaluation of publishers, editions, translations, format, etc. (Hobson.)

MATHEMATICS

Math. 0. Basic Mathematics. (0)

Daily, 8:00-9:20; Y-26. 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, 11:00-12:20; 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 Air Science, and the Department of Industrial 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)

Section 1—Daily, 9:30-10:50; Y-2.

(Shepherd.)

Section 2—Daily, 9:30-10:50; Y-26.

(Steely.)

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, amortization, and sinking funds.

Mathematics

Math. 10. Algebra. (3)

Daily, 9:30-10:50; Y-4. 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. (Mar.)

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

Daily, 8:00-9:20; Y-4. 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-16. Prerequisite, high school algebra completed and plane geometry. Open to students in the physical sciences, engineering, and education. The elementary mathematical functions, especially 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. (Dyer.)

Math. 19. Elementary Mathematical Analysis. (5)

Section 1—Daily, 8:00, 9:00 and M.W.F., 1:00-2:00; Y-17. (Berry.)

Section 2—Daily, 8:00, 9:00 and M.W.F., 1:00-2:00; Y-18. (Schwartz.)

Section 3—Daily, 8:00, 9:00 and M.W.F., 1:00-2:00; Y-19. (Henney.)

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-16. 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. (Ehrlich.)

Math. 21. Calculus. (4)

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

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

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

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

Daily, 8:00-9:20; Y-122. Prerequisite, Math. 21 or equivalent. Required of students in mechanical and electrical engineering. Differential equations of the first and second order with emphasis on their engineering applications. (Rosen.)

Mathematics, Microbiology

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

M. T. W. F., 9:30-10:50; 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. 111. Advanced Calculus. (3)

Daily, 8:00-9:20; Y-121. Prerequisite, Math. 110 or equivalent. Limits and continuity of real and complex functions, Riemann integration, partial differentiation, line and surface integrals, infinite series, elements of vector analysis, elements of complex variable theory. Emphasis on problems and techniques. (Horvath.)

**Math. 182. Foundations of Algebra. (3)*

Daily, 8:00-9:20; 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. (Good.)

Math. 183S. Foundations of Geometry. (2)

M. W. Th. F., 11:00-12:20; 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. A study of the axioms for Euclidean and Non-Euclidean geometry. (Horvath.)

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

Daily, 9:30-10:50; 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: geometry, logic, probability and statistics. (Good, Keedy.)

MICROBIOLOGY

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

Five lectures and five two-hour laboratory periods a week. Lecture, 8:00; O-30. Laboratory, 9:00, 10:00; T-311. Laboratory fee, \$10.00. The physiology, culture, and differentiation of bacteria. Fundamental principles of microbiology in relation to man and his environment. (Laffer.)

*Intended for teachers.

Microbiology, Music

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, \$10.00. 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 member of the Department. (Faber.)

Microb. 399. Research.

Prerequisite, 30 credits in microbiology. Laboratory fee, \$10.00. Credits according to work done. The investigation is outlined in consultation with, and pursued under, the supervision of a senior staff member of the Department. (Staff.)

MUSIC

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

Daily, 11:00; B-1. 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. (deVermond.)

Music 169. Choral Music. (3)

Daily, 8:00; B-1. Prerequisites, Music 120 and 121 or their equivalents. The history and literature of choral music from the Renaissance to the present, with discussion of related topics such as Gregorian chant, vocal chamber music, etc. (Stevenson.)

Music 200. Advanced Studies in the History of Music. (3)

Daily, 11:00; B-9. Prerequisites, Music 120 and 121 or their equivalents. A critical study of one style period (Renaissance, Baroque, etc.) will be undertaken. In the 1960 Summer Session musical style from the Renaissance to the contemporary period will be studied. The course may be repeated for credit, since a different area will be chosen each time the course is offered. (Stevenson.)

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. 4, Viola |
| Sec. 2, Voice | Sec. 5, Cello |
| Sec. 3, Violin | Sec. 6, Bass |

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, Springmann, Berman.)

PHILOSOPHY

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

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

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

Daily, 9:30; M-101. 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.
(Robinson.)

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; Driving 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. 100. Kinesiology. (4)

Daily, 11:00-12:20; GG-205. The study of human movement and the physical and physiological principles upon which it depends. Body mechanics, posture, motor efficiency, sports, the performance of atypical individuals, and the influence of growth and development upon motor performance are studied.
(Massey.)

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

Daily, 12:30-1:50; 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. 155. Physical Fitness of the Individual. (3)

Daily, 9:30-10:50; GG-205. A study of the major physical fitness problems con-

Physical Education, Recreation and Health

fronting the adult in modern society. Consideration is given to the scientific appraisal, development and maintenance of fitness at all age levels. Such problems as obesity, weight production, chronic fatigue, posture, and special exercise programs are explored. This course is open to persons outside the field of physical education and health.

(Massey.)

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

Arranged. 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.)

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

Tuesday, 12:30 p.m.; GG-205.

(Massey.)

P. E. 201. Foundations in Physical Education, Recreation, and Health. (3)

Daily, 8:00-9:20; GG-128. A study of history, philosophy and principles of physical education, recreation and health as applied to current problems in each area and as related to general education.

(Eyler.)

P. E. 230. Source Material Survey. (3)

Daily, 11:00-12:20; GG-128. A library survey course, covering the total areas of physical education, recreation and health, plus research in one specific limited problem of which a digest, including a bibliography is to be submitted.

(Eyler.)

P. E. 250. Mental and Emotional Aspects of Sports and Recreation. (3)

Daily, 9:30-10:50; GG-202. An exploration of psychological aspects of physical education, athletic sports and recreation. Applications of psychology are made to teaching and learning, coaching, athletic efficiency (motivation, emotional upset, staleness, etc.), and the problem of interpreting physical education and recreation experiences. Means of studying problems of these kinds are evaluated.

(Johnson.)

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.)

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

Physical Education, Recreation and Health, Physics

drivers; teaching to meet driving emergencies; program planning in driver-education; consumer education; resources and agencies; the teacher and driver-education; measuring and evaluating results; driver-education for adults; new developments in driver-education; insurance and liability, and the future of driver-education. (Tompkins.)

Hea. 160. Problems in School Health Education in Elementary and Secondary Schools. (3)

Daily, 9:30-10:50; GG-128. This is a workshop type course designed particularly for in-service teachers to acquaint them with the best methods of providing good health services, healthful environment and health instruction. (Humphrey.)

Hea. 189. Field Laboratory Projects and Workshops. (1-6)

Arranged. 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.)

Hea. 220. Scientific Foundations of Health Education. (3)

Daily, 12:30-1:40; GG-202. A course dealing with an analysis of hereditary, physical, mental, and social factors which influence the total health status during the developmental process. The role of education in fostering physical and mental health is studied. (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. (Marion, staff.)

**Phys. 118A. Atoms, Nuclei, and Stars.* (3)

Five one and one-half lectures per week. Daily, 8:00-9:20; Z-115. Prerequisite, a previous course in physics. This course is intended primarily for high school science teachers and contains a thorough introduction to basic ideas of the constitution and properties of atomic and subatomic systems, and the over-all structure of the universe. The development of present ideas will be outlined, and their shortcomings indicated. Subjects treated include the electron, the Bohr theory of the atom, the uncertainty principle and quantum mechanics, nuclear reaction, fission, fusion, cosmic radiation, the solar system, the life cycle of a star, systems of galaxies, and scientific theories about the past and future of the universe. (Iskraut.)

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

Five two-hour lectures per week. Daily, 10:00-11:50; 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. (Gutsche, staff.)

*Intended for teachers.

Physics

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

Two two-hour meetings a week. M. W., 3:00-4:50; C-134. 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. (Anderson, 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)*

Lectures and discussion sessions arranged. Credit according to work done. 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.)

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

One two-hour seminar each week, June 27 to August 5. T., 3:00-4:50. In addition, daily three-hour seminar August 8 to August 12. 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, staff.)

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

Two one and one-half hour classes per week. T. Th., 3:00-4:20; C-134. Arranged. (Faculty.)

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.

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.

*Intended for teachers.

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, 9:30-10:50; M-105. 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. (Verplanck.)

Psych. 110.—Educational Psychology. (3)

Five periods per week. Daily, 11:00-12:20; M-105. 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. (Verplanck.)

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, 8-9:20; R-103. Sociological analysis of the American social structure, metropolitan, small town, and rural communities; population distribution, composition and change; social organization. (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.)

Sociology

Soc. 64. *Courtship and Marriage.* (3)

Daily, 12:30-1:50; R-110. Prerequisite, Soc. 1 and sophomore standing. A sociological study of courtship and marriage including consideration of physiological and psychological factors. Inter-cultural companions and practical considerations. Designed for students in the lower division. (Shankweiler.)

Soc. 105. *Cultural Anthropology.* (3)

Daily, 11:00-12:20; R-103. A survey of the simpler cultures of the world, with attention to historical processes and the application of anthropological theory to the modern situation. (Anderson.)

Soc. 112. *Rural-Urban Relations.* (3)

Daily, 11:00-12:20; R-110. The ecology of population and the forces making for change in rural and urban life; migration, decentralization and regionalism as methods of studying individual and national issues. Applied field problems. (Franz.)

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. 136. *Sociology of Religion.* (3)

Daily, 8-9:20; R-110. Varieties and sources of religious experience. Religious institutions and the role of religion in social life. (Anderson.)

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. 160. *Interviewing in Social Work.* (1½)

(Given as a three-credit unit with Soc. 163.)

(McElhenie.)

Soc. 163. *Attitude and Behavior Problems in Public School Work.* (1½)

Daily, 9:30-10:50; R-204. (Given as a three credit unit with Soc. 160.) This sequence was originally restricted to state and county pupil personnel employees, but is now open to the general student body. (McElhenie.)

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. 291. *Special Social Problems.* (3)

Credit to be determined. Time to be arranged.

(Staff.)

Soc. 399. *Research in Sociology.* (3-6)

Credit to be determined. Time to be arranged.

(Staff.)

SPEECH AND DRAMATIC ART

Speech 1. Public Speaking. (3)

Section 1—Daily, 8:00-9:20; R-102.

(Starcher.)

Section 2—Daily, 9:30-10:50; R-102.

(Linkow.)

Prerequisite for advanced speech courses. Laboratory fee, \$1.00. The preparation and delivery of short original speeches; outside readings; reports; etc. It is recommended that this course be taken during the freshman year.

Speech 106. Clinical Practice. (1-6)

Hours arranged. Prerequisite, Speech 105. Fee, \$1.00 per credit hour. A laboratory course dealing with the various methods of correction plus actual work in the clinic.

(Conlon.)

Speech 111. Seminar. (3)

Hours arranged. Prerequisites, senior standing and consent of instructor. Required of speech majors. Present-day speech research.

(Strausbaugh.)

Speech 112. Phonetics. (3)

Daily, 9:30-10:50; R-109. Prerequisite, Speech 3 or consent of instructor. Laboratory fee, \$3.00. Training in the recognition and production of the sounds of spoken English, with an analysis of their formation. Practice in transcription. Mastery of the International Phonetic Alphabet.

(Dew.)

Speech 136. Principles of Speech Therapy. (3)

Daily, 11:00-12:20; R-109. Prerequisite, Speech 120. Laboratory fee, \$3.00. Differential diagnosis of speech and language handicaps and the application of psychological principles of learning, motivation and adjustment in the treatment of speech disorders.

(Hendricks.)

Speech 138. Methods and Materials in Speech Correction. (3)

Daily, 9:30-10:50; R-101. Prerequisite, Speech 120 or the equivalent. Laboratory fee, \$3.00. The design and use of methods and materials for diagnosis, measurement, and retraining of the speech-handicapped.

(Conlon.)

Speech 149. Television Workshop. (3)

Daily 11:00-12:20; R-9. Two-hour lecture, four-hour laboratory. Prerequisites, Speech 22, Speech 140, and Speech 148, or consent of instructor. Laboratory fee, \$10.00.

(Batka.)

Speech 200. Thesis. (3, 6)

Credit in proportion to work done and results accomplished.

(Hendricks.)

Speech 211. Advanced Clinical Practice. (1-3)

Hours arranged. Prerequisites, 12 hours in speech pathology and audiology. Laboratory fee, \$1.00 per hour. Supervised training in the application of clinical methods in the diagnosis and treatment of speech and hearing disorders.

(Dew.)

ZOOLOGY

†Zool. 1. *General Zoology.* (4)

Five lectures and five two-hour laboratory periods a week. Lecture, 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. 5. *Comparative Vertebrate Morphology.* (4)

Five lectures and five three-hour laboratory periods a week. Lecture, 1:00; K-310; laboratory, 9:00, 10:00, 11:00; K-22. Prerequisites, Zool. 1 and 2 or equivalent. Laboratory fee, \$8.00. A comparative study of selected organ systems in certain vertebrate groups. (Ramm.)

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. 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. 110. *Parasitology.* (4)

Five lectures and five three-hour laboratory periods a week. Lecture, 8:00; K-216; laboratory, 9:00, 10:00, 11:00; K-216. Prerequisite, one year of zoology. Laboratory fee, \$8.00. A study of the taxonomy, morphology, physiology, and life cycles of animal parasites. (Kates.)

*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 27 to August 5, and daily seminar, 8:30, 9:30, 10:30, August 8 to August 12. 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.)

Zool. 231S. *Acarology.* (3)

June 27 through July 15. Lectures, recitations, and laboratory daily, 9:00-12:00, 2:00-4:00; K-310 and K-109. Laboratory fee, \$8.00. An introductory study of the Acarina, or mites and ticks, with special emphasis on classification and biology. (Camin.)

†Recommended for teachers.

*Intended for teachers.

Zool. 232S. Medical and Veterinary Acarology. (3)

July 18 through August 5. Lectures, recitations, and laboratory daily, 9:00-12:00, 2:00-4:00; K-310 and K-109. 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 18 through August 5. Lectures, recitations, and laboratory daily, 9:00-12:00, 2:00-4:00, K-310 and K-6. Laboratory fee, \$8.00. The recognition, collection, culture, and control of acarine pests of crops and ornamentals. (Baker.)

Zoology 399. Research.

Credit to be arranged. Research on thesis project only. Laboratory fee, \$8.00. (Staff.)

THE FACULTY
SUMMER SESSION, 1960
JUNE 27 - AUGUST 5

DR. ORVAL L. ULRY, *Director*

- ALBERT L. ALFORD, *Assistant Professor of Government and Politics*
B.A., University of Akron, 1948; M.A., Princeton University, 1951; PH.D., 1953.
- JEAN ALTER, *Lecturer in 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.
- 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.
- 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.
- ROY S. ANDERSON, *Associate Professor of Physics*
A.B., Clark University, 1943; A.M., Dartmouth College, 1948; PH.D., Duke University, 1951.
- 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., 1941.
- ROY ASHMEN, *Assistant Professor of Marketing*
B.S., Drexel Institute of Technology, 1935; M.S., Columbia University, 1936; PH.D., Northwestern University, 1950.
- 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.
- 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.
- CHARLES E. BARRETT, *Instructor in Economics*
A.B., Loyola College, 1942; M.A., University of Maryland, 1950.
- WHITNEY K. BATES, *Instructor in History*
B.A., University of Washington, 1941; M.A., University of Wisconsin, 1948; PH.D.,
1951.
- GEORGE F. BATKA, *Associate Professor of Speech and Dramatic Art*
B.A., University of Wichita, 1938; M.A., University of Michigan, 1941.
- OTHO T. BEALL, JR., *Assistant Professor of English*
B.A., Williams College, 1930; M.A., University of Minnesota, 1933; PH.D., Univer-
sity of Pennsylvania, 1952.
- E. PAUL BENOIT, *Coordinator of Research, George E. Partridge Memorial Founda-
tion, Inc., Gainesville, Va., Visiting Lecturer in Education*
PH.D., University of Connecticut, 1955.
- JOEL H. BERMAN, *Assistant Professor of Music*
B.S., Juilliard School of Music, 1951; M.A., Columbia University, 1953.
- HAROLD C. BERRY, *Assistant Instructor of Mathematics*
B.S., University of Maryland, 1955.
- WILLIAM E. BICKLEY, *Professor and Head of Entomology*
B.S., University of Tennessee, 1934; M.S., 1936; PH.D., University of Maryland, 1940.
- ALFRED J. BINGHAM, *Associate Professor of Foreign Languages*
B.A., Yale University, 1933; PH.D., Columbia University, 1939.
- GLENN O. BLOUGH, *Professor of Education*
B.A., University of Michigan, 1929; M.A., 1932; LL.D., Central Michigan College
of Education, 1950.
- B. 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 Lecturer in Education*
B.S., State Teachers College, Shippenburg, Pennsylvania, 1940; M.A., University
of Maryland, 1951.
- RUSSELL H. BROADHEAD, *Professor, Visiting Lecturer in Education*
A.B., Otterbein College, 1931; M.A., Cornell University, 1937; PH.D., Stanford Uni-
versity, 1946.

Faculty

ELEANOR A. BROOME, *Instructor in Childhood Education*

B.A., University of Maryland, 1943; M.ED., 1957.

ELAINE BROWN, *Visiting Lecturer in Music*

B.A., Bush Conservatory of Music, 1929; B.MUS., Westminster Choir College, 1934; M.S., IN ED., Temple University, 1945; MUS. DOC. (HON. CAUS.), Philadelphia Conservatory of Music, 1957.

JOSHUA R. C. BROWN, *Associate Professor of Zoology*

B.A., Duke University, 1948; M.A., 1949; PH.D., 1953.

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.

RICHARD H. BYRNE, *Professor of Education*

B.A., Franklin and Marshall College, 1938; M.A., Columbia University, 1947; ED.D., 1952.

CHARLES E. CALHOUN, *Professor of Finance*

B.A., 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.

JOHN CARRUTHERS, *Assistant Professor of Chemistry*

ANN MARY CIMINO, *Instructor in Education*

B.S., Pennsylvania State University, 1954; M.ED., 1958.

CARLETON M. CLIFFORD, *Research Associate in Zoology*

B.A., University of Vermont, 1954; PH.D., University of Maryland, 1958.

SARA E. CONLON, *Assistant Professor of Speech and Dramatic Art*

B.A., University of Maryland, 1947; M.A., State University of Iowa, 1950.

NANCY L. COX, *Instructor, Department of Food and Nutrition*

B.S., Cedar Crest College, 1957; M.S., Cornell University, 1959.

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, 1929; M.S.J., Northwestern University, 1940.

JOHN A. DAIKER, *Assistant Professor of Accounting*

C.P.A., District of Columbia, 1949; B.S., University of Maryland, 1941; M.B.A., 1951.

JOHN H. DALTON, *Assistant Professor of Economics*

B.A., University of California, 1943; PH.D., 1955.

RICHARD F. DAVIS, *Professor and Head, Department of Dairy*

B.S., University of New Hampshire, 1950; M.S., 1952; PH.D., Cornell University, 1953.

TOWNES L. DAWSON, *Associate Professor of Business Law*

B.B.A., University of Texas, 1943; B.S., U. S. Merchant Marine Academy, 1946; M.B.A., University of Texas, 1947; PH.D., 1950; LL.B., 1954.

MARIE DENECKE, *Instructor in Education*

B.A., Columbia University, 1938; M.A., University of Maryland, 1942.

MARY DE VERMOND, *Instructor of Music*

B.MUS., Howard University, 1942; M.A., Columbia University, 1948; D.ED., University of Maryland, 1959.

DONALD DEW, *Assistant Professor of Speech and Dramatic Art*

B.A., University of Maryland, 1950; M.A., State University of Iowa, 1956; PH.D., 1958.

ALAN DODD, *Instructor in Science*

B.A., Western Maryland College, 1951; M.ED., University of Maryland, 1956.

THOMAS H. DYER, *Instructor in Mathematics*

B.S., U. S. Naval Academy, 1924.

CHARLES B. EDELSON, *Assistant Professor of Accounting*

B.B.A., University of New Mexico, 1949; M.B.A., Indiana University, 1950; C.P.A., Maryland, 1951.

GERALD G. EGGERT, *Instructor of History*

B.A., Western Michigan University, 1949; M.A., University of Michigan, 1951; PH.D., 1960.

GERTRUDE EHRLICH, *Assistant Professor of Mathematics*

B.S., Georgia State College for Women, 1943; M.A., University of North Carolina, 1945; PH.D., University of Tennessee, 1953.

MARVIN H. EYLER, *Associate Professor of Physical Education*

B.A., Houghton College, 1942; M.S., University of Illinois, 1948; PH.D., 1956.

JOHN E. FABER, *Professor and Head, Microbiology*

B.S., University of Maryland, 1926; M.A., 1927; PH.D., 1937.

ALPHORETTA FISH, *Instructor in Education*

B.S., State Teachers College, 1955; M.A., Western Michigan University, 1956.

Faculty

RUDD FLEMING, *Assistant Professor of English*

B.A., University of Chicago, 1930; M.A., Cornell University, 1932; PH.D., 1934.

JOHN E. FOSTER, *Professor and Head of Animal Husbandry*

B.S., North Carolina State College, 1926; M.S., Kansas State College, 1927; PH.D., Cornell University, 1937.

WILLIAM L. FOX, *Assistant Professor of History*

B.A., Western Reserve University, 1943; M.A., 1945; PH.D., George Washington University, 1960.

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

A.B., Randolph-Macon College, 1928; M.A., Peabody College, 1937; PH.D., 1938.

BERNARD FUSARO, *Instructor in Mathematics*

B.A., Swarthmore College, 1950; M.A., Columbia University, 1954.

DANIEL LEADY GARBER, JR., *Instructor in Civil Engineering*

B.S., University of Maryland, 1952; M.S., University of Maryland, 1959.

LUCIUS GARVIN, *Professor and Head of Philosophy*

A.B., Brown University, 1928; M.A., 1929; PH.D., 1933.

FRANK O. GATELL, *Instructor of History*

B.A., City College of New York, 1956; A.M., Harvard University, 1958; PH.D., 1960.

RICHARD A. GOOD, *Associate Professor of Mathematics*

B.A., Ashland College, 1939; M.A., University of Wisconsin, 1940; PH.D., 1945.

DONALD C. GORDON, *Associate Professor of History*

B.A., College of William and Mary, 1934; M.A., Columbia Teachers College; PH.D., Columbia University, 1947.

ROBERT L. GREEN, *Professor and Head of Agricultural Engineering*

B.S.A.E., University of Georgia, 1934; M.S., Iowa State College, 1939; PH.D., Michigan State University, 1953.

ROSE MARIE GRENTZER, *Professor of Music*

B.A., MUS. ED., Carnegie Institute of Technology, 1935; M.A., MUS., 1936; M.A., 1939.

BURRUSS W. GRIFFIN, *Associate Professor, Edinboro, Pennsylvania, State Teachers College, Visiting Lecturer in Education*

B.A., Ursinus College, 1925; M.A., University of Pennsylvania, 1932.

SIDNEY GROLLMAN, *Assistant Professor of Zoology*

B.S., University of Maryland, 1947; M.S., 1949; PH.D., 1951.

FOSTER E. GROSSNICKLE, *Professor, Jersey City State College, Visiting Lecturer in Education*

B.S., Blue Ridge College, 1917; M.A., University of Pennsylvania, 1919; PH.D., Columbia University, 1930.

ALLAN G. GRUCHY, *Professor of Economics*

B.A., University of British Columbia, 1926; M.A., McGill University, 1928; PH.D., University of Virginia, 1931.

GRAHAM D. GUTSCHE, *Associate Professor of Physics at U.S. Naval Academy, Visiting Lecturer in Physics*

B.S., Colorado University, 1950; M.S., Minnesota University, 1952; PH.D., Catholic University, 1959.

SUSAN E. HARMAN, *Professor of English*

B.A., University of Nebraska, 1917; M.A., 1918; PH.D., The Johns Hopkins University, 1926.

HORACE V. HARRISON, *Associate Professor of Government and Politics*

B.A., Trinity University, 1932; M.A., University of Texas, 1941; PH.D., 1951.

PAUL E. HARRISON, JR., *Associate Professor of Industrial Education*

B.ED., Northern Illinois State Teachers College, DeKalb, 1942; M.A., Colorado State College of Education, Greeley, 1947; PH.D., University of Maryland, 1955.

ELLEN E. HARVEY, *Associate Professor of Physical Education and Recreation*

B.S., New College, Columbia University, 1935; M.A., Teachers College, Columbia University, 1941; ED.D., University of Oregon, 1951.

GUY B. HATHORN, *Assistant Professor of Government and Politics*

B.A., University of Mississippi, 1940; M.A., 1942; PH.D., Duke University, 1950.

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

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

ELIZABETH E. HAVILAND, *Assistant Professor of Entomology*

A.B., Wilmington (Ohio) College, 1923; M.S., Cornell University, 1926; M.S., University of Maryland, 1936; PH.D., 1945.

EILEEN HEAGNEY, *Assistant Professor, Department of Textiles and Clothing*

B.S., Pennsylvania State University, 1941; M.A., Columbia University, 1949.

E. F. HEERMANN, *Assistant Professor*

B.A., University of Cincinnati, 1952; M.A., Ohio State University, 1957; PH.D., Ohio State University, 1959.

Faculty

- LOUISE HEMP, *Visiting Lecturer in Education*
B.S., University of Maryland, 1934; M.ED., 1956.
- RICHARD HENDRICKS, *Associate Professor of Speech*
B.A., Franklin College, 1937; M.A., Ohio State University, 1939; PH.D., 1956.
- HERBERT H. HENKE, *Assistant Professor of Music*
B.MUS.ED., Oberlin College, 1953; B.MUS., 1954; M.A., MUS.ED., 1954.
- DAGMAR R. HENNEY, *Assistant Instructor in Mathematics*
B.S., University of Miami, 1954; M.S., 1956.
- CHRISTOPH HERING, *Assistant Professor of Foreign Languages*
Abitur, Gymnasium, University of Marburg, 1945; PH.D., University of Bonn, 1950.
- JANE B. HOBSON, *Visiting Lecturer in Library Science*
A.B., Mount Holyoke College, 1927; B.S.L.S., Columbia University, 1928.
- H. PALMER HOPKINS, *Assistant Professor and Acting Head of Agricultural Education*
B.S., Oklahoma A. & M., 1936; M.ED., University of Maryland, 1948.
- JOHN HORVATH, *Assistant Professor of Mathematics*
PH.D., University of Budapest, 1947.
- JAMES H. HUMPHREY, *Professor of Physical Education and Health*
B.A., Denison University, 1933; M.A., Western Reserve University, 1946; ED.D., Boston University, 1951.
- BURRIS F. HUSMAN, *Associate Professor of Physical Education*
B.S., University of Illinois, 1941; M.S., 1948; ED.D., University of Maryland, 1954.
- RICHARD W. ISKRAUT, *Associate Professor of Physics*
B.S., City College of New York, 1937; SC.D., University of Leipzig, 1941.
- JAMES N. JACOBS, *Department of Instruction, Cincinnati Public Schools, Visiting Lecturer in Education*
B.A., Michigan State University, 1951; M.A., 1952; ED.D., 1957.
- ECKHART A. JACOBSEN, *Associate Professor of Industrial Education*
Oswego State Teachers College, New York, 1937; M.S., Cornell University, 1946; PH.D., University of Connecticut, 1957.
- RICHARD H. JAQUITH, *Assistant Professor of Chemistry*
B.S., University of Massachusetts, 1940; M.S., 1942; PH.D., Michigan State University, 1955.
- M. CLEMENS JOHNSON, *Associate Professor of Education*
B.S., University of Minnesota, 1943; M.A., 1950; PH.D., 1954.

- WARREN R. JOHNSON, *Professor of Physical Education and Health*
B.A., University of Denver, 1942; M.A., 1947; ED.D., Boston University, 1950.
- JEANNE D. KAPPLER, *Instructor in Childhood Education*
B.S., Russell Sage College, 1940; M.ED., University of Maryland, 1958.
- KENNETH C. KATES, *Visiting Lecturer in Zoology*
A.B., Columbia University, 1932; M.A., Duke University, 1934; PH.D., 1937.
- MERVIN L. KEEDY, *Associate Director of the Junior High School Mathematics Research Study*
B.S., University of Chicago, 1946; M.A., University of Nebraska, 1950; PH.D., 1957.
- WINIFRED KINN, *Visiting Lecturer in Education*
B.S., Towson State Teachers College, 1945; M.S., University of Maryland, 1950.
- NORMAN C. LAFFER, *Associate Professor of Microbiology*
B.S., Allegheny College, 1929; M.S., University of Maine, 1932; PH.D., University of Illinois, 1937.
- AUBREY C. LAND, *Professor and Head of History*
B.ED., Southern Illinois University, 1934; M.A., State University of Iowa, 1938; PH.D., 1948.
- HOWARD J. LASTER, *Associate Professor of Physics*
A.B., Harvard College, 1951; PH.D., Cornell University, 1957.
- CHARLES N. LEE, *Instructor of Foreign Languages*
B.A., University of Maryland, 1955; M.A., 1958.
- PETER P. LEJNS, *Professor of Sociology*
Magister Philosophiae, University of Latvia, 1930; Magister Iuris, 1933; PH.D., University of Chicago, 1938.
- JOHN LEMBACH, *Associate Professor of Art and Art Education*
B.A., University of Chicago, 1934; M.A., Northwestern University, 1937; ED.D., Columbia University, 1946.
- IRVING LINKOW, *Assistant Professor of Speech and Dramatic Art*
B.A., University of Denver, 1937; M.A., 1938.
- SELMA F. LIPPEATT, *Professor of Home Economics and 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.
- EDWARD L. LONGLEY, JR., *Assistant Professor, Department of Practical Art*
B.A., University of Maryland, 1950; M.A., Columbia University, 1953.
- LEONARD I. LUTWACK, *Assistant Professor of English*
B.A., Wesleyan University, 1939; M.A., 1940; PH.D., Ohio State University, 1950.

Faculty

ELLIS G. MAC LEOD, *Assistant*

B.S., University of Maryland, 1955.

THOMAS M. MAGOON, *Associate Professor of Psychology and Director, University Counseling Center*

B.A., Dartmouth College, 1947; M.A., University of Minnesota, 1951; PH.D., 1954.

DONALD MALEY, *Professor and Head of Industrial Education*

B.S., State Teachers College, California, Pennsylvania, 1943; M.A., University of Maryland, 1947; PH.D., 1950.

SHUH-YIN LU MAR, *Instructor of Mathematics*

B.A., Ginling College, 1928; M.S., Mount Holyoke, 1932.

JERRY B. MARION, *Associate Professor of Physics*

B.A., Reed College, 1952; M.A., Rice University, 1953; PH.D., 1955.

GEORGE L. MARX, *Assistant Professor of Education*

B.A., Yankton College, 1953; M.A., State University of Iowa; PH.D., 1959.

BENJAMIN H. MASSEY, *Professor of Physical Education*

B.A., Erskine College, 1938; M.S., University of Illinois, 1947; PH.D., 1950.

RICHARD L. MATTESON, *Instructor in Education, Institute for Child Study*

B.A., Knox College, Galesburg, Illinois, 1952; M.A., University of Maryland, 1956.

L. MORRIS MCCLURE, *Professor of Education and Assistant Dean of the College of Education*

B.A., Western Michigan University, 1940; M.A., University of Michigan, 1946; ED.D., Michigan State University, 1953.

ANNIE L. MC ELHENIE, *Assistant Professor of Sociology*

B.A., Franklin College, 1926; B.S., Hillsdale College, 1927; University of Chicago, 1941; CERTIFICATE THIRD YEAR, New York School of Social Work, Columbia University, 1951.

GEORGE R. MERRILL, *Instructor in Industrial Education*

B.S., University of Maryland, 1954; M.ED., 1955.

MADELAINE J. MERSHON, *Professor of Education, Institute for Child Study*

B.S., Drake University, 1940; M.A., University of Chicago, 1943; PH.D., 1950.

CHARLTON G. MEYER, *Assistant Professor of Music*

B.MUS., Curtis Institute of Music, 1952.

T. FAYE MITCHELL, *Professor and Head, Department of Textiles and Clothing*

B.S., State Teachers College, Springfield, Missouri, 1930; M.A., Columbia University, 1939.

VIRGINIA MOORE, *Supervisor of Elementary Schools, Anne Arundel County, Visiting Lecturer in Education*

B.A., Johns Hopkins University, 1946; M.ED., Maryland University, 1950.

H. GERTHON MORGAN, *Professor of Education, Institute for Child Study*

B.A., Furman University, 1940; M.A., University of Chicago, 1943; PH.D., 1946.

RICHARD K. MURDOCK, *Associate Professor of History*

A.B., Harvard College, 1936; M.A., University of California at Los Angeles, 1940; PH.D., 1947.

CHARLES D. MURPHY, *Professor and Head, Department of English*

B.A., University of Wisconsin, 1929; M.A., Harvard University, 1930; PH.D., Cornell University, 1940.

JAMES NEILSON, *Visiting Lecturer in Music*

Northwestern University, Juilliard School of Music.

BOYD L. NELSON, *Associate Professor of Business Administration*

B.A., University of Wisconsin, 1947; M.A., 1948; PH.D., 1952.

CLARENCE A. NEWELL, *Professor of Educational Administration*

B.A., Hastings College, Nebraska, 1935; M.A., Columbia University, 1939; PH.D., 1943.

JANE H. O'NEILL, *Instructor in Office Techniques*

B.A., University of Maryland, 1932.

LEO W. O'NEILL, *Associate Professor of Education*

B.A., University of Chicago, 1938; M.A., University of Kansas City, 1953; ED.D., University of Colorado, 1955.

BETTY E. ORR, *Assistant Professor, Institute for Child Study*

B.A., Beloit College, 1943; M.A., University of Chicago, 1945; PH.D., 1958.

ROBERT A. PATERSON, *Assistant Professor of Botany*

B.A., University of Nevada, 1949; M.A., Stanford University, 1951; PH.D., University of Michigan, 1957.

ARTHUR S. PATRICK, *Professor of Office Management and Business Education*

B.S., Wisconsin State College, 1931; M.A., University of Iowa, 1940; PH.D., American University, 1956.

BERNARD PECK, *Assistant Professor of Education, Institute for Child Study*

B.A., Indiana University, 1939; M.A., Columbia University, 1941; ED.D., University of Maryland, 1957.

HUGH V. PERKINS, *Professor of Education, Institute for Child Study*

B.A., Oberlin College, 1941; M.A., University of Chicago, 1946; PH.D., 1949; ED.D., New York, 1956.

Faculty

ELMER PLISCHKE, *Professor and Head of the Department of Government and Politics*

PH.B., Marquette University, 1937; M.A., American University, 1938; PH.D., Clark University, 1943.

PAUL R. POFFENBERGER, *Assistant Dean-Instruction, and Professor and Acting Head of Agricultural Economics*

B.S., University of Maryland, 1935; M.S., 1937; PH.D., American University, 1953.

DANIEL A. PRESCOTT, *Professor of Education*

B.S., Tufts College, 1920; M.ED., Harvard University, 1922; ED.D., 1923.

DONALD K. PUMROY, *Assistant Professor of Psychology*

B.A., University of Iowa, 1949; M.S., University of Wisconsin, 1951; PH.D., University of Washington, 1954.

GORDON M. RAMM, *Assistant Professor of Zoology*

B.A., University of Buffalo, 1949; M.A., 1950; PH.D., New York University, 1954.

ROBERT G. RISINGER, *Associate Professor of Education*

B.S., Ball State Teachers College, Muncie, Indiana, 1940; M.A., University of Chicago, 1947; ED.D., University of Colorado, 1955.

HELEN A. RIVLIN, *Assistant Professor of History*

B.A., University of Rochester, 1949; M.A., Radcliffe College, 1950; D.PHIL., Oxford University.

DODD E. ROBERTS, *Director of Language Arts Education, Oakland County Schools, Pontiac, Michigan, Visiting Lecturer in Education*

B.A., University of Maine, 1951; M.A., 1955; ED.D., University of Missouri, 1958.

JOHN M. ROBINSON, *Marlboro College, Marlboro, Vermont, Visiting Lecturer in Philosophy*

B.A., Middlebury College, 1945; PH.D., Cornell University, 1949.

MALCOLM ROGERS, *Associate Professor of Education, University of Connecticut, Visiting Lecturer in Education*

CARL L. ROLLINSON, *Professor of Chemistry*

B.S., University of Michigan, 1933; PH.D., University of Illinois, 1939.

WILLIAM G. ROSEN, *Assistant Professor of Mathematics*

B.S., University of Illinois, 1943; M.S., 1947; PH.D., 1954.

PHILIP ROVNER, *Instructor of Foreign Languages*

B.A., The George Washington University, 1948; M.A., 1949; PH.D., University of Maryland, 1958.

MARTIN SCHAEFER, *Assistant Professor, Eastern Illinois University, Visiting Lecturer in Education*

B.ED., Wisconsin State College, 1948; M.A., State University of Iowa, 1951; PH.D., State University of Iowa, 1958.

- CARL SCHRAMM, *Instructor in Industrial Education*
B.S., University of Maryland, 1956.
- PETEE B. SCHWARTZ, *Assistant Instructor in Mathematics*
B.A., Hunter College, 1956; M.A., Emory University, 1957.
- HAROLD SHAFFER, *Visiting Lecturer in Education*
B.A., UCLA, 1939; M.ED., Teachers College, Columbia University, 1947; ED.D., 1959.
- CLYNE S. SHAFFNER, *Professor and Head of Poultry Husbandry*
B.S., Michigan State College, 1938; M.S., 1940; PH.D., Purdue University, 1947.
- PAUL W. SHANKWEILER, *Associate Professor of Sociology*
PH.B., Muhlenberg University, 1919; M.A., Columbia University, 1921; PH.D., University of North Carolina, 1934.
- G. DONALD SHELBY, *Assistant Professor of Economics*
B.A., University of Cincinnati, 1947; PH.D., University of California, 1955.
- JULIUS C. SHEPHERD, *Instructor in Mathematics*
B.A., East Carolina Teachers College, 1944; M.A., 1947.
- HEINY W. SHIPPLING, *Instructor in Mechanical Engineering*
B.S., California State Teachers College, Pennsylvania, 1952.
- GAYLE S. SMITH, *Assistant Professor of English*
B.S., West Virginia University, 1925; M.S., 1946; ED.D., 1959, The American University
- MARTHANNE SMITH, *Instructor in Home Economics*
B.S., Carson-Newman College, 1950; M.S., University of Tennessee, 1957.
- MABEL S. SPENCER, *Assistant Professor of Home Economics Education*
B.S., West Virginia University, 1925; M.S., 1946; ED.D., 1959, American University.
- FAGUE K. SPRINGMANN, *Associate Professor of Music*
B.MUS., Westminster Choir College, 1939.
- MARGARET A. STANT, *Assistant Professor of Childhood Education*
B.S., University of Maryland, 1952; M.ED., 1955; A.P.C., George Washington University, 1959.
- E. THOMAS STARCHER, *Instructor of Speech and Dramatic Art*
B.A., University of Southern California, 1940; M.S., University of Arkansas, 1948.
- LEWIS R. STEELY, *Assistant Instructor in Mathematics*
B.S., Wilson Teachers College, 1937; M.A., Catholic University, 1945.
- RUEBEN G. STEINMEYER, *Professor of Government and Politics*
B.A., American University, 1929; PH.D., 1935.

Faculty

ROBERT STEVENSON, *Visiting Lecturer in Music*

A.B., Texas Western College, 1936; M.M., Yale University, 1939; PH.D., University of Rochester, 1942.

WARREN L. STRAUSBAUGH, *Professor and Head, Department of Speech and Dramatic Art*

B.S., Wooster College, 1932; M.A., University of Iowa, 1935.

CALVIN F. STUNTZ, *Associate Professor of Chemistry*

B.A., University of Buffalo, 1939; PH.D., 1947.

HAROLD SYLVESTER, *Professor of Personnel Administration*

PH.D., The Johns Hopkins University, 1938.

JESSE WILSON TARWATER, *Dean of Students, Whittier College, Visiting Lecturer in Education*

A.B., University of Southern California, 1939; M.S., 1948; ED.D., Stanford University, 1951.

HARRY W. TAYLOR, *Lecturer in Geography*

B.S., State Teachers College, West Chester, Pa., 1954; M.A., University of Indiana, 1955.

DAVID GOODRICH THOMPSON, *Instructor in Electrical Engineering*

B.S., University of Maryland, 1949; M.S., 1959.

FRED R. THOMPSON, *Professor of Education, Institute for Child Study*

B.A., University of Texas, 1929; M.A., 1939; ED.D., University of Maryland, 1952.

THERON A. TOMPKINS, *Associate Professor of Physical Education*

B.S., Eastern Michigan College of Education, 1926; M.A., University of Michigan, 1939.

ORVAL L. ULRYS, *Associate Professor of Education and Director of Summer Session*

B.S., Ohio State University, 1938; M.A., 1944; PH.D., 1953.

GORDON VARS, *Associate Professor, State University, Plattsburgh, New York*

B.A., Antioch College, 1948; M.A., Ohio State University, 1949; ED.D., George Peabody College for Teachers, 1958.

WILLIAM S. VERPLANCK, *Professor of Psychology*

B.S., University of Virginia, 1937; M.A., 1938; PH.D., Brown University, 1941.

MITCHELL L. VOYDAT, *Director, Secondary Education, Alameda Unified Schools, Alameda, California, Visiting Lecturer in Education*

B.S., Queens College, Long Island, N. Y., 1948; M.A., Teachers College, Columbia University, 1949; ED.D., 1954.

WALTER B. WAETJEN, *Professor of Education, Institute for Child Study*

B.S., State Teachers College, Millersville, Pennsylvania, 1942; M.S., University of Pennsylvania, 1947; ED.D., University of Maryland, 1951.

KATHRYN P. WARD, *Associate Professor of English*

B.A., George Washington University, 1935; M.A., 1936; PH.D., 1947.

SIVERT M. WEDEBERG, *Professor of Accounting*

B.B.A., University of Washington, 1925; A.M., Yale University, 1935; C.P.A., Maryland, 1934.

MINNA F. WEINSTEIN, *Instructor of History*

B.A., University of Maryland, 1955; M.A., 1957.

DAVID W. WELLS, *Director, Mathematics Education, Oakland County Board of Education, Visiting Lecturer in Education*

B.SCI.ED., University of Nebraska, 1953; M.ED., 1956; ED.D., 1958.

GEORGE W. WHARTON, *Professor and Head of Zoology*

B.S., Duke University, 1935; PH.D., 1939.

GLADYS A. WIGGIN, *Professor of Education*

B.S., University of Minnesota, 1929; M.A., 1939; PH.D., University of Maryland, 1947.

G. FORREST WOODS, *Professor of Chemistry*

B.A., Northwestern University, 1935; M.S., Harvard University, 1937; PH.D., 1940.

JACQUELINE L. ZEMEL, *Instructor of Mathematics*

B.S., Queens College, 1949; M.A., Syracuse University, 1951.



—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.

