The University of Connecticut Bulletin

THE GRADUATE SCHOOL

1949-1950

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calendar</td>
<td>3</td>
</tr>
<tr>
<td>Graduate School Calendar</td>
<td>4</td>
</tr>
<tr>
<td>The Board of Trustees</td>
<td>5</td>
</tr>
<tr>
<td>Administrative Officers</td>
<td>6</td>
</tr>
<tr>
<td>The Executive Committee</td>
<td>6</td>
</tr>
<tr>
<td>The Graduate School Faculty</td>
<td>6</td>
</tr>
<tr>
<td>Location and History of the University</td>
<td>8</td>
</tr>
<tr>
<td>The Purpose of the Graduate School</td>
<td>8</td>
</tr>
<tr>
<td>Degrees Awarded</td>
<td>9</td>
</tr>
<tr>
<td>Graduate Assistantships</td>
<td>9</td>
</tr>
<tr>
<td>Student Housing</td>
<td>9</td>
</tr>
<tr>
<td>Veterans Counseling Service</td>
<td>9</td>
</tr>
<tr>
<td>Classification of Graduate Students</td>
<td>10</td>
</tr>
<tr>
<td>Regular Graduate Students</td>
<td>10</td>
</tr>
<tr>
<td>Probationary Graduate Students</td>
<td>10</td>
</tr>
<tr>
<td>Unclassified Graduate Students</td>
<td>10</td>
</tr>
<tr>
<td>Graduate Advisers</td>
<td>10</td>
</tr>
<tr>
<td>The Major Adviser</td>
<td>10</td>
</tr>
<tr>
<td>The Advisory Committee</td>
<td>10</td>
</tr>
<tr>
<td>Requirements and Procedures for Admission to the Graduate School</td>
<td>11</td>
</tr>
<tr>
<td>Admission to the Master's Program</td>
<td>11</td>
</tr>
<tr>
<td>Admission to the Doctoral Program</td>
<td>11</td>
</tr>
<tr>
<td>Admission Procedures</td>
<td>12</td>
</tr>
<tr>
<td>Registration Procedures</td>
<td>12</td>
</tr>
<tr>
<td>Scholastic Standards</td>
<td>12</td>
</tr>
<tr>
<td>Course Marks for Graduate Students</td>
<td>12</td>
</tr>
<tr>
<td>Mid-semester Course Marks for Graduate Students</td>
<td>13</td>
</tr>
<tr>
<td>Course Performance Required of Students Working for Graduate Degrees</td>
<td>13</td>
</tr>
<tr>
<td>Reports of Standing</td>
<td>13</td>
</tr>
<tr>
<td>Confering of Degrees</td>
<td>13</td>
</tr>
<tr>
<td>Fees and Expenses (Continued)</td>
<td></td>
</tr>
<tr>
<td>Minimum Fee for Graduate Degrees</td>
<td></td>
</tr>
<tr>
<td>Fee for Students Enrolled Prior to April 1, 1949</td>
<td></td>
</tr>
<tr>
<td>Residence Hall Fee</td>
<td></td>
</tr>
<tr>
<td>Summary of Expenses</td>
<td></td>
</tr>
<tr>
<td>Payment of Fees</td>
<td></td>
</tr>
<tr>
<td>Refund of Fees</td>
<td></td>
</tr>
<tr>
<td>Transcript Fee</td>
<td></td>
</tr>
<tr>
<td>The Master's Degree</td>
<td>1</td>
</tr>
<tr>
<td>Fields of Study and Advisers</td>
<td>10</td>
</tr>
<tr>
<td>Alternative Plans for the Master's Degree</td>
<td>1</td>
</tr>
<tr>
<td>Period of Study</td>
<td>1</td>
</tr>
<tr>
<td>Plan of Study</td>
<td>1</td>
</tr>
<tr>
<td>Candidacy for the Degree</td>
<td>1</td>
</tr>
<tr>
<td>Course Work</td>
<td>1</td>
</tr>
<tr>
<td>Special Requirements under Plan A</td>
<td>1</td>
</tr>
<tr>
<td>Residence Requirement and Transfer Credits</td>
<td>18</td>
</tr>
<tr>
<td>The Thesis</td>
<td>18</td>
</tr>
<tr>
<td>Graduate Conferences</td>
<td>18</td>
</tr>
<tr>
<td>Final Examination</td>
<td>18</td>
</tr>
<tr>
<td>Suggested Specifications for the Thesis</td>
<td>18</td>
</tr>
<tr>
<td>Special Requirements under Plan B</td>
<td>19</td>
</tr>
<tr>
<td>Residence Requirement and Transfer Credits</td>
<td>19</td>
</tr>
<tr>
<td>Comprehensive Examination</td>
<td>20</td>
</tr>
<tr>
<td>Application for the Degree</td>
<td>20</td>
</tr>
<tr>
<td>Recommendation for the Degree</td>
<td>20</td>
</tr>
<tr>
<td>The Doctor of Philosophy Degree</td>
<td>20</td>
</tr>
<tr>
<td>Fields of Study and Advisers</td>
<td>21</td>
</tr>
<tr>
<td>Graduate Advisers</td>
<td>21</td>
</tr>
<tr>
<td>Period of Study</td>
<td>21</td>
</tr>
<tr>
<td>Residence Requirement</td>
<td>22</td>
</tr>
<tr>
<td>Basic Requirements</td>
<td>22</td>
</tr>
<tr>
<td>Foreign Language Requirement</td>
<td>22</td>
</tr>
<tr>
<td>Report of Progress</td>
<td>22</td>
</tr>
<tr>
<td>Plan of Study</td>
<td>22</td>
</tr>
<tr>
<td>Preliminary Examination</td>
<td>23</td>
</tr>
<tr>
<td>Candidacy for the Degree</td>
<td>23</td>
</tr>
<tr>
<td>The Thesis</td>
<td>23</td>
</tr>
<tr>
<td>Final Examination</td>
<td>24</td>
</tr>
<tr>
<td>Application for the Degree</td>
<td>24</td>
</tr>
<tr>
<td>Recommendation for the Degree</td>
<td>24</td>
</tr>
<tr>
<td>Directory of Courses</td>
<td>25</td>
</tr>
<tr>
<td>List of persons who received the Master's degree in 1948</td>
<td>66</td>
</tr>
</tbody>
</table>
THE BOARD OF TRUSTEES

The end of each member's term is indicated by the date which follows his name.

His Excellency, Chester Bowles, Governor of the State of Connecticut, president ex officio Hartford

Finis E. Engleman, Commissioner of Education, member ex officio Yalesville

John Christensen, Commissioner of Farms and Markets, member ex officio Wilson

APPOINTED BY THE GOVERNOR

Creighton Barker, M.D., 1949 New Haven
C. Raymond Brock, 1953 Northford
James W. Hook, 1951 New Haven
Francis S. Murphy, 1949 Hartford
Sister Mary Rosa, 1952 West Hartford
Lester E. Shippee, 1951 Hartford
Samuel R. Spencer, 1949, vice-president and chairman Suffield
Leon C. Staples, 1953 Stamford
Edward A. Suisman, 1949 West Hartford
George L. Warncke, 1952 Cannondale

ELECTED BY THE ALUMNI

Willard Eddy, 1949 New Canaan
J. Ray Ryan, 1951, secretary Simsbury

5
THE EXECUTIVE COMMITTEE

(As of July 1, 1949)

Nathan Laselle Whetten, Ph.D., Dean of the Graduate School, Chairman
Lawrence Hardin Amundsen, Ph.D., Professor of Chemistry
Weston Ashmore Bousfield, Ph.D., Professor of Psychology
P. Roy Brammell, Ph.D., Professor of Education
Francis Lee Castleman, Jr., D.Sc., Professor of Civil Engineering
Leonard Fellows Dean, Ph.D., Professor of English
Edwin Pierce Singsen, Ph.D., Associate Professor of Poultry Husbandry
Charles Burt Gentry, M.S. in Agr., Dean of the University (ex officio)

THE GRADUATE SCHOOL FACULTY

The graduate faculty includes only those staff members who have been appointed to serve as major advisers to graduate students. It does not include all staff members who teach graduate courses or who serve as associate advisers.

Laurence Justin Ackerman, A.M., LL.B., Professor of Insurance
Lawrence Hardin Amundsen, Ph.D., Professor of Chemistry
Elmer Olin Anderson, M.S., Professor of Dairy Manufacturing
Vernon E. Anderson, Ph.D., Associate Professor of Education
Homero Arjona, Ph.D., Professor of Foreign Languages
Frank Howard Ash, M.A., Associate Professor of Business Education and Secretarial Studies
James Harwood Barnett, Ph.D., Professor of Sociology
Edward G. Boettiger, Ph.D., Assistant Professor of Zoology
Weston Ashmore Bousfield, Ph.D., Professor of Psychology
P. Roy Brammell, Ph.D., Professor of Education
Benjamin Arthur Brown, M.S., Professor of Agronomy
Joseph Brown, Jr., A.M., Associate Professor of Foreign Languages
Edwin Grant Burrows, Ph.D., Associate Professor of Anthropology
Ralph Judson Bushnell, Ph.D., Associate Professor of Genetics
William Harrison Carter, Jr., Ph.D., Professor of Economics
Marjorie Case, M.A., Assistant Professor of Social Work
Francis Lee Castleman, Jr., D.Sc., Professor of Civil Engineering
William Fitch Cheney, Jr., Ph.D., Professor of Mathematics
Hugh Clark, Ph.D., Assistant Professor of Zoology
WM. R. Collins, Ed.D., Associate Professor of Education
Charles Henry Coogan, Jr., M.S., M.E., Professor of Mechanical Engineering
Wendell Burnham Cook, Ph.D., Associate Professor of Chemistry
Henry Dorsey, Ph.D., Professor of Agronomy
Reinhold August Dorwart, Ph.D., Professor of History
Hamilton Dean Eaton, Ph.D., Associate Professor of Animal Nutrition
Maurice L. Farber, Ph.D., Assistant Professor of Psychology
Roger Boynton Friend, Ph.D., Entomologist
Sel L. Garfield, Ph.D., Associate Professor of Psychology
Charles Burt Gentry, M.S. in Agr., Professor of Education
Joseph Raymond Gerberich, Ph.D., Professor of Education
Albert Otto Greff, Ph.D., Associate Professor of Finance
Mary Louise Greenwood, Ph.D., Associate Professor of Foods and Nutrition
William Theodore Gruhn, Ph.D., Professor of Education
William S. Horton, Ph.D., Assistant Professor of Chemistry
James Lowell Hypes, Ph.D., Professor of Sociology
Robert Ebenezer Johnson, M.S., Associate Professor of Dairy Husbandry
Donald Forsha Jones, Sc.D., Genetics
Erwin Leopold Junghein, D.M.V., Professor of Animal Diseases
Curtis G. Keyes, Ph.D., Assistant Professor of Floriculture
Charles Albert Kind, Ph.D., Assistant Professor of Chemistry
Harold Paul Knauss, Ph.D., Professor of Physics
Arthur Lewis Knoblauch, Ed.D., Professor of Education
Walter Leroy Kulp, Ph.D., Professor of Botany
Walter Landauer, Ph.D., Professor of Genetics
Marian Lowe, M.A., Associate Professor of Social Work
Lloyd Daniel Matterson, Ph.D., Associate Professor of Poultry Husbandry
Walter Cecil McKain, Jr., Ph.D., Associate Professor of Rural Sociology
James Andrew Scarborough McPeek, Ph.D., Professor of English
George Edgar McReynolds, Ph.D., Professor of Government and International Relations
Edmund Arthur Moore, Ph.D., Professor of History
Earl Holland Newcomer, Ph.D., Associate Professor of Botany
William Dillard Orbison, Ph.D., Assistant Professor of Psychology
Charles Egerton Osgood, Ph.D., Associate Professor of Psychology
Lawrence Raymond Penner, Ph.D., Assistant Professor of Zoology
Edmond Adrian Perreuxa, Ph.D., Professor of Agricultural Economics
Martha Potgieter, Ph.D., Associate Professor of Foods and Nutrition
Paul Lee Putnam, M.S., Professor of Farm Management
John Stewart Rankin, Jr., Ph.D., Associate Professor of Zoology
Henry N. Riciotti, Ph.D., Assistant Professor of Psychology
George Brandon Saul, Ph.D., Professor of English
Herman O. Schmidt, Ph.D., Associate Professor of Psychology (on staff of Norwich State Hospital)
Charles Hill Wallace Sedgewick, Ph.D., Professor of Mathematics
Fritz Semmler, Ph.D., Assistant Professor of Foreign Languages
Edwin Pierce Singsen, Ph.D., Associate Professor of Poultry Husbandry
Earl C. Spaeth, Ph.D., Instructor in Chemistry
Adam H. Spees, Ph.D., Assistant Professor of Physics
Arless A. Spielman, Ph.D., Professor of Dairy Husbandry
Philip E. Taylor, Ph.D., Associate Professor of Economics
Isaac Newton Thut, Ph.D., Associate Professor of Education
Gregory Stephen Timoshenko, Dipl. Ing., Ph.D., Professor of Electrical Engineering
Kenneth Clem Tippy, M.S., Professor of Civil Engineering
George Safford Torrey, A.M., Professor of Botany
Raymond Harold Wallace, Ph.D., Associate Professor of Botany
Charles E. Waring, Ph.D., Professor of Chemistry
Robert Warnock, Jr., Ph.D., Professor of English
Albert Edmund Waugh, M.S., Professor of Economics
Nathan Laselle Whetten, Ph.D., Professor of Rural Sociology
Max Richard White, Ph.D., Associate Professor of Government and International Relations
James William Yates, M. S., Assistant Professor of Chemistry

Temporary Advisers
Catherine Campbell
Irving Fellows
Richard King
Andre Schenker
Karl Boasworth

Edward Grant
Samuel McMillan
Joseph M. Lang
Arthur W. Dewey

1On leave, 1948-49. 1949-50
2Connecticut Agricultural Experiment Station.
LOCATION AND HISTORY OF THE UNIVERSITY

The University of Connecticut is located at Storrs, in the town of Mansfield, eight miles north of Willimantic and 25 miles east of Hartford. Storrs is connected with all principal parts of the state by trunk line highways. Bus service is maintained between Willimantic and Storrs.

The University had its beginning in 1881 as The Storrs Agricultural School primarily concerned with problems of practical agriculture. In 1893 the General Assembly assigned to the school the proceeds of Connecticut’s share of funds originating in the Federal Land Grant Act of 1862 and the Morrill Act of 1890. At this time the name was changed to Storrs Agricultural College and the institution was made co-educational. In 1899 another change took place and the name became Connecticut Agricultural College which was retained for thirty-four years. With a gradual but steady growth in the scope of its services, the General Assembly dropped the limiting adjective “Agricultural” from the name of the institution and it became Connecticut State College in 1933. With further developments in professional fields, with continuing increases in enrollments, and with rapidly growing physical facilities, the General Assembly made the institution its State University and gave it the name of The University of Connecticut in 1939.

Although the Graduate School was not created until 1940 at the time of the reorganization of the institution as the State University, graduate work leading to the Master’s degree has been gradually developed over a period of twenty-nine years. The first Master’s degree was awarded in 1920. Since that time 247 degrees have been conferred.

The University is accredited by the Association of American Universities and the New England Association of Colleges and Secondary Schools. It is a member of the National Association of State Universities, the Association of Land-Grant Colleges and Universities, the American Council on Education, the National Education Association, and the New England Conference on Graduate Education.

THE PURPOSE OF THE GRADUATE SCHOOL

The Graduate School is organized for the purpose of giving properly qualified students an opportunity to pursue advanced work. Its administrative function is to supervise all graduate work throughout the University, to provide necessary minimum requirements for graduate degrees, and to recommend the conferring of graduate degrees on students who have successfully completed their graduate programs.

The graduate faculty includes only those staff members who have been appointed to serve as major advisers to graduate students. It does not include all staff members who teach graduate courses or who serve as associate advisers.

Graduate work is more advanced and more specialized than undergraduate study. It provides opportunity for the student to gain mastery
of his chosen field and to develop initiative and ability in independent work.

Any University of Connecticut faculty member who is on permanent tenure or who holds a rank higher than that of instructor may not earn a Master's or a Doctor's degree at this institution.

Students who are admitted to the Graduate School are held responsible for knowing the requirements and regulations which are contained in this bulletin.

DEGREES AWARDED

The degrees of Master of Arts, Master of Science, and Doctor of Philosophy are awarded by the University of Connecticut.

GRADUATE ASSISTANTSHIPS

A number of graduate assistantships are available to properly qualified graduate students admitted to regular status. These assistantships are positions within the department and require half-time service on the part of the student during the academic year. The work required is ordinarily of a type that will contribute in some way to the student's professional growth and experience. Since graduate assistants must devote half time to service in the department, it ordinarily requires two years for them to earn the Master's degree or to fulfill the minimum residence requirement for the Ph.D degree. Graduate assistants pay the regular fees for graduate study.

The stipend for graduate assistants for the 1949-50 academic year will be at the rate of $135 per month for half-time service. Ordinarily appointments are for nine months, September 16 to June 16.

Any student wishing to obtain a graduate assistantship should write directly to the head of the department in the field in which he wishes to work or to the Dean of the Graduate School.

STUDENT HOUSING

A number of rooms in University dormitories are available to graduate students who pay the full University fee (see "Residence Hall Fee").

A limited number of rooms are available in privately owned houses near the University. Housing accommodations for married students are extremely limited. Information concerning opportunities for housing in this vicinity may be obtained by contacting the Housing Director for Men.

VETERANS COUNSELING SERVICE

A Veterans Counseling Service is maintained to provide information concerning the veterans programs. Students wishing to study under G.I. benefits should contact the Veterans Counselor at the University.
CLASSIFICATION OF GRADUATE STUDENTS

Students who hold the Bachelor's degree are registered in one of three groups:

1. Regular Graduate Students. These are students whose previous training has been accepted as satisfactory and whose applications for admission to the Graduate School to study for graduate degrees have been approved.

2. Probationary Graduate Students. These include a small group wishing to work for graduate degrees who, although not fully meeting all requirements for admission, have given other evidence of ability in their chosen fields and are permitted to register on a probationary basis for a limited amount of work with the privilege of applying later for admission to regular status. If they complete their probationary work satisfactorily they will be admitted to regular status retroactively as of the date their probationary period began.

3. Unclassified Graduate Students. These are students holding the Bachelor's degree but not working for graduate, or other undergraduate, degrees. Some of these do not meet the requirements for admission to the Graduate School and are merely taking courses for self-improvement. Others may be fully qualified academically but do not wish to work for graduate degrees.

Graduate study is carried on under an advisory system. Emphasis is placed throughout on fitting the program to the individual needs of the student as indicated by his objectives and by his previous training and experience.

Certain variations from the following description are to be found under "Graduate Advisers" in the doctoral program.

THE MAJOR ADVISER

The student, as part of his admission procedure, chooses a major adviser (or at his request one will be appointed by the Dean) from the Graduate School faculty in the field in which he wishes to specialize. This adviser may be temporary, pending clarification of the student's objectives, but a permanent arrangement should be made as early as possible.

The adviser evaluates the student's credentials in terms of the facilities available for advanced study in his field, and makes a recommendation to the Dean of the Graduate School as to whether or not the student should be admitted.

THE ADVISORY COMMITTEE

As soon as the student's objectives are crystallized, adviser and student in consultation select two associate advisers, one of whom ordinarily should be from a related field. Associate advisers may be chosen either from the Graduate School faculty or from other faculties of the University. The major adviser, as chairman, and the associate advisers constitute the student's Advisory Committee and to them he is responsible for his entire graduate program.
REQUIREMENTS AND PROCEDURES
FOR ADMISSION TO THE GRADUATE SCHOOL

ADMISSION TO THE MASTER'S PROGRAM

Admission to the Graduate School in the fields listed is open to any qualified student. Qualification is defined in three requirements: (1) having a Bachelor's degree from a college, technical school, or university, of approved standing; (2) having a cumulative quality point ratio of 26 or higher in the undergraduate record (on the basis of the following quality points per credit assigned to the marks: A-40, B-30, C-20, D-10, F-0); and (3) having an average mark of B for the last two years of undergraduate work or at least an average of B in the major field.

Under certain circumstances, a student holding a Bachelor's degree but not qualifying as above may be permitted to register as a probationary graduate student and to take advanced courses with the privilege of applying later for admission to regular status. To register as a probationary graduate student, one must be recommended by an adviser and approved by the Dean of the Graduate School. Such a student shall be required to complete 12 credits of advanced work with at least 60 percent of the credits carrying a mark of "2" or above, and in individual cases to satisfy other requirements in addition, to be admitted to full graduate standing. If he cooperates from the outset with a graduate adviser and is admitted to full graduate standing after completing 12 course credits, the advanced courses taken during this probationary period may be counted toward the graduate degree, provided that they are in line with his major objectives.

As a prerequisite to Master's study, the student is expected to present the equivalent of an undergraduate major in his chosen field, or to make up this deficiency either by taking courses without graduate credit or by passing an examination.

Students wishing to pursue Master's work in Education, except those pursuing work in Elementary Education, must present a minimum of 12 credits in Education, including Education 202, 214, 224, and 236, or the equivalents. Students planning Master's programs in Elementary Education must present an undergraduate concentration in Elementary Education.

Admission to the Graduate School does not constitute candidacy for a degree. (See "Candidacy for the Degree.")

ADMISSION TO THE DOCTORAL PROGRAM

Prospective candidates for doctoral study must possess unusual promise as shown by their records of scholarship and experience. They must be qualified to meet the admission requirements for candidacy for the Master's degree and must present other evidence why they should be allowed to plan for the doctorate. They must have a satisfactory amount of background work in their proposed areas of specialization or must pass background courses without credit toward the doctorate.

Admission to the Graduate School does not constitute admission to candidacy for the degree. (See "Candidacy for the Degree.")
ADMISSION PROCEDURES

The official application form, which may be obtained from the office of the Dean of the Graduate School, should be submitted with an official transcript of all previous undergraduate study to the Dean or to the adviser with whom the student wishes to work.

All credentials submitted by the student become the property of the Graduate School and may not be returned.

The student will be notified by the Dean as to the action taken on his application.

REGISTRATION PROCEDURES

Graduate students are urged to complete their registration before classes begin each semester. In any event, registration must be completed by the end of the first week of classes. Failure to do this will incur a penalty of $5.00, unless for special reasons permission to register later is given by the Dean of the Graduate School. All students are expected to attend classes from the outset.

Registration forms may be secured from the student's major adviser or from the Graduate School office. After approval by the adviser and the Dean, the student shall pay his fees at the Business Office and shall complete registration procedures by submitting his fee receipt and registration card to the Registrar's Office.

SCHOLASTIC STANDARDS

COURSE MARKS FOR GRADUATE STUDENTS

Effective July 1, 1949, course marks for graduate students will include three passing marks and one which is unacceptable for course credit. Beginning with the highest, the three passing marks are "1," "2," and "3." Unsatisfactory work is indicated by "U".

The instructor shall, in all cases, determine the standards of the course and the marks he will assign. However, to encourage greater uniformity in the meaning of marks given by various instructors, these definitions of marks are given to indicate the quality of work they represent.

The highest mark, "1," represents work of honors quality. It should be assigned to those graduate students who show unusual originality and insight in dealing with the materials of the course.

The mark "2" represents work of good quality. It should be assigned to those graduate students who do uniformly good work in the course and to those graduate students who do work which in some respects is of honors quality but is not uniformly so. It should represent more than mere conscientious performance in assigned work.

The mark "3" represents work of a quality which justifies the granting of graduate credit in the course, but which is below the quality of work expected of the average successful graduate student.
The mark "U" represents unacceptable work and does not carry course credit. It should be assigned to those students who fail to measure up to the minimum of what the instructor expects of graduate students. If a student receives a final mark of "U" in any course, his entire program shall be brought up for review.

The mark "I" (or "Inc.") represents work incomplete because of the necessary absence of the student or for some other reason equally satisfactory to the instructor. It should be assigned only if the instructor judges the work done by the student to be of passing quality for graduate students. Ordinarily a student may obtain credit for courses in which his marks are Incomplete only by completing the work of the course in a satisfactory manner before the end of the fourth week of the next semester in which he is enrolled.

**Mid-semester Course Marks for Graduate Students**

The instructor may, at his option, assign marks on the scale recommended above or use “S” (satisfactory) and “U” (unsatisfactory).

**Course Performance Required of Students Working for Graduate Degrees**

Ordinarily a graduate degree will not be granted unless the student has received marks of “2” or above in at least 60 percent of the credits earned during his approved graduate program. Exceptions to this general rule may be made only by the Executive Committee of the Graduate School and only after recommendation of the student’s Advisory Committee.

**Reports of Standing**

The scholastic record of each student is reported at the end of each semester and at the end of the first eight weeks of each semester. Mid-semester marks are not a part of the permanent record.

**Confering of Degrees**

Degrees are granted only on Commencement Day at the end of the spring semester to those students who have met all requirements and are in good standing in the University. Students who do not complete the work for the degree by Commencement Day may not receive the degree until the following commencement. Students who complete the requirements in February or at the end of the Summer Session may, upon request, have their diplomas dated as of the time when the requirements were completed.

The candidate is expected to attend the commencement at which the degree is to be conferred, unless for some special reason he is excused by the Dean of the Graduate School. *Academic costume is required of all candidates at commencement.* Hoods will be provided for the occasion by the University.
FEES AND EXPENSES
(Effective April 1, 1949)

UNIVERSITY FEE

Each full-time graduate student attending regular semester sessions is charged a University fee of $62.50 per semester. Full-time students carry a minimum of 12 course credits or the equivalent in a combination of course and research work. Graduate students paying this fee are entitled to admission to athletic activities and all home games, lectures and convocations, and, in case of illness, to the University infirmary at Storrs for one week a year without additional cost, except for meals or special nurse.

FEE FOR PART-TIME STUDENTS

Part-time students carrying less than 12 credits or the equivalent may, if they choose, pay at the rate of $7.50 per credit instead of the full fee. No student will be expected to pay more than $62.50 per semester unless his program is being completed and an additional payment is required to meet the minimum fee for the degree.

THESIS REGISTRATION FEE

The fee for thesis registration only, per semester or summer session, is $10.00.

SUMMER SESSION FEE

Fees for the Summer Session are $45 for the six-week term. Students expecting to attend Summer Session should consult the Summer Session Bulletin.

UNIVERSITY EXTENSION FEE

Students who attend University Extension Courses shall pay $7.50 per credit.

MINIMUM FEE FOR GRADUATE DEGREES

The minimum fee to be paid to the University by any candidate before being awarded a graduate degree is $125.00.

FEE FOR STUDENTS ENROLLED PRIOR TO APRIL 1, 1949

Students who have been admitted to the Graduate School by the Dean and have begun their course programs prior to April 1, 1949 may continue to pay fees under the 1948-49 fee schedule. However, no student will be carried under the 1948-49 schedule beyond April 1, 1952.

RESIDENCE HALL FEE

Rooms in University dormitories are available to graduate students who pay the full University fee. The rooms are furnished with bed and
mattress, dresser, desk and chair; other items should be supplied by the student.

A residence hall fee ranging from $55 to $85 per semester is charged all students living in University-operated housing facilities.

**Summary of Expenses**

The following estimate of expenses indicates the approximate annual cost to the student for the regular academic year. This does not include personal expenditures which vary with the individual.

<table>
<thead>
<tr>
<th></th>
<th>Minimum Estimate</th>
<th>Liberal Estimate</th>
</tr>
</thead>
<tbody>
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<td>University fee</td>
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<td>$125.00</td>
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<tr>
<td>Residence hall fee</td>
<td>110.00</td>
<td>170.00</td>
</tr>
<tr>
<td>Board (a la carte)</td>
<td>275.00</td>
<td>325.00</td>
</tr>
<tr>
<td>Books and incidental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University expenses</td>
<td>65.00</td>
<td>80.00</td>
</tr>
<tr>
<td></td>
<td><strong>$575.00</strong></td>
<td><strong>$700.00</strong></td>
</tr>
</tbody>
</table>

**Payment of Fees**

Collection of fees is handled by the Business Office. Registration is not complete in any semester until the fees for that semester have been paid.

**Refund of Fees**

Students withdrawing from the University before the end of the fifth week of a semester are entitled to a refund of part of their fees. All students who withdraw from the University for any reason must notify the Registrar on the proper forms before any refunds will be made. Refunds are made on the following schedule: Two weeks or less, 80%; between two and three weeks, 60%; between three and four weeks, 40%; between four and five weeks, 20%; after five weeks, no refund.

**Transcript Fee**

One University of Connecticut transcript is issued free to each student upon request. A fee of $1.00 is charged for each subsequent transcript involving 12 credits or more.

*Fees are subject to change without notice.*

**The Master's Degree**

Master's work is offered in the various fields listed below. By securing permission from the Dean, students occasionally may arrange to do Master's work in fields, or with University faculty members, not listed.

A program for the Master's degree in the field of Social Work is offered at the University's School of Social Work in Hartford. This is a
two-year program designed to meet the standards of the American Association of Schools of Social Work. Students pursuing this program are expected to meet the requirements of the Graduate School and, in addition, to satisfy other requirements set forth by the School of Social Work. Students wishing to work for the Master's degree in this field should apply directly to the School of Social Work, Room 338, 170 Broad Street, Hartford, and should consult the School of Social Work Bulletin which is available at that address.

**Fields of Study and Advisers**

- *Agricultural Economics and Farm Management*—Messrs. Perregaux, Putnam, Johnson
- *Agronomy*—Messrs. B. A. Brown, Dorsey
- *Animal Diseases*—Mr. Jungherr
- *Animal Industries*
  - *Animal Nutrition*—Messrs. Eaton, Spielman
  - *Dairy Husbandry*—Messrs. Johnson, Spielman, Elliott
  - *Dairy Manufacturing*—Mr. E. O. Anderson
- *Bacteriology*—Mr. Kulp
- *Botany*—Messrs. Newcomer, Torrey, Wallace
- *Business Administration*—Messrs. Ackerman, Greef
- *Chemistry*—Messrs. Amundsen, Cook, Horton, Kind, Spaeth, Waring, Yates
- *Economics*—Messrs. Carter, Taylor, Waugh
- *Education*—Messrs. V. E. Anderson, Ash, Brammell, Collins, Cooper, Gentry, Gerberich, Gruhn, Knoblauch, Thut
- *Engineering*
  - *Civil Engineering*—Messrs. Castleman, Tippy, Sant, Scatton
  - *Electrical Engineering*—Mr. Timoshenko
  - *Mechanical Engineering*—Mr. Coogan
- *English*—Messrs. Dean, McPeek, Saul, Warnock, Kessel, Pockel, Tilley, Stalham
- *Foreign Languages*—Messrs. Arjona (Spanish), Joseph Brown, Jr. (French), Semmler (German)
- *Government and International Relations*—Messrs. McReynolds, White
- *History*—Messrs. Dorwart, Moore
- *Home Economics*—Miss Greenwood, Miss Potgieter
- *Horticulture*—Mr. Keyes
- *Mathematics*—Messrs. Cheney, Sedgewick
- *Physics*—Messrs. Knauss, Spees, Friedland
- *Poultry Husbandry*—Messrs. Matterson, Singens
- *Psychology*—Messrs. Bousfield, Farber, Castfield, Orbison, Spanel, Riccardi, Schmidt, Cottam
- *Social Work*—Miss Case, Mr. Cronin, Miss Lowe
- *Sociology and Anthropology*—Messrs. Barnett, Burrows, Hynes, McKain, Whetten
- *Wildlife Management*—Mr.
- *Zoology and Entomology*—Messrs. Boettiger, Bushnell, Clark, DeCoursey, Landauer, Penner, Rankin
- *Pharmacy*—Jannice, Schwarting, Straden
ALTERNATIVE PLANS FOR THE MASTER'S DEGREE

The Master's degree may be earned under one of two alternative plans. Plan A emphasizes research and requires the writing of an acceptable thesis. Plan B emphasizes comprehensive understanding of a more general field. It involves more course work but does not require a thesis.

PERIOD OF STUDY

Either Plan A or Plan B involves at least one year of full-time study, or its equivalent, beyond the Bachelor's degree.

All work for the Master's degree must be completed within eight years of the beginning of study for the degree at this institution. Failure to complete the work within the period specified will necessitate re-evaluation of the entire program.

PLAN OF STUDY

To become a candidate for the Master's degree, the student must submit a plan of study on an official form to the Dean, for approval of the Executive Committee. This shall be done as soon as the student's objectives are clarified and not later than completion of half the indicated course work for the degree. This plan requires initial approval by the members of the student's Advisory Committee and must bear their signatures.

CANDIDACY FOR THE DEGREE

Approval of the plan of study by the Executive Committee makes effective the candidacy for the degree. The approved plan becomes a contract between the student and the Graduate School and any requests for changes involving courses, credits, or thesis topic must be submitted in advance to the Dean on an official form.

COURSE WORK

Course offerings are listed in the Directory of Courses by departments. The courses taken for the Master's degree must be approved as a part of the student's plan of study and the course performance must meet requirements (see "Scholastic Standards"). The courses elected shall be (a) related to the field of study in which the student plans to take his degree, and (b) usually numbered 300 or above, although certain advanced 200's courses may be accepted. In addition to the minimum course credits required for the degree, other courses, with or without graduate credit, may be required of any student, depending upon his objectives in relation to his previous preparation.

SPECIAL REQUIREMENTS UNDER PLAN A

A minimum of 18 course credits of a graduate character and an acceptable thesis are required for the Master's degree under Plan A.
Residence Requirement and Transfer Credits. No credits will be accepted in transfer from other institutions; and ordinarily not fewer than 12 of the 18 minimum course credits must be earned on the University campus at Storrs. The entire program, including the thesis, must be carried out under the direction of the student's Advisory Committee.

In the field of Education, students pursuing Plan A must complete 24 credits, of which a maximum of six may be earned in residence at other acceptable graduate schools if they contribute definitely to the student's program of work. University extension course credits from other institutions will not be accepted.

The Thesis. The relative weight given to course work and to research may vary according to the students' objectives. A satisfactory thesis or written study is required, the subject and scope of which must be approved by the student's Advisory Committee and by the Executive Committee of the Graduate School. It shall give evidence of independent investigation on a topic of significance and shall form an important part of the student's program. It must be acceptable in literary style and composition. (See "Suggested Specifications for the Thesis").

After the thesis has been completed and approved by the Advisory Committee, two copies (the original and one carbon copy), in suitable form for binding, must be deposited with the Dean of the Graduate School at least one week before commencement (see "Graduate School Calendar"), together with a receipt from the University librarian showing payment of a binding fee. One bound copy of the thesis shall be placed on file in the University Library and one shall become the property of the Graduate School to be placed on loan with the major adviser for the use of staff members and students.

Graduate Conferences. A candidate is expected to attend, without course credit, conferences of graduate students in his own and related fields as suggested by his adviser. At one or more of these conferences he will present and defend his plan of research and toward the end of his program he will present the results of his study. These conferences afford a test of each candidate's ability to present his problem, to discuss the presentations of others, and to relate his own study to the studies of other members of his own graduate group.

Final Examination. At the close of the candidate's period of study he must pass a final examination under the jurisdiction of his Advisory Committee. The examination shall include a written part dealing with the major field of study and an oral part dealing with the field of the thesis.

Invitation to participate actively in the examination of the candidate is issued by the Advisory Committee. Notification of the examination is sent to the Dean of the Graduate School well in advance.

The Advisory Committee shall decide whether the student has passed or failed the examination.

Suggested Specifications for the Thesis

(1) The thesis should be typed on sheets 8\(\frac{1}{2}\) x 11 inches of good rag content bond paper.

(2) The typing should be double spaced.
(3) Margins should be 1 1/2 inches from the left and no lines should run closer than 3/4 of an inch to the right, 1 inch from the top, and 3/4 of an inch from the bottom.

(4) The thesis must have a neatly arranged title page which should include the following:

Title
Author, Degree
School, Date
A Thesis
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts (or Science)
(or Doctor of Philosophy)
at
The University of Connecticut

194—

(5) The thesis should be carefully organized. The following plan is suggested as suitable for theses in the natural sciences:

Title Page
Acknowledgements
Table of Contents
List of Tables
List of Illustrations
Introduction
Review of Literature
Procedure
Results
Discussion
Conclusions
Summary
Appendix
Bibliography

(6) For suggestions as to the arrangement of footnotes, bibliography, quotations, tables, and many other aspects of thesis preparation, the Graduate School recommends A Manual for Writers of Dissertations by Kate L. Turabian published by the University of Chicago and available at the University of Connecticut bookstore at a cost of 30 cents. This manual is a standard guide and offers alternative suggestions for different fields in accordance with standard practices.

SPECIAL REQUIREMENTS UNDER PLAN B

A minimum of 30 course credits of a graduate character are required for the Master's degree under Plan B. This will involve at least one year of full-time study or its equivalent. In some fields, such as social work and clinical psychology where in-service practice is required, it may take two years to complete the requirements for the degree.

Residence Requirement and Transfer Credits. At least 24 credits must be earned through the University of Connecticut; any work accepted in transfer from other acceptable graduate schools must have been completed with grades B or above. University extension course credits from other institutions will not be accepted.
Except for the field of social work, for which instructional facilities are located in Hartford, ordinarily not fewer than 18 of the 30 minimum course credits must be earned on the University campus at Storrs. The entire program must be carried out under the direction of the student's Advisory Committee.

**Comprehensive Examination.** At the close of the candidate's period of study he must pass a comprehensive examination under the jurisdiction of his Advisory Committee. The examination, which shall be written, at least in part, is intended to measure the student's mastery of his field, his ability to discern relationships, and his ability to interpret and use research in his field.

Invitation to participate actively in the examination of the candidate is issued by the Advisory Committee. Notification of the examination is sent to the Dean of the Graduate School well in advance.

The Advisory Committee shall decide whether the student has passed or failed the examination.

**APPLICATION FOR THE DEGREE**

Effective July 1, 1949, each student must file a formal application in order to be placed on the list of degree candidates for any given commencement. (Official forms are available in the office of the Dean of the Graduate School.) *This application must be filed with the Dean before March 1 of the year in which the applicant wishes to receive the degree.* If the application is not filed, the student has no assurance that the degree will be granted in that particular year even though all other requirements may have been fulfilled prior to Commencement Day. In cases of withdrawal after the application has been filed or failure, for other reasons, to receive the degree, the student must reapply by filing a new application.

**RECOMMENDATION FOR THE DEGREE**

Upon completion of all requirements for the degree, the student's adviser shall send the final report on his work to the Dean of the Graduate School. *This report must be in not later than one week before commencement* (see “Graduate School Calendar”). The Executive Committee of the Graduate School shall review the report and the student's record, and on finding that all requirements have been met shall recommend to the faculty of the Graduate School that the degree be awarded.

**THE DOCTOR OF PHILOSOPHY DEGREE**

The program for the degree of Doctor of Philosophy is offered in a limited number of fields and is intended to give persons of outstanding ability and promise the opportunity to become contributing scholars in their fields of specialization. The Graduate School plans to list other fields as soon as adequate facilities are available. By securing permission from the Dean, students occasionally may arrange to do doctoral work in fields, or with University faculty members, not listed.
FIELDS OF STUDY AND ADVISERS

Animal Pathology—Mr. Jungherr

Chemistry
- Bio-chemistry—Mr. Kind
- Organic Chemistry—Mr. Amundsen
- Physical Chemistry—Mr. Waring
- Inorganic Chemistry—Mr. Ward

Education
- Administration—Mr. Knoblauch
- Evaluation and Measurement—Mr. Gerberich
- Guidance—Mr. Collins
- Secondary Education—Messrs. Brammell, Gruhn
- Supervision and Curriculum Development—Mr. V. E. Anderson

Genetics—Messrs. Bushnell, D. F. Jones, Landauer, Newcomer

Psychology
- Clinical Psychology—Messrs. Garfield, Schmidt, Pickens-Osianwa
- General Experimental Psychology—Mr. Osmond Liberman
- Social Psychology—Mr. Farber

Sociology
- Rural Sociology—Messrs. McKain, Whetten

Zoology and Entomology
- Entomology—Messrs. DeCoursey, Friend, Penner

GRADUATE ADVISERS

Work for the Ph.D. is carried out under the advisory system as described earlier, except that:

1. Any student enrolling for the Ph.D. and holding only the Bachelor's degree shall be assigned an adviser for the first semester on a temporary basis. The assignment of a temporary adviser shall be made by the Dean of the Graduate School after consultation with the student and appropriate staff members. At the end of the first semester the student shall choose his permanent adviser.

2. Three associate advisers may be chosen if the major adviser and the student so request, such request to be approved by the Dean.

3. It is permissible to delay choosing one of the associate advisers until the student's research project has been selected.

PERIOD OF STUDY

A minimum of three years of full-time study beyond the Bachelor's degree, or two years beyond the Master's degree, is required for the doctorate. All work for the Ph.D. degree must be completed within eight years of the beginning of doctoral study at this institution and within three years of admission to candidacy for the degree, unless in exceptional cases the requirements of essential research make an extension desirable. Failure to complete the work within the period specified will necessitate reevaluation of the entire program.
Residence Requirement

A minimum of one year of full-time study, constituting either the second or third year of work beyond the Bachelor's degree, must be completed in residence.

Basic Requirements

Mastery of subject matter and skills basic to productive scholarship in the student's field of specialization shall be required by the student's Advisory Committee.

Foreign Language Requirement

A reading knowledge of two foreign languages is ordinarily required. Departure from this requirement must not be made unless recommended by the student's Advisory Committee and approved by the Executive Committee of the Graduate School. The student is expected to meet the foreign language requirement by the end of the first year of full-time study at this institution. In any case, the requirement must be met before the student is permitted to take the preliminary examination. Ordinarily, a student will not be permitted to take the foreign language examination in any one language more than three times.

Foreign language examinations are held three times a year—during the last full week in October and in February and the third week in May. The student is expected to file an application with the Dean of the Graduate School at least two weeks before the examination is to be held (see "Graduate School Calendar"). The student will be notified as to the exact date, time, and place of the examination. The result of the examination will be sent to the student by the Dean.

Report of Progress

At the end of one semester of full-time study at this institution, the student's Advisory Committee shall submit a report of progress to the Dean. If the student's work is reported as unsatisfactory, he shall be advised not to continue work for the doctorate at this institution. If his work is reported as satisfactory, the Advisory Committee and the student shall promptly submit his plan of study to the Executive Committee for approval.

Plan of Study

In the plan of study (to be submitted on an official form after satisfactory report of progress) shall be listed all work offered for the degree, including course work at this institution and any which is offered in transfer from other acceptable graduate schools. The proposed thesis topic shall also be listed. (In cases where the thesis topic has not been determined it may be submitted at a later date.) The plan must be approved by the student's Advisory Committee, then submitted to the Dean of the Graduate School for approval of the Executive Committee. The approved plan becomes a contract between the student and the Graduate School.
Any changes must be recommended in advance by the adviser to the Dean for approval of the Executive Committee.

No formal transfer of credit for work done in other institutions shall be made until after the student has demonstrated his ability to do acceptable graduate work in this institution, as certified by the Advisory Committee's report of progress.

The equivalent of two full years of graduate work may be accepted in transfer if the work (a) has been completed on the graduate level in some acceptable graduate school or schools, (b) indicates high scholarship, and (c) contributes to the objectives of the proposed doctoral program.

All work accepted in transfer must have been completed with a mark of B or above, and the course performance in the University of Connecticut must meet requirements (see "Scholastic Standards").

PRELIMINARY EXAMINATION

A preliminary examination covering the major field of study and essential related work shall be taken near the end of the course program, but not later than two full semesters before completion of all requirements for the degree. This examination shall be under the jurisdiction of the student's Advisory Committee and shall be written, although an oral examination may be required in addition. Ordinarily the examination will cover major divisions of the student's general field of study. The examination for students in the various fields of chemistry, for example, usually covers each of the four major fields of chemistry—organic, inorganic, physical, and analytical.

Invitation to participate actively in the examination of the candidate is issued by the Advisory Committee. Notification of the examination is sent to the Dean of the Graduate School well in advance.

The Advisory Committee shall decide whether the student has passed or failed the examination.

CANDIDACY FOR THE DEGREE

Upon passing the preliminary examination the student becomes a candidate for the Ph.D. degree, provided his plan of study and his thesis topic have been approved by the Executive Committee.

THE THESIS

A thesis which makes a significant contribution to the candidate's field of specialization is a primary requirement. The thesis shall be under the immediate and continuous supervision of the student's Advisory Committee and shall meet all standards set by the Committee. It must be acceptable in literary style and composition. Suggested specifications will be found under Plan A of the Master's program.

Four typed copies of the completed thesis (original and three carbon copies), approved and signed by members of the Advisory Committee and in form suitable for binding, together with a receipt from the University librarian showing that binding fees have been paid, must be submitted to the Dean of the Graduate School not later than six weeks prior to the time
when the degree is to be awarded. Two of the bound copies shall be placed on file in the University Library and one shall be sent to the Library of Congress. The remaining copy shall be returned to the student after his final examination.

One hundred printed copies of an abstract of the thesis approved by the student's Advisory Committee shall be deposited with the Dean of the Graduate School not later than one week prior to the time when the degree is to be awarded. If conditions warrant, other arrangements relative to deposit of the abstract may be made with the approval of the Dean of the Graduate School.

**Final Examination**

The final examination shall be oral and shall be under the jurisdiction of the student's Advisory Committee. It shall deal mainly with the field of the thesis. The examination shall be held not earlier than two weeks after four copies of the candidate's completed thesis have been submitted to the Dean of the Graduate School, and not later than two weeks prior to the time when the degree is to be awarded.

While this examination is open to all members of the University faculty, invitation for active participation is issued by the candidate's Advisory Committee. Notification of the examination is sent to the Dean of the Graduate School well in advance.

The Advisory Committee shall decide whether the student has passed or failed the examination.

**Application for the Degree**

Effective July 1, 1949, each student must file a formal application in order to be placed on the list of degree candidates for any given commencement. (Official forms are available in the office of the Dean of the Graduate School.) This application must be filed with the Dean before March 1 of the year in which the applicant wishes to receive the degree. If the application is not filed, the student has no assurance that the degree will be granted in that particular year even though all other requirements may have been fulfilled prior to Commencement Day. In cases of withdrawal after the application has been filed or failure, for other reasons, to receive the degree, the student must reapply by filing a new application.

**Recommendation for the Degree**

Upon completion of all requirements for the degree, the student's adviser shall send the final report on his work to the Dean of the Graduate School. This report must be in not later than one week before commencement (see "Graduate School Calendar"). The Executive Committee of the Graduate School shall review the report and the student's record, and on finding that all requirements have been met shall recommend to the faculty of the Graduate School that the degree be awarded.
DIRECTORY OF COURSES

At the University of Connecticut, courses numbered 100 are primarily for freshmen and sophomores; courses numbered 200 are for juniors and seniors; and courses numbered 300 and 400 are primarily for graduate students. In this bulletin are listed only courses designed primarily for graduate students. In some cases, a few advanced 200's courses may also be acceptable toward an advanced degree provided they are approved as a part of the student's plan of study. Ordinarily, 200's courses open to sophomores will not be acceptable for graduate credit. The courses numbered 200 will be found in the General Catalog of the University.

Courses acceptable for graduate programs are not confined to the department in which a student is doing his major work. Graduate students may draw on departmental offerings throughout the entire institution provided they are of an advanced character, are in line with the student's objectives, and are approved by the student's Advisory Committee.

No course credit is given for a thesis at this institution. Wherever a thesis is required it is in addition to the stipulated credit requirements. Although no credits are actually assigned for thesis work, the thesis, where required, is regarded as an important part of the student's program. The Master's thesis is considered as equivalent to at least 12 credits of graduate course work. The Doctor's thesis is usually considered as equivalent to at least one year of full-time graduate study. Students are required to register for thesis preparation even though no course credit is allowed.

Brackets indicate courses which are not offered in 1949-50. For courses offered in the summer, see the Summer Session Catalog.

When course numbers are hyphenated, the first course is always prerequisite to the second.

The daily schedule of courses is indicated in terms of class periods, not clock hours, unless otherwise specified.

AGRICULTURAL ECONOMICS AND FARM MANAGEMENT

301. INVESTIGATION OF AGRICULTURAL INSTITUTIONS. Either of both semesters. Credits and hours by arrangement. Open only with consent of instructor.

DEPARTMENTAL STAFF.

The organization, operations, problems and policies of particular federal, state or local agricultural agencies. Each student is required to prepare a report of his investigation which is delivered before the other students in the course. Whenever possible, a representative of the agency involved will be present when the report is made.

366-367. RESEARCH METHOD AND PROCEDURE IN AGRICULTURAL ECONOMICS. Both semesters. Three credits each semester. One 3-hour class period. Open only with consent of instructor. Hours by arrangement.

A critical and comprehensive study of the results and methods of agricultural economic research in farm management, marketing, price economics and agricultural policy. The student should have broad preparation in general economics, agricultural economics and statistics.

25
383-384. **ADVANCED AGRICULTURAL ECONOMICS.** Both semesters. Three credits each semester. One 3-hour class period. Open to graduate students; to seniors with consent of instructor. Hours by arrangement.

The competitive and monopolistic forces, the institutional and functional influences and the static and dynamic factors affecting agricultural production, finance and trade. As a basis for appraising economic adjustment and public policy with respect to these problems, the conditions and theory of partial and general equilibrium are explored.

385. **ADVANCED FARM ORGANIZATION.** Second semester. Three credits. One 2-hour class period and one 2-hour laboratory period. Primarily for graduate students in agricultural economics. Open to seniors with consent of instructor. Hours by arrangement.

MR. PUTNAM AND DEPARTMENTAL STAFF.

An appraisal of budgetary analysis and other farm management techniques, and their application to problems of farm organization and farm planning. Students will study actual farms and the farm planning work of such agencies as the Extension Service, the Soil Conservation Service, and the Farmers' Home Administration. Current research developments and the use of research results and techniques in planning improvements in farm organizations will be emphasized. Field trips, to study operating farms and to obtain class materials, will be required.

399. **THESIS PREPARATION.** Open only to Master's candidates.

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**AGRonomy (Plant Science)**

370. **SOIL CHEMISTRY AND FERTILITY.** Second semester. Three credits. Two class periods and one 3-hour laboratory period. Prerequisite: Plant Science 278 and Chemistry 233. Alternate years; to be given in 1949-50. Hours by arrangement. MR. RUBINS.

The evaluation of fertility levels in soils and consideration of the principles underlying the liberation, absorption, leaching and fixing of nutrient elements in soils.

(Formerly partly covered in number 270.)

373. **SOIL MICROBIOLOGY.** First semester. Three credits. Two class periods and one 3-hour laboratory period. Prerequisite: Plant Science 276 and Bacteriology 210. Alternate years; to be given in 1950-51. MR. MUSELL.

The isolation of important soil organisms and an examination of their morphology and activities including transformations brought about in organic matter, nitrogen and mineral substances and their control with a view of the microbial relations to soil management.

375. **SOIL PHYSICS.** Second semester. Three credits. Two class periods and one 3-hour laboratory period. Prerequisite: Plant Science 276 and Physics 122. Alternate years; to be given in 1950-51. MR. RUBINS.

The physical constitution and colloidal properties of soils, and their relation to texture and structure; the measurements of water movement, aeration, and temperature in soils.

377. **SOIL ANALYSIS.** Semester by arrangement. Three credits. One class period and two 3-hour laboratory periods. Prerequisite: Chemistry 231 and 233, or 233 and consent of instructor. Plant Science 278 advised. Hours by arrangement. DEPARTMENTAL STAFF.

A study of the history and practices of total and partial soil analyses as well as of quick tests for the nutrient and related elements of the soil. Special problems will be undertaken.

399. **THESIS PREPARATION.** Open only to Master's candidates.
ANIMAL DISEASES

399. Thesis Preparation. Open only to Master's candidates.

499. Thesis Preparation. Open only to Ph.D. candidates.

ANIMAL INDUSTRIES


Mr. Johnson.

An advanced course dealing with dairy herd improvement and management, including application of the principles of breeding, feeding and disease control, and consideration of dairy barn planning and equipment. Field trips are required to study representative farms.

(Formerly Dairy Industry 282.)


Mr. Anderson.

An advanced technical course dealing with the physics and chemistry of milk and milk products. Laboratory includes qualitative and quantitative tests employed in the technical control of dairy products.

(Formerly Dairy Industry 325.)

327. Microbiology of Dairy Products. Second semester. Three credits. One class period and two 2-hour laboratory periods. Prerequisite: Chemistry 241 and Bacteriology 222 and consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement.

Mr. Morgan.

A study of the physiology of milk organisms; metabolic products and their relation to the flavor and quality of dairy products.


Mr.______

Functions of government in milk ordinance control, sanitation requirements of milk ordinances, grading enforcement methods, report preparation and program evaluation. Field trips at the student's expense are required.


Mr. Eaton.

The principles of nutrition and their application to animals. The digestion and metabolism of the food nutrients and the tools of nutritional research such as purified diets, paired feedings and experimental design.

(Formerly Dairy Industry 340.)


Departmental Staff.

A consideration of the recent experimental data on which the principles of animal nutrition are based, and a critical review of current literature.

352. Milk Secretion. Second semester. Two credits. One class period and one 2-hour laboratory or discussion period. Alternate years; to be given in 1949-50. Open to advanced students with consent of instructor. Hours by arrangement.

Mr. Spielman, Mr. Mercer.

An advanced course dealing with the development of the mammary gland and the secretion of milk.

(Formerly Dairy Industry 330.)

[353. Physiology of Livestock. First semester. Three credits. Two class periods and one 3-hour laboratory period. Open to advanced students with consent of instructor. Alternate years; to be given in 1950-51. Mr. Eaton.

An advanced course dealing with the special physiological problems of the ruminant and other farm animals.]
360. Research. Either or both semesters. Credits and hours by arrangement. Open only to graduate students. Departmental Staff.
Independent research in livestock production, meats, dairy manufacturing, dairy production, or animal nutrition and physiology.

399. Thesis Preparation. Open only to Master’s candidates.

**BACTERIOLOGY**

300. Special Problems in Bacteriology. Either or both semesters. Credits and hours by arrangement. Prerequisite: Bacteriology 233 and consent of instructor. Departmental Staff.

This course is planned for undergraduates who have demonstrated special aptitude and interest in bacteriology and for graduate students in bacteriology or related fields.

311. Seminar. Either semester. One credit. Two 1-hour periods. Prerequisite: Bacteriology 233 and consent of instructor. Hours by arrangement. Departmental Staff.

This course consists of readings, reports, and round-table discussions and is planned for graduate and advanced students in bacteriology or related subjects.

316. Serology. Second semester. Three credits. One class period and two 2-hour laboratory periods. Prerequisite: Bacteriology 233 and consent of instructor. T5, TT8h-9. Mr. White.

Lectures and laboratory exercises dealing primarily with the fundamentals of serology, with applications to the identification of microorganisms, the laboratory diagnosis of disease and other studies of antigenic relationships.


This course, designed primarily for bacteriology majors and graduate students, includes such subjects as soil microbiology, problems in microbial physiology, industrial fermentations, bacteriostatic agents and viruses.

399. Thesis Preparation. Open only to Master’s candidates.

**BOTANY**

300. Investigation of Special Topics. Either or both semesters. Credits and hours by arrangement. Prerequisite: Two courses in botany and consent of instructor. Mr. Newcomer, Mr. Torrey, Mr. Wallace.

A course for the advanced student who desires to pursue a special line of work in botany, either in morphology, cytology, physiology, pathology or taxonomy. Opportunity will be given to acquire familiarity with the technique of killing and fixing different types of plant material, embedding in paraffin and celloidin, cutting microtome sections and preparing and staining mounts, with the technique of plant pathology or physiology and with the methods of taxonomic research. As an introduction to methods of investigation each student will be expected to devote special attention to a particular problem.

310. Advanced Cytology. Second semester. Four credits. Two class periods and two 2-hour laboratory periods. Prerequisite: Botany 260. Hours by arrangement. Mr. Newcomer.

This course is confined to the study of the structure, morphology and behavior of the chromosomes and their roles in reproduction and heredity. The emphasis upon the cytological interpretation of genetic data is of theoretical significance to the
taxonomist or evolutionist and of practical value to the plant and animal breeder. Further training in the preparation of chromosomes for microscopic study by the smear techniques is provided in the laboratory.

399. **Thesis Preparation.** Open only to Master's candidates.

**BUSINESS ADMINISTRATION**

**ACCOUNTING**

300. **Accounting Seminar.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

An advanced course for investigation and discussion of specific problems of accounting.

320. **Cost Accounting and Budgeting.** Semester and hours by arrangement. Three credits. Prerequisite: Graduate standing and consent of adviser and instructor. **Mr. Ross.**

Factors and elements in cost, types of cost systems and budgetary control. Static, flexible budgets and their control. Application of variable costs in management. Operation and control of departmental budgets.

(Formerly Business Administration 388.)

**BUSINESS**

300. **Business Administration Seminar.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

An advanced course for investigation and discussion of specific problems of business administration.

(Formerly Business Administration 310.)

**INDUSTRY**

300. **Seminar.** Either or both semesters. Credits and hours by arrangement. **Departmental Staff.**

An advanced course for investigation and discussion of specific problems of industry.

375. **Industrial Relations.** First semester. Three credits. Prerequisite: Graduate standing and consent of instructor and adviser. Hours by arrangement. **Mr.———.**

A study of various methods designed to improve relations between employers and employees. The functions of a personnel department in maintaining morale and building good will, negotiating with employees, and selecting and training workers are examined. The use of statistical technique as applied to personnel problems forms an important part of this course.

(Formerly Business Administration 321.)

377. **Labor Administration.** Either semester. Three credits. Prerequisite: Graduate standing and consent of adviser and instructor. Hours by arrangement. **Mr.———.**

A course showing in detail the relations of corporate management and union organization within the plant. A short introduction to the history of the kinds of labor units, as evidenced by American experience, and a survey of labor law are presented. A study of labor cases is made to show the position of the employee, foreman, and superintendent under the Wagner Act and the National Labor Relations Board. Some case material is used to demonstrate the statutes of Connecticut.

(Formerly Business Administration 380.)

29
378. **Industrial Jurisprudence.** Second semester. Three credits. Three class periods. Prerequisite: Graduate standing and consent of adviser and instructor. Hours by arrangement.

The course is devoted to (a) the legal structure and functioning of the labor union, (b) the rights of members within the union, and (c) the union’s relations with the employer. Court and board decisions compose most of the work in union incorporation, the constitution and by-laws, the trade agreement, the injunction, the strike, the boycott, and picketing.

(Formerly Business Administration 386.)

**Marketing**

300. **Seminar.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

An advanced course for investigation and discussion of specific problems of marketing.

**Business Administration**

399. **Thesis Preparation.** Open only to Master’s candidates.

**Chemistry**

302. **The History of Chemistry.** Second semester. One credit. One class period. Hours by arrangement. **Mr. Newton.**

Lectures and assignments in a study of the history of chemistry and the development of chemical thought in experiment and theory.

[308. **Electronic Structure of Molecules.** Second semester. Three credits. Three class periods. Prerequisite: Chemistry 241, 253 and Mathematics 203. Open to seniors only with consent of instructor. Alternate years; to be given in 1950-51. Hours by arrangement. **Mr. Horton.**

The nuclear and extranuclear structure of the atom, the electronic structure of molecules, and related topics utilizing this background. Subject matter includes the Bohr theory, quantum theory, magnetic properties, rules of two and eight, mechanical and chemical resonance, wave mechanics, orientation, and mechanism of reactions.]

310. **Seminar.** Both semesters. One credit each semester. Graduate students are expected to register for this course one semester of each year they are enrolled. Hours by arrangement. **Departmental Staff.**

Readings, reports and round table discussion.

312. **Mathematical Analysis of Physico-Chemical Problems.** Second semester. Three credits. Three class periods. Prerequisite: Chemistry 253, which may be taken concurrently, and Mathematics 203. Open to qualified juniors and seniors with consent of instructor. Hours by arrangement. **Mr. Waring.**

This course is designed to teach the student how to apply concepts of mathematics to the solution of problems in physics and chemistry. Emphasis is placed on the solution of linear and non-linear equations, the determination of the degree of the polynomial from experimental data, the derivation of equations from data having functional relationships, use of determinants, graphical solution methods, interpolation, extrapolation, theory of errors and probability.

315. **Advanced Inorganic Chemistry.** First semester. Three credits. Three class periods. Prerequisite: Chemistry 253. Hours by arrangement. **Mr. ——**

A study of selected topics in theoretical inorganic chemistry, with emphasis on the chemistry of the solid state and coordination compounds. This includes the structure of the elements, the structure of the molecules of inorganic compounds, the me-
talic state, the nature of alloys, intermetallic and interstitial compounds, inorganic stereo-chemistry, the Werner theory, Rosenheim’s theory of heteropolyacids, free radicals, isomorphism, mixed crystals and polymorphism.

316. THE BIOCHEMISTRY OF CARBOHYDRATES AND LIPIDS. First semester. Three credits. Three class periods. Open only with consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement. Mr. Kind.

A lecture course devoted to an intensive study of these two important classes of naturally occurring substances, including their biogenesis, metabolism, and their chemical structure.

326. BIOCHEMICAL TECHNIQUES. Second semester. Three credits. One class period and two 3-hour laboratory periods. Prerequisite: Chemistry 241 and 262 and consent of instructor. Hours by arrangement. Mr. Kind.

A laboratory course introducing the student to the more advanced laboratory manipulations involved in biochemical investigations. Required of all graduate students who intend to carry out research work in biochemistry.

333-334. INSTRUMENTAL ANALYSIS. Both semesters. Three credits each semester. One class period and two 3-hour laboratory periods. Prerequisite: Chemistry 253. Hours by arrangement. Mr. Yates.

An introduction to the more advanced techniques of experimental physical chemistry, acquainting the student with the applications of modern instruments in applied and theoretical work, and giving him a background for designing equipment for his own research problems. The laboratory work includes spectrophotographic, polarographic, potentiometric and other instrumental methods as well as experiments on the characteristics of triodes, tetrodes, pentodes, thytratrons, photocells, and the cathode ray oscillograph, and the applications of these devices in physical measurements.

335. THEORETICAL ANALYTICAL CHEMISTRY. Second semester. Three credits. Three class periods. Prerequisite: Chemistry 253. Hours by arrangement. Mr. Yates.

An intensive study of the principles of modern analytical chemistry including precipitation and crystallization, theory of indicators, electrochemical methods, and a discussion of recent developments in analytical chemistry. The mathematical basis for the various analytical methods will be emphasized.

341. IDENTIFICATION OF ORGANIC COMPOUNDS. First semester. Three credits. One class period and two 3-hour laboratory periods. Prerequisite: Chemistry 241 and consent of instructor. Hours by arrangement. Mr. Amundsen, Mr. Spaeth.

Study of the methods of organic qualitative analysis, including treatment of both individual compounds and mixtures.

342. ORGANIC CHEMICAL TECHNIQUE. First semester. Three credits. One class period and two 3-hour laboratory periods. Prerequisite: Chemistry 241 and consent of instructor. Hours by arrangement. Departmental Staff.

Study of the laboratory practice of synthetic organic chemistry, with particular emphasis on the methods of isolating and purifying organic compounds.

[343. ORGANIC CHEMICAL REACTIONS. Second semester. Three credits. Three class periods. Prerequisite: Chemistry 241. Alternate years; to be given in 1950-51. Hours by arrangement. Mr. Amundsen.

A detailed study of several of the most widely useful types of organic reactions, with particular emphasis upon their applicability to laboratory syntheses.]

346. THEORETICAL ORGANIC CHEMISTRY. Second semester. Three credits. Three class periods. Prerequisite: Chemistry 241, 252 and consent of instructor. Chemistry 253 is recommended. Alternate years; to be given in 1949-50. Hours by arrangement. Mr. Amundsen.

A study of such topics as stereochemistry, reaction mechanisms, applications of electronic theory and the relationships of structure with physical properties and with reactivity.
347-348. ADVANCED ORGANIC CHEMISTRY. Both semesters. Three credits each semester. Three class periods. Prerequisite: Chemistry 241 and consent of instructor. A reading knowledge of German is desirable. Hours by arrangement. Mr. AMUNDESEN.

A study of the structure, occurrence, methods of preparation, properties and use of organic compounds. Training in the use of the organic chemical literature is included.

349. METALLO-ORGANIC COMPOUNDS. First semester. Three credits. Three class periods. Prerequisite: Chemistry 241 and 253. Chemistry 298 and a reading knowledge of German recommended. Open to undergraduates only with consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement. Mr. KLINE.

A study of the compounds in which metals are in direct attachment to carbon. The formation, stability, properties and use of such compounds in synthesis will be discussed. The course will consist of introductory lectures by the instructor and reports based on literature references by the student.

351-352. ADVANCED PHYSICAL CHEMISTRY. Both semesters. Three credits each semester. Three class periods. Prerequisite: Chemistry 253. Hours by arrangement. Mr. WARING.

A thorough treatment of the principles of physical chemistry, with special emphasis on chemical thermodynamics.

353-354. CHEMICAL KINETICS AND PHOTOCHEMISTRY. Both semesters. Three credits each semester. Three class periods. Alternate years; to be given in 1949-50. Prerequisite: Chemistry 253. Hours by arrangement. Mr. WARING.

Theories of rate processes and reaction kinetics in the gaseous and liquid states. The quantum aspects of the theory of transition states, the kinetics of adsorption and evaporation from liquid and solid surfaces, theories of chemical bonds, catalysis, chain reactions, and atomic flame reactions, the mechanism of certain types of organic reactions such as esterification, isomerization, polymerization, condensation and enol-keto tautomerism. Photo-activation and deactivation, photosensitization, and predisassociation, the kinetics and mechanism of photochemical reactions, photolysis of organic compounds in the vapor and liquid states, photolysis in the solid state, chain reactions, polymerizations and heterogeneous reactions.

355-356. CHEMICAL THERMODYNAMICS. Both semesters. Three credits each semester. Three class periods. Alternate years; to be given in 1950-51. Prerequisite: Chemistry 253. Hours by arrangement. Mr. HORTON, Mr. WARING.

Training in the use of classical and statistical thermodynamics as a tool for solving chemical problems. The first, second and third laws of thermodynamics are thoroughly treated. Topics include vapor pressures, solutions, solubility, molecular spectra, galvanic cells, and the various factors associated with measurement and control of chemical equilibria.

357-358. QUANTUM MECHANICS. Both semesters. Three credits. Three class periods. Prerequisite: Chemistry 352. Mathematics 292 is desirable. Alternate years; to be given in 1949-50. Hours by arrangement. Mr. LIPPINCOTT.

The theoretical and mathematical treatment of the newer ideas concerning the structure of matter. Topics include a brief review of classical mechanics, the old quantum theory and Schrodinger wave mechanics with simple solutions, methods of approximation and chemical applications, the hydrogen atom, the harmonic oscillator, the free particle, the particle in a box, the rigid rotator, the helium atom, many electron atoms, rotation and vibration of molecules, and quantum mechanical basis of resonance.

360. THE VITAMINS. First semester. Two credits. Two class periods. Prerequisite: Chemistry 241 and 260. Alternate years; to be given in 1950-51. Hours by arrangement. Mr. KIND.

The isolation, structure, and physiological action of the water and fat soluble accessory food factors.
361. Food Chemistry. First semester. Four credits. Two class periods and two 3-hour laboratory periods. Prerequisite: Chemistry 233 and 260. Alternate years; to be given in 1949-50. Hours by arrangement. Mr. Cook.

Discussion of food products and methods of analysis for important constituents.


A thorough study of the problems encountered in determining the structures and course of metabolism of proteins and the amino acids. General analytical methods in use and being developed for the analysis of amino acids in proteins are discussed, with special emphasis on the analysis of the essential amino acids.


A study of some of the methods of elucidation of structure of complex organic molecules. Discussions are devoted to the various structural problems offered by the following classes of natural products: carotenoids, steroids, prophyrrins, and certain of the alkaloids. Emphasis is placed on structure determinations based on experimental evidence obtained from functional group reactions, degradative fragments, chemical relationships between members of a class, and syntheses.


A study of the preparation and properties of the simple heterocyclic compounds of nitrogen, sulfur and oxygen.]

[380-381. Atomic and Molecular Spectra. Both semesters. Three credits each semester. Three class periods. Prerequisite: Chemistry 352; Chemistry 358 is desirable. Alternate years; to be given in 1950-51. Hours by arrangement. Mr. Lippincott.

The course is designed to treat in a semi-empirical way the results of spectroscopic studies with enough theoretical background to aid in organization of the material. A discussion of the types of spectra obtained from atoms and molecules includes explanations based upon the vector model, determination of atomic and molecular constants, and chemical applications. Some time is devoted to the determination of useful information from the spectra and the use of this information.]

399. Thesis Preparation. Open only to Master’s candidates.

499. Thesis Preparation. Open only to Ph.D. candidates.

CIVIL ENGINEERING


Presentation and discussion of advanced civil engineering problems.

320. Investigation of Special Topics. Semester by arrangement. Not to exceed four credits. Open only to seniors and graduate students in civil engineering. Hours by arrangement. Departmental Staff.

This course is offered for students wishing to do special work on individual topics under the direction of members of the departmental staff. The complete program of study is to be approved by the instructor before registration is completed.

332. Advanced Strength of Materials and Applied Elasticity I. Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. Mr. Gant.

Combined stresses; bending and torsion problems; curved bars; stresses in flat plates; stress concentrations; applied mathematical theory.
324. **Advanced Strength of Materials and Applied Elasticity II.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Castleman.

Stress concentrations. Special problems in bending and torsion. Thin plates and shells; buckling of bars, plates and shells; beam columns; elastic instability; creep, repeated stress and endurance limit; plasticity; experimental methods; applied mathematical theory.

332. **Advanced Fluid Mechanics I.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Tippy.

Equations of motion; principles of energy, continuity, momentum; the flow net; circulation and vorticity; irrotational motion; velocity potential and stream function; conformal mapping; elementary transformations; successive transformations; Kutta and Joukowsky profiles; airfoil theory; applied mathematical theory.

334. **Advanced Fluid Mechanics II.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Scotton.

A continuation of Civil Engineering 332. Dimensional analysis, fundamental equations of viscous flow, dissipation of energy, laminar flow, theory of lubrication, fluid turbulence, boundary layer, separation, drag of immersed bodies, flow in closed conduits, applied mathematical theory.

336. **Applied Fluid Mechanics.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Scotton.

Advanced treatment of the principles of fluid mechanics with emphasis on the physical and quantitative aspects; accelerated motion; pulsation, water hammer, cavitation, flow in pipes and channels.

338. **Hydraulics of Open Channels.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Scotton, Mr. Tippy.

Varied or non-uniform flow in open channels; surface and backwater curves; the hydraulic jump; surges and waves; applied mathematical theory.

340. **Advanced Soil Mechanics.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Gant.

Advanced theories of the mechanics of earth masses. Stability of slopes, seepage, settlement of structures, special types of foundations, methods of testing. Applications to design.

350. **Advanced Engineering Mechanics I.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Gant.

Elastic energy theory and classical methods of analysis; analysis of redundant frames and beams; combined bending and torsion, resilience; applied mathematical theory.

352. **Advanced Engineering Mechanics II.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Gant.

Modern methods of analysis of redundant frames and beams; slope deflection; moment distribution and the column analogy; use of influence lines in analyzing superstatic frames and beams; applied mathematical theory.

354. **Advanced Structures I.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Castleman.

Analysis and design of complex structures such as high buildings, continuous bridges, elastic arches and suspension bridges.

356. **Advanced Structures II.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.  
Mr. Castleman.

A continuation of Civil Engineering 354.
358. **Advanced Structural Analysis and Design.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. **Mr. Castleman, Mr. Gant.**

Advanced theories of structural action and their application to design.

366. **Experimental Stress Analysis.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. **Mr. Gant.**

Experimental and analytical stress analysis by such methods as photoelasticity, strain gages, analogies and models.

380. **Hydraulic Engineering I.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. **Mr. Tippy.**

Application of hydrologic theories to the study of the occurrence and flow of water, including skew-frequency methods and the unit-hydrograph. Study of problems involved in location of hydroelectric developments, and theory and selection of turbines. Storage requirements and regulation of flow.

382. **Hydraulic Engineering II.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. **Mr. Tippy.**

Design of hydraulic structures, modern methods of hydraulic design of pipe grids, flow in open channels, back-water curves.

392. **Advanced Sanitary Engineering.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. **Mr. Tippy.**


399. **Thesis Preparation.** Open only to Master’s candidates.

**ECONOMICS**

300. **Independent Study in Economics.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

This course offers an opportunity for candidates for graduation with distinction in economics to round out their training in specific fields, or for other advanced students to investigate special topics not covered by the regular course offerings of the department. Students registering for work in this course will ordinarily be expected to have completed a reasonable amount of background work in the social sciences with better than average grades.

301. **Research in Economics.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

Students interested in carrying on original research projects should submit their plans to some member of the departmental staff for approval before registering for this course. Each student is expected to assume complete responsibility for selecting his project, but the work is carried on under the immediate supervision of the department.

302. **Source Materials in Economics.** First semester. Two credits. One class period and conference with instructor. Prerequisite: Economics 260 and consent of instructor. **Mr. P. E. Taylor.**

This course is designed primarily for graduate students to familiarize them with the vast amount of statistical and journal material available in the various specialized fields. In addition to becoming familiar with the sources themselves and the interpretation of the data, consideration will be given to the preparation of bibliographies and of reports.

35
314. **Mathematical Analysis for Economists.** Second semester. Three credits. Three class periods. Prerequisite: Economics 211. Hours by arrangement.

**Departmental Staff.**

A review of attempts to state economic theory in mathematical terms, and a study of the usefulness of mathematical method in developing new theoretical concepts and conclusions.


Mr. P. E. Taylor.

A comparative and critical study of writings significant in the development of economic thought. Representatives of such schools as the following will be read and discussed: mercantilist, classical, critics of classical, historical, socialist, Austrian, neo-classical, mathematical, and institutional. Contemporary writers will be discussed in Economics 318.

318. **Current Economic Thought.** First semester. Three credits. Three class periods. Prerequisite: Economics 211. Hours by arrangement.

Mr. P. E. Taylor and Departmental Staff.

A study of current ideas in economic theory, including the determination of price under competitive and non-competitive conditions, partial and general equilibrium analyses, savings and investment, and the development of new tools of analysis. Stress is laid on the interrelationships of the theories of production, distribution, consumption and exchange.

341. **Business Cycles Seminar.** Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement.

Mr. P. E. Taylor.

A seminar in business cycle theory and policy.

342. **International Trade and Finance Seminar.** First semester. Credits and hours by arrangement. Prerequisite: Economics 242 and consent of instructor.

Mr. Carter.

Study of the development of international trade and finance theories, and of current discussions in this field. The course is designed for graduate students specializing in this field.


Mr. Carter.

An analysis of current problems in international trade, foreign exchange, foreign investments, trade policies, international monetary stabilization and international economic organization. The course includes an analysis of the international economic position of the United States and selected foreign countries. Emphasis is given to the determination of national policy in international trade and finance.


Mr. P. N. Taylor.

A critical and detailed analysis of the tax structure, individual taxes, debt control and management, and budgetary controls. Also a study of fiscal policy, including its relationship to such problems as production, economic stability, and income distribution.

346. **Monetary and Banking Theories.** First semester. Three credits. Three class periods. Prerequisite: Economics 240 and consent of instructor. Hours by arrangement.

Mr. Carter, Mr. Snavely.

A study of the development of monetary and banking theories, and of current discussions in the field of monetary and banking theory. This course is designed for graduate students specializing in the field.
347. Money and Banking Seminar. Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Snavely.

An analysis of contemporary problems in the fields of money and banking.


A course for those who expect to make professional use of the statistical method or to interpret the results of advanced statistical analysis. It deals with the philosophy of the scientific method and develops the more refined and recent methods of analysis.

375. The Labor Market. First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. P. N. Taylor.

An analysis of the problems centering in the labor market: wages, working conditions, factors determining the amount of employment, and the impact on these of organizations, collective bargaining, the business cycle, and governmental policies.


The general techniques used in collective bargaining. Conciliation, arbitration and mediation procedures and the principal provisions of the labor contract are discussed. The social and economic background and significance of collective bargaining are emphasized.


A study of the ideological and historical foundations of capitalism, fascism, socialism and cooperation. Analysis of the economic institutions of countries representative of each type and their relations to American democracy.

399. Thesis Preparation. Open only to Master's candidates.

EDUCATION

300. Investigation of Special Topics in Education. Either semester. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Departmental Staff.

Students requesting this course should have a significant background in education and should present to the instructor problems, well-defined and well laid out for investigation, which hold special interest for them and which will be pursued on the plane of advanced study.

302. The Theory of Modern Education. Semester by arrangement. Three credits. Open to advanced and graduate students in education and other departments with consent of instructor. Not open to students who have taken Education 306. Hours by arrangement. Mr. Thut.

An introduction to modern education including its philosophical, psychological, and sociological foundations.

303. Principles and Practices of Vocational Education. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 9 semester hours in education, and consent of instructor. Mr. Martin.

The basis of education in vocations, selection of student personnel, standards of admission, guidance programs, curricula and courses of study, method, orientation with school and community.

305. Trends in Elementary Education. Semester by arrangement. Credits and hours by arrangement. Open to advanced and graduate students with an under-
graduate concentration in elementary education, or administrative experience, and consent of instructor. 

Mr. Cooper.

The fundamental philosophy underlying education in the elementary school, present trends in elementary education, practical approaches to typical problems.

306. PHILOSOPHY OF EDUCATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor.

Mr. Thut.

An examination of the basic assumptions that underlie the major theories of mind, and of the manner in which each theory has influenced current educational practice.

310. SEMINAR IN EDUCATION. Either or both semesters. One or two credits by arrangement each semester. A two or three-hour session each week. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor.

Departmental Staff.

A problem course in which students and staff members present prepared reports and discuss in detail topics significant in education. Each student is responsible not only for his own major contributions but also for well-thought-out reactions to the contributions of others. In general the work of the course will deal with problems current in American education.

311. WORKSHOP IN EDUCATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor.

Departmental Staff.

The workshop provides opportunity for professional personnel to work cooperatively on problems arising out of actual school situations.

313. SEMINAR IN VOCATIONAL EDUCATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 361 or equivalent preparation, and consent of instructor. A course for administrators and teachers.

Mr. Martin.

Current programs and areas in the developmental stage, developing schools and classes at the local and area level; revision of curricula, facilitating teacher growth, articulation within school and without, State and Federal cooperation, administration of vocational funds, consideration of individual problems.

318. THE ADMINISTRATION OF AUDIO-VISUAL AIDS. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 319 or equivalent preparation, and consent of instructor.

Mr. Erickson.

Primarily for educational personnel who wish to develop competency in administering audio-visual aids. Problems, principles, and trends in the organization, administration, and supervision of audio-visual aids programs will receive major emphasis.

319. AUDIO-VISUAL AIDS IN EDUCATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor.

Mr. Erickson.

Primarily for teachers, this course emphasizes the basic principles for effective use of the various types of audio-visual aids and their application to learning situations. The necessary understandings and skills for teacher competency in this field will be developed through learning experiences dealing with selection of aids, planning for their use, evaluation of methods, advantages and limitations of various aids, implications of research, and the operation of mechanical equipment.

322. OCCUPATIONALOGY. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 323, or equivalent preparation, and consent of instructor.

Mr. ———.

A course primarily for counselors, supervisors, and administrators. A study of fields of work; of methods of assembling, evaluating, and disseminating information about occupations and related training; of techniques involved in research in occupations, such as job analysis, descriptions, classification, relationships, and occupational surveys.
323. GUIDANCE IN THE SCHOOL. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. 

Mr. Collins.

The historical development of guidance functions and the present status of guidance activities in educational institutions; the proper place of guidance in an educational program in the light of the nature and purposes of education and the characteristics and needs of students.

324. TECHNIQUES IN GUIDANCE. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 323, or equivalent preparation, and consent of instructor. 

Mr. Collins.

The tools and techniques used in guidance, and the application of these to specific student problems. Students will be expected to make an extensive and critical analysis of judgment-making devices used in counseling, with special reference to test interpretation, diagnosis of student problems, techniques of treatment, and interviewing procedures. The case study approach is used.

325. PRINCIPLES OF CURRICULUM CONSTRUCTION. First semester. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. 

Mr. Anderson.

The major issues involved in the development of school programs. Consideration is given to the objective, content, and organization of elementary and secondary school curriculum programs, and to the principles and techniques for adjusting the curriculum to the child and to the community. Students make individual studies and critical reports of curriculum problems.

326. CURRICULUM LABORATORY. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Education 325 is recommended. 

Mr. Anderson.

Open to teachers and administrators seeking practical solutions to curriculum problems in elementary and secondary schools. Reorganization of courses, reorientation of the program of studies, articulation of administrative units, and development of new materials are considered in relation to the local situation. Students make individual studies of their specific problems, and group studies of related problems. Students taking this course also have available the services of specialists in various subject matter areas on the educational staff.

327. THE JUNIOR HIGH SCHOOL. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. 

Mr. Gruhn.

For principals and teachers in junior high schools, six-year high schools, and the seventh, eighth, and ninth grades under other types of organization. The laboratory approach permits individuals or small groups to work on specific problems. Particular attention is given not only to the underlying philosophy, organization and implementation of an effective program for the junior high school grades but to specific problems brought in by members of the class.

328. SECONDARY SCHOOL CURRICULUM. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 hours in education or equivalent preparation, and consent of instructor. 

Mr. Anderson.

Evaluation of types of experiences pupils have in secondary schools in classes, activities, and the community; trends in the secondary school curriculum; practices in selected high schools. Opportunity to make direct study of a high school curriculum is provided.

329. PUPIL ACTIVITIES IN THE SECONDARY SCHOOL. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. 

Mr._

A study of principles, methods, and techniques of guiding pupil activities in junior and senior high schools, both inside and outside the classroom. Emphasis is given to activities as functional parts of a well-integrated instructional program.
331. The Elementary School Child. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 233 or equivalent, and consent of instructor. Miss Crossley.

Characteristics and needs of the child and their implications for the selection and direction of developmental experiences, effects of school and out-of-school activities on child development, analysis of significant psychological problems involved in curricular activities, provision by the school and other social agencies for the psychological needs of the child.

333. Advanced Educational Psychology. First semester. Credits and hours by arrangement. Prerequisite: Education 233 and consent of instructor. Mr. Gerberich.

An intensive and critical analysis of recent psychological research and theories having educational implications, with particular reference to learning, personality and individual differences, and pupil adjustment. Students will be expected to obtain, organize and interpret experimental data on a few major issues.

340. The Evaluation of Educational Research. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Mr. Northby.

This course is intended to help students with the study and interpretation of research materials in education, and to provide them with a background for the preparation of seminar reports. The selection and formulation of problems, sources of educational materials, the more common research techniques, and standards for the form of seminar reports. Students taking this course also have available the services of specialists in various subject matter areas on the education staff.

342. Educational Tests and Measurements Laboratory. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 242 or equivalent preparation, and consent of instructor. Mr. Gerberich.

A course for teachers, administrators, research directors, and supervisors seeking solutions to measurement and evaluation problems in their schools. Individualized and group activities will be used in planning evaluation programs in terms of local conditions and needs. Students taking this course also have available the services of specialists in various subject matter areas on the education staff.

344. Construction of Evaluation Instruments. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 242 or equivalent preparation, and consent of instructor. Mr. Gerberich.

The theory and construction of educational achievement tests, evaluative instruments, and such other evaluative tools as check lists, rating scales, anecdotal records, profiles, and cumulative records. Attention will be given to the validation of instruments and techniques in terms of the instructional outcomes to be measured and to research techniques useful in broad programs of evaluation.

350. Materials and Methods of Teaching, Physical Education. Second semester. Credits and hours by arrangement. This course should be taken before Education 361; however, the two courses may be taken concurrently. Prerequisite: Physical Education 225, Zoology 111 and Education 214, or equivalent preparation, and consent of instructor. Mr. Christian, Miss Rogers.

For prospective and in-service physical education teachers in secondary schools. A study of the terminology and techniques of teaching physical education, with special reference to principles of selection and organization, grading, and progression of activities throughout the secondary school.

351. Materials and Methods of Teaching, Modern Languages. Second semester. Credits and hours by arrangement. This course should be taken before Education 361; however, the two courses may be taken concurrently. Prerequisite: Education 214 or equivalent preparation, and consent of instructor. Mr. Croteau and Departmental Staff.

A course for prospective and in-service teachers of French, German and Spanish in secondary schools. It is adapted to the needs of individual students and deals with the following: the history, general principles, aims and objectives, content and meth-
ods of teaching modern languages in the secondary school; course organization, testing, significant contributions of research, laboratory equipment, classroom accessories, activities for language clubs. The work is adapted to the needs of individual students under the supervision of departmental staff members.

352. MATERIALS AND METHODS OF TEACHING, HEALTH EDUCATION. Second semester. Credits and hours by arrangement. This course should be taken before Education 361; however, the two courses may be taken concurrently. Prerequisite: Physical Education 240, Zoology 231, and Education 214 or equivalent preparation, and consent of instructor.

MR. FISCHER.

A course for prospective and in-service teachers of health and physical education in the secondary schools. The history, principles, aims and objectives of health teaching; problems encountered in teaching functional health units; evaluation of instructional materials, including audio-visual aids; construction, organization and administration of secondary school health curricula.

353. MATERIALS AND METHODS OF TEACHING, MATHEMATICS. Second semester. Credits and hours by arrangement. This course should be taken before Education 361; however, the two courses may be taken concurrently. Prerequisite: Education 214 or equivalent preparation, and consent of instructor.

MR. ASH, MISS BOSWORTH.

For prospective and in-service teachers of mathematics in secondary schools. A study of the aims and function of mathematics in the American secondary school, modern methods of teaching mathematics, organization and development of the curriculum, and trends in the mathematics program. For prospective teachers this course correlates with six weeks of full-time professional practice in the schools.

354. MATERIALS AND METHODS OF TEACHING, PRE-VOCATIONAL BUSINESS SUBJECTS. First semester. Credits and hours by arrangement. Prerequisite: Education 214 or equivalent preparation, and consent of instructor. This course should be taken before Education 361; however, the two courses may be taken concurrently.

MR. ASH, MISS BOSWORTH.

For prospective and in-service business teachers in secondary schools. Teaching of the basic business subjects usually offered during the early years of the high school program: junior business training, business arithmetic, business writing, elementary bookkeeping, elementary typewriting. The shifting from vocational values to general social and personal use values; the desirability of correlating the material in some of these closely related subjects.

355. MATERIALS AND METHODS OF TEACHING, VOCATIONAL BUSINESS SUBJECTS. Second semester. Credits and hours by arrangement. Prerequisite: Education 214 or equivalent, and consent of instructor. This course should be taken before Education 361; however, the two courses may be taken concurrently. MR. ASH, MISS BOSWORTH.

Planned for prospective and in-service business teachers in the secondary schools. Attention is given to problems in teaching those business subjects in which the primary aim is development of occupational skills; stenography, typewriting, machine clerical practice, advanced bookkeeping. Students may concentrate on one or two vocational business subjects.

357. MATERIALS AND METHODS OF TEACHING, NATURAL SCIENCES. Second semester. Credits and hours by arrangement. This course should be taken before Education 361; however, the two courses may be taken concurrently. Prerequisite: Education 214 or equivalent preparation, and consent of instructor. MR. BLICK, MR. GENTRY.

Planned for prospective and in-service teachers of general science, biology, chemistry and physics in secondary schools. Evaluation of aims and objectives, selection and organization of content, the principles and methods of science teaching, and the research work which has been reported covering these and other topics. The individual study plan is followed to some extent, so that students may adapt the work to their particular needs. For prospective teachers this course correlates with six weeks of full-time professional practice in the schools.

358. MATERIALS AND METHODS OF TEACHING, SOCIAL STUDIES. Either semester. Credits and hours by arrangement. This course should be taken before Education 361;
however, the two courses may be taken concurrently. Prerequisite: Education 214 or equivalent preparation, and consent of instructor.

Miss Lombard.

For prospective and in-service teachers of social studies in secondary schools. The function of the social studies in American secondary education is examined. Through study of changes in objectives and evolution of methods and materials, and through observation in schools, current good practice is determined. For prospective teachers this course correlates with six weeks of full-time professional practice in the schools.

359. Materials and Methods of Teaching, English. Either semester. Credits and hours by arrangement. This course should be taken before Education 361; however, the two courses may be taken concurrently. Prerequisite: Education 214 or equivalent preparation, and consent of instructor.

Miss Lombard.

For prospective and in-service secondary school teachers of English composition or literature. The function and aims of the teaching of English in the American secondary school are examined. Current good practice is determined from study of changes in objectives and evolution of materials and methods and through observation or teaching in the schools. For prospective teachers, this course correlates with six weeks of full-time professional practice in the schools.

360. Techniques of Diagnostic and Corrective Instruction. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 362, or Education 462, or equivalent, and consent of instructor.

Mr. Cooper.

Intensive analysis of instructional programs in the public schools from the standpoint of current instructional and remedial methodologies, with special reference to reading; adaptation of successful clinical practices to classroom use; demonstration and experimental use of devices for analysis of severe reading disability; clinical techniques.

361. Supervised Teaching. Either semester. Credits and hours by arrangement. Open only to fifth-year students in the School of Education. It is recommended that students take Education 263 before taking this course. A course in special methods in the subject or field in which supervised teaching is done should precede or be taken concurrently with the supervised teaching. This course may not be used for credit toward the Bachelor’s degree. Application must be made to the instructor for fall semester before April 15; for spring semester, before October 15.

Mr. Gruhn and Departmental Staff.

Teaching in high schools or other schools of secondary grade or higher, supervised by a member of the staff of the Department of Education, in cooperation with special methods instructors from other departments. It is the policy of the department to extend its practice-teaching opportunity to a point sufficient to indicate adequately a student’s teaching ability and aptitude.

362. Materials and Methods in the Teaching of Reading. Semester by arrangement. Credits and hours by arrangement. Open to advanced and graduate students with an undergraduate concentration in elementary education, or administrative experience, and consent of instructor.

Mr. Cooper, Miss Crossley.

For teachers, supervisors and principals. Current practices in reading instruction for the elementary grades, organization and administration of a functional reading program, consideration of certain aspects of the spelling program, demonstrations, individual and group projects.

363. Materials and Methods in the Teaching of Elementary School Mathematics. Semester by arrangement. Credits and hours by arrangement. Open to advanced and graduate students with an undergraduate concentration in elementary education, or administrative experience, and consent of instructor.

Mr. Pritzka.

For teachers, supervisors and principals. Principles, methods and research in the teaching of mathematics in the elementary grades; the "meaning theory" of arithmetical instruction; examination of subject matter and materials; demonstrations; individual and group projects.
364. MATERIALS AND METHODS IN THE TEACHING OF SOCIAL STUDIES AND RELATED AREAS. Semester by arrangement. Credits and hours by arrangement. Open to advanced and graduate students with an undergraduate concentration in elementary education, or administrative experience, and consent of instructor.

MR. COOPER, MR. PRITZKAU.

Use of different types of materials and subject matter content when educational activities grow out of centers of child interest; unit organization of topics in the social studies and science areas; development of teaching materials.

365. PROBLEMS IN BUSINESS EDUCATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. MR. ASH.

Primarily for in-service business teachers, and for supervisors who are seeking solutions to practical problems encountered in their schools. Basic principles, problems and trends in business education, particularly in the program of the secondary school. Attention is given to training for various business occupations, to personal-use and consumer-economic courses.

366. PROBLEMS IN THE TEACHING OF HOME ECONOMICS. Summer session. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. MISS CAMPBELL.

For home economics teachers and supervisors who are seeking solutions to practical problems encountered in their schools. Emphasis will be given to the recent developments in the teaching of home economics at all school levels. Individuals or small groups may work on specific problems in the field.

367. PROBLEMS IN THE TEACHING OF NATURAL SCIENCES. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. MR. BLICK, MR. GENTRY.

For teachers and supervisors in the physical or biological sciences who are seeking solutions to practical problems in their schools. The laboratory approach permits individuals or small groups to work on specific problems in their field. Through exchange of experience and study of the selection and effective use of current materials in natural science, basic concepts underlying the modern science program are evolved.

368. PROBLEMS IN THE TEACHING OF THE SOCIAL STUDIES. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. MR. __________.

For social studies teachers and supervisors who are seeking expanded background in the social studies and solutions to practical problems encountered in their schools. The laboratory approach permits individuals or small groups to work on specific problems in the field. Through exchange of experiences and study of the selection and effective use of current materials in the social studies, certain basic concepts underlying the modern social studies program are evolved.

369. PROBLEMS IN THE TEACHING OF ENGLISH. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. MR. __________.

For English teachers and supervisors who are seeking expanded background in English and solutions to practical problems encountered in their schools. The laboratory approach permits individuals or small groups to work on specific problems in the field. Through exchange of experiences and study of the selection and effective use of current materials in English, certain basic concepts underlying the modern English program are evolved.

371. IMPROVEMENT OF INSTRUCTION IN SECRETARIAL SUBJECTS. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. MR. ASH.

For teachers and supervisors who are interested in improving the teaching of such business subjects as shorthand, typewriting; office and secretarial training; and business English and correspondence. Open only to those who have had at least two
years' experience in administration or supervision, or in the teaching of at least one of the above subjects.

374. HISTORY OF EDUCATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Hours by arrangement. Mr. THUT.

An examination of current problems in American education in the light of their historical antecedents, with some attention to the differences in the manner in which these problems are met by contemporary social groups.

382. PUBLIC SCHOOL ADMINISTRATION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Mr. KNOBLAUCH.

An introduction for teachers and administrators to the basic problems of school administrators and school administration. The organization and administration of state, county, town, and district school systems and the duties and responsibilities of teachers and administrators for improvement of education through informed administrative leadership.

383. ORGANIZATION AND ADMINISTRATION OF THE ELEMENTARY SCHOOL. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in Education or equivalent preparation, and consent of instructor. Mr.——.

A study of current elementary school organization and administration; the efficient utilization of personnel, buildings, equipment and instructional materials in providing appropriate curricular and extra-curricular experiences; and the relationship of the elementary school to other units in the school system.

385. ORGANIZATION AND ADMINISTRATION OF THE SECONDARY SCHOOL. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in Education or equivalent preparation, and consent of instructor. Mr. GRUHN.

The organization of secondary education in America and of the administration of the secondary school. For teachers, supervisors, and principals, and others concerned with secondary education.

386. THE SECONDARY SCHOOL PRINCIPALSHIP. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 385 or equivalent preparation and consent of instructor. Mr. GRUHN.

A study of the procedures employed in the management of secondary schools. Attention is given to schedule-making, records and reports, activities accounting. Designed especially for principals, vice-principals, and others concerned with administration of the secondary school.

388. SCHOOL PLANT, SITE, EQUIPMENT, AND SUPPLIES. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 382 and Education 390 or equivalent preparation and consent of instructor. Mr. KNOBLAUCH.

A study of selecting, planning, financing, designing, constructing, and maintaining a functional school plant and site; and of selection, purchase, management, service, and care of educational equipment and supplies. Building plans will be studied and school plants and sites visited.

390. PUBLIC SCHOOL SUPERVISION. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation and consent of instructor. Mr. GRUHN.

The nature and function of supervision in the public school. A study of the ways in which instruction may be improved through the cooperative participation of school personnel. Emphasis is given to evaluating the total teaching-learning situation and to organizing and planning the instructional program.

392. SUPERVISION OF INSTRUCTION IN THE ELEMENTARY SCHOOL. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 390, or equivalent preparation and consent of instructor. Mr. PRITZKAU.

Problems in supervision peculiar to the elementary school.

44
394. Supervision of Instruction in the Secondary School. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 390, or equivalent preparation and consent of instructor. Mr. Gruhn.

Problems in supervision peculiar to the secondary school.

395. Public School Finance. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation and consent of instructor. Mr. Knoblauch.

A study of school finance in the United States, on the federal, state and local level. Major emphasis is placed on the relationship of the control to the support of education, the commonly approved methods of financing education, and the implications of a sound fiscal policy for the school and community.

396. Personnel Problems of the Teaching Staff. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Mr. ———.

The mutual responsibilities, rights and relationships of the members of the professional staff. The student is expected to be cognizant of the major problems, to be able to formulate a satisfactory set of principles that will be of value in establishing personnel policy, and to develop a professional attitude toward staff relationships and the solution of personnel problems on all levels.

397. The Legal Basis of a Public School System. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Mr. Knoblauch.

Constitutional and statutory provisions for a public school system; the origin and legal status of the local school unit; the nature of the office of school board member; the legal status of the teacher; the legal status of the administrative officers; the legal rights and responsibilities of parents and pupils; the evolution of legal provisions for school support; the legal nature of capital expenditures; the centralizing tendencies and the changes in educational legislation.

398. Public Relations in Education. Semester by arrangement. Credits and hours by arrangement. Prerequisite: At least 12 credits in education or equivalent preparation, and consent of instructor. Mr. Knoblauch.

The policies and practices involved in the integration of community and institutional life. The course stresses the functions common to the task of interpreting the school to the public, with special emphasis on the task of informing the many publics as to the aims, problems and program of the educational enterprise in its local, state and national phases. Considerable attention is given to modern public relations procedures.

399. Thesis Preparation. Open only to Master's candidates.

407. Education and Society. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 306 or equivalent preparation, and consent of instructor. Mr. ———.

An analysis of the value pattern characteristic of our society, the historical development of this pattern, and its implications for problem solving in school and society.

410. Seminar. Semester by arrangement. Credits and hours by arrangement. Open to doctoral students only, with consent of instructor. Guidance, Mr. Collins; curriculum and supervision, Mr. Anderson; measurement and evaluation, Mr. Gerberich; secondary education, Mr. Gruhn; school administration, Mr. Knoblauch.

Cooperative study of developments and problems in the student's area of specialization.

432. Psychological Foundations of Education. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Psychology 298, and Education 333 or Psychology 236, or equivalent preparation, and consent of instructor. Mr. ———.
A survey of research in human learning and related psychological topics with reference to the curriculum, teaching methods, guidance, evaluation of pupil growth and behavior, teacher education and evaluation, and provision of educational leadership. The chief concern of this course is to point out implications for practice in the areas mentioned.

445. Advanced Statistical Methods in Education and Psychology. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 245 or equivalent preparation, and consent of instructor. Mr. Gerberich.

The theory, computation, and application of partial and multiple, bi-serial, tetradrachic, contingency, rank-order, and curvilinear coefficients of correlation, of analysis of variance, and of the chi-square test for goodness of fit. Some attention will be given to the design of experiments.

460. Practicum. Semester by arrangement. Credits and hours by arrangement. Open to doctoral students only with consent of instructor. Guidance, Mr. Collins; curriculum and supervision, Mr. Anderson.

The implementation and application of theory in the student's area of specialization.

462. Teaching Beginning Reading. Semester by arrangement. Credits and hours by arrangement. Open to advanced and graduate students with an undergraduate concentration in elementary education, or administrative experience, and consent of instructor. Mr. Cooper, Miss Crossley.

For kindergarten and primary teachers and supervisors. Practical problems in the teaching of reading at the beginning level, including various aspects of reading, readiness, development and use of experience stories, introducing the first books, and developing a basic sight vocabulary and other primary reading abilities; emphasis on procedures based on research.

463. Teaching the Language Arts. Semester by arrangement. Credits and hours by arrangement. Open to advanced and graduate students with an undergraduate concentration in elementary education, or administrative experience, and consent of instructor. Miss Crossley.

For teachers, supervisors, and principals. Problems and procedures in teaching the language arts, including oral and written composition, creative language work, spelling, and handwriting; relationship to activity and experience units; application of research dealing with the language arts. (Does not include the teaching of reading.)

481. Principles and Policies of Educational Leadership. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 407 and Education 432, or equivalent preparation, and consent of instructor. Mr. ——.

This course is intended to help students formulate principles of leadership based upon the psychological and sociological foundations of education and to help students develop policies in administration consistent with the principles formulated.

482. Educational Leadership: Working with Boards of Education. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 481, or equivalent preparation, and consent of instructor. Mr. ——.

A study of promising techniques for working with boards of education consistent with principles and policies of democratic educational leadership. Special attention will be focused upon practices employed by democratic leaders in public school systems.

483. Educational Leadership: Working with the Staff and the Profession. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Education 481, or equivalent preparation, and consent of instructor. Mr. ——.

A study of promising techniques for engendering growth of teachers and other school personnel consistent with principles and policies of democratic educational leadership. Attention will be given to procedures for developing and utilizing the
potentialities of teaching and non-teaching personnel and for improving the status of
the profession.

484. EDUCATIONAL LEADERSHIP: WORKING WITH THE COMMUNITY. Semester
by arrangement. Credits and hours by arrangement. Prerequisite: Education 481 or
equivalent preparation, and consent of instructor.

A study of promising techniques for securing cooperation among community or-
ganizations, interest groups, and individuals within the community consistent with
the principles and policies of democratic educational leadership.

499. THESIS PREPARATION. Open only to Ph.D. candidates.

ELECTRICAL ENGINEERING

311. ELECTRICAL ENGINEERING SEMINAR. Either semester. One credit. One
class period. T7.

Presentation and discussion of advanced electrical engineering problems.

320. INVESTIGATION OF SPECIAL TOPICS. Either semester. Not to exceed four
credits. Three class periods and one 3-hour laboratory period. Open only to seniors
and graduate students in electrical engineering. MWF7, W12-14.

The course is designed primarily for students who wish to pursue a special and
specific interest in electrical engineering.

322. ELECTRICAL POWER TRANSMISSION I. First semester. Three credits. Three
class periods. Prerequisite: Electrical Engineering 221. MWF5.

Mr. Laudenslager, Mr. Robb.

An advanced course dealing with the theory, construction and operation of a
modern electric power system. Class work is a study of the principles and design of
electrical transmission lines with reference to the theory of their regulation and per-
formance and to their design as determined by economic principles.

323. ELECTRICAL TRANSIENTS. First semester. Three credits. Three class peri-
ods. Prerequisite: Electrical Engineering 222 and Mathematics 204. MWF5.

Mr. Timoshenko.

A study of electrical transients in linear and non-linear networks. Use of classi-
cal and operational methods in problem solution. The latter part of the course is
devoted to study of transients in the fields of machinery, transmission lines, and
communication circuits.

324. ELECTRICAL POWER TRANSMISSION II. Second semester. Three credits.
Three class periods. Prerequisite: Electrical Engineering 322 or consent of instructor.
MWF5.

Mr. Timoshenko, Mr. Laudenslager.

Study of the equipment for electric power transmission, commencing with a
study of insulation and insulators. High voltage bushings, switches, transformers
and lightning arresters are discussed. Lightning and coordination of protective de-
vices are attacked by an analysis of traveling waves.

328. SERVO-MECHANISMS AND CONTROL DEVICES. Second semester. Three cred-
its. Three class periods. Prerequisite: Electrical Engineering 223, which may be taken
concurrently. MWF5.

Mr. Fischer, Mr. Clayton.

General treatment of automatic control devices, including mechanical and elec-
tronic relays, thrustors, selvyn motors, amplidyne, and similar types of machines.

329. SERVO-MECHANISMS LABORATORY. Second semester. One credit. One 3-
hour laboratory period. To be taken concurrently with Electrical Engineering 328.
Prerequisite: Electrical Engineering 271, which may be taken concurrently. Th8-10.

Mr. Fischer, Mr. Spencer.

Experimental study of component parts of various servo-mechanisms, as well as
of some complete servo-systems.
331. Advanced Electrical Measurements. First semester. Credits by arrangement, not to exceed three. Two or three class periods. Prerequisite: Electrical Engineering 222, 230 and 240. MWF5.

Mr. Timoshenko.

Application of electromagnetic theory to circuit parameter computations. The electromechanical coupling in various indicating instruments. Theory and tests of instrument transformers and selected topics in alternating current bridge measurements covering a wide range of frequencies.

332. Advanced Electrical Measurements Laboratory. First semester. One credit. One 3-hour laboratory period. Prerequisite: Electrical Engineering 272. Th8-10.

Mr. Timoshenko, Mr. Heydt.

Experimental work on more complex a-c bridges and other measuring equipment at audio and high frequencies.

336. Engineering Acoustics. Second semester. Three credits. Three class periods. Prerequisite: Electrical Engineering 240, which may be taken concurrently, and Mathematics 204. Hours by arrangement.

Mr. Fischer, Mr. Schultz.

Theory of oscillations in electro-mechanical coupled systems. Methods of measuring acoustical quantities, including sound pressure level, spectrum level, and impedance. Transducers, wave-guides, and elements of architectural acoustics. Elements of ultrasonics are included.

337. Engineering Acoustics Laboratory. Second semester. One credit. One 3-hour laboratory period. Prerequisite: Electrical Engineering 336, which may be taken concurrently. Hours by arrangement.

Mr. Schultz, Mr. Landers.

Calibration and use of acoustical measuring equipment in the study of practical problems in acoustics.


Mr. Williams.

Theoretical study of electromagnetic micro-waves, antennas, transmission lines, UHF generators, and wave guides.

347. Microwave Laboratory. Second semester. One credit. One 3-hour laboratory period. To be taken concurrently with Electrical Engineering 346. Prerequisite: Electrical Engineering 274. Th8-10.

Mr. Anderson, Mr. Williams.

Experimental study of high frequency electromagnetic waves, antennas, transmission lines, UHF generators, and wave guides.


Mr. Fischer, Mr. Clayton.

A study of the general case of relative motion between electrical and magnetic circuits, both in the transient and steady state. Special reference is made to modern power machinery and analysis of the newer types.

399. Thesis Preparation. Open only to Master’s candidates.

ENGLISH


Mr. Dean, Mr. Rockel.

An examination of the principal ways in which literary works have been described, evaluated, and related.


Mr. Engelhardt.

A study of the origin of the English language and its development through the Old and Middle English dialects to the standard usage of the present.

(Formerly number 221.)
Mr. Engelhardt.
Old English grammar, selected simple prose and verse, and Beowulf.

Mr. Engelhardt.
A study of the basic types and foremost works of medieval literature, excluding Dante and Chaucer.

Mr. Dean.
Major prose works by Erasmus, More, Machiavelli, Bacon, and others.

317. Elizabethan Poetry. First semester. Three credits. Three class periods. MWFS. 
Mr. McPeek.
The works of selected Elizabethan poets, with particular attention to Sidney, Spenser, and Shakespeare.

318. Age of Pope. First semester. Three credits. Three class periods. Prerequisite: English 205 or consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement. 
Mr. Warnock.
The central period of the Classical Movement: Pope, Gay, Swift, Addison, Steele, and their contemporaries.

319. Dr. Johnson and His Circle. First semester. Three credits. Three class periods. Prerequisite: English 205 or consent of instructor. Alternate years; to be given in 1950-51. Hours by arrangement. 
Mr. Warnock.
The final period of the Classical Movement: Johnson, Boswell, Goldsmith, Garrick, Sheridan, Gibbon, and Burke.

321. Studies in Romantic Literature. First semester. Three credits. Three class periods. Prerequisite: English 206 or consent of instructor. Hours by arrangement. 
Mr. Kessel.
The topics will be varied from year to year. Shelley will be the central figure in 1949-50.

322. Studies in Victorian Literature. Second semester. Three credits. Three class periods. Prerequisite: English 210 or 218 or consent of instructor. Not to be offered in 1949-50. Hours by arrangement. 
Mr. Clark.
A study of Victorian prose and verse, to supplement and unify earlier studies in the literature of the period.

323. The English Drama to 1642. Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr.——
A survey of English drama from the beginnings until 1642. The plays of Marlowe, Kyd, Greene, Dekker, Middleton, Ben Jonson, Beaumont and Fletcher, Webster, Massinger and others are studied.
(Formerly number 234.)

325. Studies in American Literature. First semester. Two credits. Two class periods. Prerequisite: English 272 and 273 or consent of instructor. Hours by arrangement. 
Mr. Tilley.
For students who desire further training in American literature.

327. Studies in Literature since 1885. Second semester. Three credits. Three class periods. Prerequisite: English 211 or consent of instructor. Hours by arrangement. 
Mr. Saul.
Selected critical problems. Yeats will be the central figure in 1949-50.

Mr. Dean.
Selected critical problems. Plays dealing with political themes will be studied in 1950-51.]

371. Literary Criticism. Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Rockel.
   A study of the major documents of literary criticism from Plato and Aristotle to the present.

399. Thesis Preparation. Open only to Master's candidates.

FOREIGN LANGUAGES

French

307. Problems in French Civilization. Either or both semesters. Credits and hours by arrangement. Prerequisite: French 264 or 266. Mr. Brown.
   Special problems in the study of the institutions of France, its arts and letters; a study of basic problems for advanced undergraduate students or graduate students.

   A survey of literary trends in France since the beginning of the twentieth century, with special attention to the novel. Readings are selected from such authors as Andre Gide, Marcel Proust, Paul Claudel, Jules Romains, Romain Rolland, Andre Maurois, Georges Duhamel, Edouard Estaunie and Francois Mauriac. Collateral reading. Book reports.

374. French Drama from the Theatre Libre to the Present Day. First semester. Three credits. Three class periods. Open to graduates and advanced undergraduates with consent of instructor. Hours by arrangement. Mr. Brown.
   A study of the works of representative authors—Becque, Rostand, Curel, Hervieu, Brieux, Lavedan, etc. Particular attention is given to the modern dramatist, Francois de Curel. His intellectual and philosophical evolution is studied in its relation to current social, political and literary trends, and to contemporary authors. Constant reference is made to parallel dramatic development in other literatures.


399. Thesis Preparation. Open only to Master's candidates.

German

317. Problems in German Civilization. Both semesters. Credits and hours by arrangement. Prerequisite: 12 credits in German 200's courses, except German 230, and consent of instructor. Departmental Staff.
   A course for the study of special problems in German history, the fine arts, music and theatre, customs and folklore.

331. Goethe. First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Maiier.
   The reading and interpretation of selected dramas, novels, autobiographical writings, and lyric poetry of Goethe to show his ideological development and his influence on his time.
332. **History of the German Language.** First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. 

Mr. Semmler.

A study of the development of the German language, its sounds, vocabulary, and grammatical forms from the beginning to the present. Lectures and analysis of illustrative texts.

333. **Middle High German.** Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Maier.

An introduction to the language and literature of the chivalric age through the reading and interpretation of selected epic and lyric texts.

399. **Thesis Preparation.** Open only to Master's candidates.

**Spanish**

321. **Theatre of the Golden Age.** First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Arjona.

A study of the origin, formation and development of the Spanish *comedia*. Representative works of Lope de Vega, Calderon, Tirso de Molina, and Alarcon will be analyzed with special emphasis on individual characteristics.

322. **Cervantes.** Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Lombardo.

An interpretive reading of the masterpieces of Cervantes with special emphasis on the literary style and novelistic technique of the Quijote.

323. **The Generation of '98.** First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Osborne.

A study of the development of modern Spanish thought as reflected in the works of Ganivert, Unamuno, Azorin, Ortega y Gasset, etc.

325. **The Picaresque Novel.** First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. ———.

A study of the origin, development and characteristics of the picaresque novel. Readings include masterpieces such as *La Celestina*, *Lazarillo de Tormes*, *Guzman de Alfarache*, etc.

327. **Problems in Spanish Civilization.** Either or both semesters. Credits and hours by arrangement. Prerequisite: Spanish 284 or 286. Mr. Arjona.

Treatment of the finer points of Spanish grammar. Exercises in translation and free composition. Stylistic analysis of texts chosen from Spanish authors.

399. **Thesis Preparation.** Open only to Master's candidates.

**Government and International Relations**

301. **Investigation of Special Topics in Government.** Either semester. Credits and hours by arrangement. Open only with consent of head of department and the instructor concerned. Departmental Staff.

Open to properly qualified students who present suitable projects for independent work in government.

350. **Research Methods in Government.** First semester. Two credits. Two class periods. Prerequisite: Accounting 131, Economics 260, and consent of instructor. Hours by arrangement. Mr. McReynolds and Departmental Staff.

Discussion and practice of effective research, problem solution and types of thesis study, use of bibliographies, application of statistical and graphical methods, and the arrangement and style of memoranda, reports, and articles used in the field of governmental research and public administration.
360. **Seminar in Public Administration.** Second semester. Credits and hours by arrangement. Prerequisite: Government 288 and consent of instructor. Mr. _______. Study of selected topics in public administration for advanced students.

   A study of the basic legal framework of administrative organization and of the rules governing administrative powers and their exercise; also the legal procedures for the enforcement of bureaucratic responsibility in the democratic state.

   The overhead management of municipal affairs: the role of the chief executive and his administrative aides and the auxiliary, staff, and control work, such as finance, personnel, planning, purchasing, and reporting and public relations.

363. **Administrative Functions of Local Governments.** Second semester. Three credits. Three class periods. Prerequisite: Government 274 or consent of instructor. Hours by arrangement. Mr. Bosworth.
   An examination of the characteristic managerial problems of the several functions of local government such as police, fire, traffic, public works, parks, health, recreation. The course is designed for individuals planning to work with citizen agencies, in agencies for governmental management, or in journalism.

   The investigation and discussion of specific problems of the state and local governments of Connecticut.

   A comparative study of the state and local governmental structures of the six New England states. Particular attention will be focused on the similarity and differences of Connecticut government with that of other New England states. The subject will be approached both in its general aspect and with reference to a comparison of selected functions.

377. **Advanced Comparative Government.** Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. Linnefeld.
   Political institutions and processes in the United States and in foreign countries are compared on a topical basis to establish general principles of government and the nature of political science. The integration of information obtained in other courses is emphasized.

380. **Seminar in International Relations.** First semester. Credits and hours by arrangement. Open only with consent of instructor. Mr. McReynolds.
   Advanced students may pursue the study of special topics in the general field of international economic and political relations.

381. **Seminar in American Diplomacy.** Second semester. Credits and hours by arrangement. Prerequisite: Government 281 and consent of instructor. Mr. McReynolds.
   The seminar will be devoted to special problems in the field of American foreign policy.

390. **Near Eastern International Relations.** Second semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement. Mr. ______.
A study of the historical background of the Near East today. The changing economic strategic and power relationships of the area will be surveyed. An analysis of the position of the United States in the Near East will be included.

399. Thesis Preparation. Open only to Master's candidates.

HISTORY

300. Investigation of Special Topics in History. Either semester. Credits and hours by arrangement. Open only with consent of head of department and the Departmental Staff.

Open to properly qualified students who present suitable projects for independent work in history.

306. History of European Thought, 1500-1800. Second semester. Three credits. Three class periods. Prerequisite: History 221 or consent of instructor. Hours by arrangement.

This course consists of readings of original writings which exemplify the history of thought from the Renaissance and Reformation to the French Revolution, e.g. writings of Erasmus, Luther, More, Montaigne, Francis Bacon, Hobbes, Locke, Montesquieu, Voltaire, Rousseau. Readings are followed by seminar discussions.

312. The Corporate State. Second semester. Three credits. Three class periods. Open only with consent of instructor. Students are advised to take History 225 or Government 277 preceding this course. MWF2.

Mr. Schenker.

An intensive study of the history of Europe since 1917 with emphasis on the establishment of governmental agencies devised to control the economic life of the people in Russia, Italy, Germany and other countries.

333. History of the Northeastern United States. First semester. Three credits. Three class periods. Prerequisite: History 230 or consent of instructor. Hours by arrangement.

Mr.——.

A study of selected topics in the colonial and early national history of New England and adjacent areas.


Mr.——.

A research course primarily for graduate students who expect to prepare theses or to work on significant projects in Connecticut history.

335. The Civil War and Reconstruction. First semester. Three credits. Three class periods. Open only with consent of instructor. Hours by arrangement.

Miss Culp.

A study of relations between North and South from the Compromise of 1850 to the close of the Reconstruction era. Primary as well as secondary materials will be used and the historical method emphasized.


Mr. Moore.

An examination, through reports, of writings of a selected group of outstanding American thinkers. Typical writers include some from the revolutionary era, a larger number from the nineteenth century, and a few more contemporary representatives.

337. Studies in Recent and Contemporary United States History. First semester. Three credits. Three class periods. Prerequisite: History 231 and 232 and consent of instructor. TTh6-7.

Mr. Moore.

A study of the successive movements, from Populism to the New Deal, which have been advanced for adapting American democracy to new conditions. Conducted mainly through reports.
339. **Historical Interpretation.** First semester. Three credits. Open only with consent of instructor. WF8-9.

The course is conducted through papers and reports with the aim of gaining some understanding of varieties and schools of historical interpretation. Some consideration is given to the relation of history to related studies.

399. **Thesis Preparation.** Open only to Master’s candidates.

**HOME ECONOMICS**

**ART**

305. **Special Problems in Art.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

A course for students who are qualified to pursue independently special problems in art.

310. **Art Seminar.** Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. **Miss Keyes.**

This course consists of readings, reports and discussions. Field trips may be included.

**CHILD DEVELOPMENT**

310. **Child Development Seminar.** Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. **Miss Davine.**

Readings, reports and discussions. Field trips may be included.

380. **Special Problems in Child Development.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

A course for students who are qualified to pursue independently special problems in child development.

388. **Supervised Field Work in Child Development.** Either semester. Credits and hours by arrangement. Prerequisite: Child Development 288 and consent of instructor. **Miss Davine.**

Work in a community agency related to the field of child development.

**CLOTHING**

310. **Clothing Seminar.** Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. **Mrs. Eikel.**

Readings, reports and discussions. Field trips may be included.

320. **Special Problems in Clothing.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

A course for students who are qualified to pursue independently special problems in clothing.

**FOODS**

303. **Investigation of Special Topics.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Miss Greenwood.**

A course designed for students who are qualified to pursue independently special problems in foods.

306. **Workshop in Foods.** Summer. Credits and hours by arrangement. Prerequisite: Foods 250 or equivalent preparation and consent of instructor. **Departmental Staff.**

The purpose of this course is to provide opportunity for professional home economists to work cooperatively on problems arising out of actual situations.
310. Foods Seminar. Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. Miss Greenwood. Readings, reports and discussions. Field trips may be included.


Home Administration

307. Workshop in Home Management. Summer. Credits and hours by arrangement. Prerequisite: Home Administration 273 and 276 or equivalent preparation and consent of instructor. Departmental Staff. The purpose of this course is to provide opportunity for professional home economists to work cooperatively on problems arising out of actual situations.

310. Home Management Seminar. Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. Miss——. Readings, reports and discussions. Field trips may be included.

370. Investigation of Special Topics. Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. Departmental Staff. A course designed for students who are qualified to pursue independently special problems in home management.

Institution Management

308. Special Problems in Institution Management. Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. Mrs. Robinson. A course for students who are qualified to pursue independently special problems in institution management.

310. Institution Management Seminar. Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. Mrs. Robinson. Readings, reports and discussions. Field trips may be included.

Nutrition

302. Investigation of Special Topics. Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. Miss Potgieter. A course designed for students who are qualified to pursue independently special problems in nutrition.

310. Nutrition Seminar. Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. Miss Potgieter. Readings, reports and discussions. Field trips may be included.


362. Research Methods and Procedure in Nutrition. Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. Miss Potgieter, Miss Greenwood. A study of the composition and nutritive value of foods (including recently developed food products) by means of chemical methods and animal experimentation; a study of human food requirements and of metabolic processes.
TEXTILES
304. INVESTIGATION OF SPECIAL TOPICS. Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. Miss Gilmore, Miss Roach.
A course designed for students who are qualified to pursue independently special problems in textiles and clothing.

310. TEXTILES SEMINAR. Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. Miss Gilmore.
Readings, reports and discussions. Field trips may be included.

HOME ECONOMICS
399. THESIS PREPARATION. Open only to Master’s candidates.

HORTICULTURE (Plant Science)
320. METHODS OF HORTICULTURAL RESEARCH. First semester. Three credits.
Open only with consent of instructor. Hours by arrangement. Mr. ________.
A study of the principles of scientific research applied to recent horticultural investigations, including statistical analysis of data and methods of experimentation.

330. APPLIED HORTICULTURAL PHYSIOLOGY. First semester. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Botany 291 or 292, and consent of instructor. Hours by arrangement. Mr. ________.
A course showing the direct effects of the principles of plant physiology as they apply to horticultural practices. The following topics will be considered: effects of water, fertilizers, light and temperature on the growth of economic plants; effect of spray materials on photosynthetic activity; factors affecting the development of color in horticultural plants and fruits.

399. THESIS PREPARATION. Open only to Master’s candidates.

MATHEMATICS

300. INVESTIGATION OF SPECIAL TOPICS. Either or both semesters. Credits by arrangement, not to exceed three each semester. Open only with consent of instructor. Departmental Staff.
Students who have well-defined problems for advanced reading and investigation should submit to the department their plans for work.

310. SEMINAR. Either or both semesters. One credit each semester. Two 1-hour discussion periods. Open only with consent of instructor. Hours by arrangement. Departmental Staff.
The treatment of special topics, primarily by individual readings and reports.

315-316. ABSTRACT ALGEBRA. Both semesters. Three credits each semester. Three class periods. Prerequisite: Mathematics 250 and 251 or consent of instructor. Hours by arrangement. Mr. Montgomery.
Finite groups, algebraic fields, integral algebraic domains, rings, perfect fields, matrices, linear associative algebras.

333. PARTIAL DIFFERENTIAL EQUATIONS. Semester by arrangement. Three credits. Three class periods. Prerequisite: Mathematics 204. Hours by arrangement. Mr. Cook.
Methods of solving partial differential equations of the first and second orders and linear equations of higher orders. Applications.

351-352. THEORY OF FUNCTIONS OF REAL VARIABLES. Both semesters. Three credits each semester. Three class periods. Prerequisite: Mathematics 204. Hours by arrangement. Mr. Sedgewick.
Limits, continuity, derived functions, elementary transcendental functions, series, implicit functions, sets of points, modern theories of integration.
353. Complex Variables II. Semester by arrangement. Three credits. Three class periods. Prerequisite: Mathematics 204 and 252. Hours by arrangement.

Mr. Nordling.

Uniform convergence, calculus of residues, integral functions. Selected topics from the following: Gamma functions, hypergeometric functions, Legendre functions, Bessel functions, elliptic functions of Jacobi and Weierstrass.

399. Thesis Preparation. Open only to Master's candidates.

Mechanical Engineering

320. Investigation of Special Topics in Mechanical Engineering. Semester by arrangement. Credits by arrangement, not to exceed four. Open only to qualified seniors and graduate students in mechanical engineering. Hours by arrangement.

Departmental Staff.

The course is designed primarily for students who wish to pursue a special line of study or investigation. The program of study or investigation is to be approved by the head of the department and by the instructor before registration is completed.

333. Advanced Thermodynamics. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Mechanical Engineering 232.

Mr. Coogan, Mr. Hilding, Mr. Butler.

Study of the various thermal properties and their relationships, including theory and experimental methods. Gas phase processes involving gas mixtures and reactions in combustion, compression, expansion and flow in furnaces, gas turbines, jet propulsion units, etc. Two phase processes involving evaporation, condensation, absorption and solution with applications to steam power, refrigeration, drying, etc. Chemical equilibrium and dissociation.

337. Flow of Compressible Fluids. Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.

Mr. Coogan.

The laws of motion of a compressible fluid for the one-dimensional case. The general laws of motion for a compressible fluid. Solutions of these equations for important special cases. Emphasis is placed on two-dimensional sub-sonic and super-sonic flow with applications to steam and gas turbines, wind-tunnels and jet propulsion devices.

338. Turbines and Centrifugal Machinery. Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor.

Mr. Coogan, Mr. Butler.

Theory, design, construction and performance of steam and gas turbines, blowers, fans, centrifugal compressors, superchargers and centrifugal pumps. A detailed study of the mechanics of the transfer of energy between a fluid and a rotor is made for each application.

341. Power Plant Analysis. Semester by arrangement. Credits and hours by arrangement. Prerequisite: Mechanical Engineering 240.

Mr. Fisher.

A study of the power plant for power generation from the viewpoint of design and economic selection of the component parts. A study is made of steam plants and internal combustion engine plants. Variable load operation and its effect is analyzed in detail. The balance of exhaust steam and power requirements in industrial processes is considered. Each student makes a complete design of a small plant.


Mr. Butler, Mr. Fisher.

An analytical study of all the factors influencing the operation and performance of the internal combustion engine. Spark-ignition and compression ignition engine theory and analytical theory of combustion in the internal combustion engine are covered. Particular emphasis is placed on the latest analytical and experimental developments.

57
346. **Advanced Heat Transfer.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. Mr. Coogan, Mr. Hilding.

A study of advanced problems in conduction, convection and radiation. The general equations for heat transfer. One, two and three-dimensional problems, including applications. Emphasis is primarily on the mathematical analysis of fundamental heat transfer.

362. **Mechanical Vibrations.** Semester by arrangement. Credits and hours by arrangement. Open only with consent of instructor. Mr. Stephan, Mr. Brand.

A study of the fundamental principles of vibration theory and their application to engineering problems. Emphasis is placed on vibration of systems of one degree of freedom, the energy method of analysis, the critical speeds of shafts, the balancing of machines and applied mathematical theory.

363. **Advanced Mechanical Vibrations.** Semester by arrangement. Credits and hours by arrangement. Prerequisite: Mechanical Engineering 362. Mr. Stephan.


381. **Ferrous Metallurgy.** Semester by arrangement. Credits and hours by arrangement. Prerequisite: Mechanical Engineering 203. Mr. ———.

Production, properties and uses of iron and steel. Effect of composition, cold working and heat treatment on structure and properties of ferrous alloys.

382. **Non-Ferrous Metallurgy.** Semester by arrangement. Credits and hours by arrangement. Prerequisite: Mechanical Engineering 203. Mr. ———.

Production, properties and processing of the commercially important non-ferrous metals and alloys, particularly copper, aluminum, magnesium and zinc.

399. **Thesis Preparation.** Open only to Master's candidates.

**PHYSICS**

300. **Independent Study.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. Departmental Staff.

A special reading course for students who are majoring in physics or who are candidates for the degree with distinction.

310. **Physics Seminar.** Either or both semesters. One credit each semester. One 2-hour discussion period. Open only with consent of instructor. T6-7. Departmental Staff.

The treatment of special topics, primarily by individual readings and reports.

315. **Recent Advances in Elementary Physics.** Summer Session. Three credits. Three class periods. Open only with consent of instructor. Departmental Staff.

Elementary aspects of technological and theoretical progress in physics, current literature, design and presentation of new demonstration experiments, modernization of laboratory exercises. This course is recommended for present and prospective teachers of physics.

320-321. **Theoretical Physics.** Both semesters. Three credits each semester. Three class periods. Prerequisite: Physics 241 and 260, and Mathematics 204. Departmental Staff.

An analytical approach to the fundamental concepts of physics.

(Formerly number 320, and in 1948-49 numbers 293-294.)
325-326. ADVANCED THEORETICAL PHYSICS. Both semesters. Three credits each semester. Three class periods. Prerequisite: Physics 321 and Mathematics 289 and 290. Hours by arrangement. Mr. Spees.

Topics in theoretical physics selected from the following: vibrations and waves, advanced dynamics, hydrodynamics, heat flow, potential theory, Maxwell's equations, wave mechanics, statistical mechanics, kinetic theory, and atomic and molecular structure.

330. PHYSICAL OPTICS. First semester. Three credits. Three class periods. Prerequisite: Physics 280 and Mathematics 204. Hours by arrangement. Mr. Kinsey.

Interference, Fraunhofer diffraction, Fresnel diffraction, emission, absorption, scattering, dispersion, refraction, double refraction, optical activity, magneto-optics and electro-optics.

340-341. NUCLEAR PHYSICS. Both semesters. Three credits each semester. Three class periods. Prerequisite: Physics 212 and Mathematics 290. Hours by arrangement. Mr.

Isotopes and nuclear structure, nuclear radiations, nuclear reactions, cosmic radiation, and techniques of nuclear research.

350-351. ADVANCED ACOUSTICS. Both semesters. Three credits each semester. Three class periods. Prerequisite: Mathematics 290. Hours by arrangement. Mr. Knauss.

Dynamics of vibrating systems, electro-acoustic analogies, propagation of compressional waves, analysis and synthesis of complex waves, speech sounds, hearing and subjective phenomena, architectural acoustics, ultrasonics.

399. THESIS PREPARATION. Open only to Master's candidates.

POULTRY HUSBANDRY

315. ADVANCED PROBLEMS IN POULTRY HUSBANDRY. Either semester. Credits and hours by arrangement. Open only with consent of instructor. Departmental Staff.

This course offers training in the application of research methods to contemporary problems in poultry husbandry.

320. LABORATORY TECHNIQUES IN ANIMAL NUTRITION. Either semester. Two credits. Six hours of laboratory work per week. Prerequisite: Chemistry 206 and 233, or Chemistry 260, and consent of instructor. Hours by arrangement. Mr. Matterson.

This course is designed to train the student in chemical techniques and methods used in nutrition research. Required of all graduate students doing research work in Animal Nutrition.

330. RESEARCH METHODS IN POULTRY NUTRITION. Either semester. Three credits. Prerequisite: Poultry Husbandry 320 or equivalent, and consent of instructor. Hours by arrangement. Mr. Singersen.

This course is designed to give training in planning nutrition experiments, formulating and preparing simplified and purified diets, the use of restricted feeding techniques, care and management of experimental stock, and interpretation of results.

399. THESIS PREPARATION. Open only to Master's candidates.

PSYCHOLOGY

300. INDEPENDENT STUDY. Either semester. Credits and hours by arrangement. Open only with consent of instructor. Departmental Staff.

304. RESEARCH IN PSYCHOLOGY. Either semester. Credits and hours by arrangement. Open only with consent of instructor. Departmental Staff.
307-308. **Seminar in General Psychology.** Both semesters. Three credits each semester. Four class periods. Open only to graduate students with consent of instructor. MTWF7. Miss deCillis (307), Mr. Osgood (308).

Through a survey of the major fields of psychology—sensation, perception, motivation, symbolic processes, personality and social psychology—the student is brought into contact with both the important empirical facts and their theoretical organizations. Beyond the lectures and assigned readings students in this course are expected to participate in reading and reporting on recent experimental articles in the various fields as they are studied. The course is designed both to provide a broad base of factual information and to develop facility in the critical evaluation of research techniques and findings.


The course undertakes, at an advanced level, a genetic treatment of the structure of personality on the basis of experimental findings and psychological theory. Particular emphasis is given to the theories of Freud, Lewin and Piaget.

337. **Advanced Social Psychology.** Second semester. Three credits. Three class periods. Prerequisite: Psychology 240. Hours by arrangement. Mr. Farber.

An advanced treatment of such problems as class differences, social communication, language and social crisis. New developments in group dynamics are stressed.


An examination of the problems and findings with regard to the psychological differences among the races of man and among the major nations.

342. **Seminar in Experimental Social Psychology.** First semester. Three credits. Three class periods. Prerequisite: Psychology 240. Hours by arrangement. Mr. Farber.

A critical evaluation of selected writings in social psychology with a view toward clarifying major methodological and experimental problems. Students will submit term papers or, when feasible, will report on original research projects.

343. **Political Psychology.** Second semester. Three credits. Three class periods. Prerequisite: Psychology 240. Hours by arrangement. Mr. Farber.

The role of psychology in modern politics, including such topics as the personality characteristics of the politician, the political stereotype, formation of political attitudes, authoritarian and democratic control, and the place of public opinion and propaganda in politics.

345. **Psychology of Abnormality.** Second semester. Three credits. Three class periods. Prerequisite: Psychology 243. Open only to seniors and graduate students. TTh6-7. Mr. Garfield.

The various forms of mental disorder, their origin, treatment, prevention and social significance. Study of mental deficiency and special abilities and disabilities. Particular attention is centered in the relation between these aberrations and problems of normal human adjustment.

351. **Clinical Psychology I.** Semester by arrangement. Three credits. Three class periods. Prerequisite: Psychology 345 or consent of instructor. Hours by arrangement. Mr. Schmidt.

An introduction to the problems, methods and scope of clinical psychology. The various types of psychological problems and disorders with which the clinician is concerned are reviewed. Attention is given to the role of the clinical psychologist and the techniques he uses in his professional study of the individual case.

352. **Clinical Psychology II.** Semester by arrangement. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Psychology 351 and 382. Hours by arrangement at the Norwich State Hospital. Field Supervisors.
An introduction to special tests and techniques used in the study of psychological disorders such as tests of conceptual thinking and mental impairment. The student will be given actual practice in synthesizing test data in the evaluation and interpretation of mental disturbance.

353. **Clinical Psychology III.** Semester by arrangement. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Psychology 352, 381, and 382. Hours by arrangement.

This is an advanced course in clinical psychology stressing the application of clinical methods and procedures to the individual case. Problems of techniques, diagnosis and therapy are considered. The class deals with actual clinical problems referred from various centers for intensive study and treatment. The emphasis here is on the professional utilization and evaluation of accepted clinical techniques.

354. **Principles of Psychotherapy.** Semester by arrangement. Three credits. Three class periods. Prerequisite: Psychology 345 and consent of instructor. Hours by arrangement.

An introduction to recognized approaches to psychotherapy. Various psychotherapeutic methods are evaluated and emphasis is given to basic factors in the therapeutic process. Provision is made for some practical experience in this area under supervision.

355. **Advanced Psychopathology.** Semester by arrangement. Three credits. Three class periods. Prerequisite: Psychology 345. Hours by arrangement at Norwich State Hospital.

The purpose of this course is to give the student enough familiarity with psychiatric literature, case material and methods to provide a background for the formulation of specific theoretical problems in abnormal psychology. The material is drawn from a patient population of 2,600 representing all psychiatric and etiological classifications. The class periods are devoted to lectures and the formal presentation by students of reports of specific topics. The observation periods consist of attendance at diagnostic staff conferences at which the students see the integration of medical, neurological, social and psychiatric data and points of view by staff of 15 specialists led by the instructor.

357. **Clinical Neurology.** Semester by arrangement. Three credits. Three class periods. Prerequisite: Zoology 231. Hours by arrangement at Norwich State Hospital.

This course aims to impart a basic knowledge of the form and functions of the nervous system and to relate this knowledge to the common neuro-psychiatric syndromes. Brain specimens and serial sections will be analyzed and illustrative clinical cases presented.

359. **Psychological Counseling.** Semester by arrangement. Three credits. Two class periods, three conference periods. Prerequisite: Psychology 345. Open only with consent of instructor. Hours by arrangement.

Supervised practice in making analyses, diagnoses and recommendations, in writing case reports, and in conducting follow-up conferences with young people on educational and personal problems of adjustment.

361-362. **Seminar in Learning.** Both semesters. Three credits each semester. Three class periods. Open only with consent of a member of the psychology staff. Hours by arrangement.

**Mr. Orbison (361), Mr. Osgood and Departmental Staff (362).**

This course undertakes a survey of major experimental problems, findings and theories in the field of learning.

373-374. **Seminar in Experimental Psychology.** Both semesters. Three credits each semester. Three class periods. Prerequisite: Psychology 376 and 307-308. Hours by arrangement.

Current experimental problems in psychology are analyzed with particular reference to the research techniques necessary for their investigation. Emphasis is placed
upon the following phases of research and experimental design: definition of the problem; identification of the theoretical and practical issues involved; the validity, efficiency and sensitivity of the experimental design; the problem of apparatus, and the statistical treatment of results. During the second semester, each student plans and conducts an original experiment.

376. **Psychometric Methods.** First semester. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Psychology 231, Economics 260 or Education 245, and consent of instructor. TTh5, M9-10. Mr. Orbison.

A course designed to acquaint the student with psychophysical and psychological methods of measurement.

(Formerly number 276).

377. **Quantitative Methods in Psychology.** Second semester. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Psychology 376. TTh5, M9-10. Mr. Orbison.

Topics covered will include: Construction and evaluation of psychological tests, factor analysis, scaling and polling techniques, and advanced topics in psycho-physical methods.

381. **Psychological Tests Laboratory I.** First semester. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Psychology 280. Open only to graduate students with consent of instructor. Hours by arrangement. Mr. Garfield.

This course is designed to give supervised practice in the administration, scoring and interpretation of individual tests of intelligence. Special emphasis is given to the development of skill in the use of the Terman-Merrill revision of the Stanford-Binet Scale and the Wechsler-Bellevue Scale.

382. **Psychological Tests Laboratory II.** Second semester. Three credits. Two class periods and one 2-hour laboratory period. Prerequisite: Psychology 345 and consent of instructor. Hours by arrangement. Mr. Garfield.

Supervised practice in the administration, scoring and interpretation of projective tests of personality. Special emphasis is given to the development of skill in the use of the Rorschach and Thematic Apperception tests.

387-388. **Personality and the Behavior Disorders.** Both semesters. Three credits each semester. Three class periods. Prerequisite: Psychology 345 and consent of instructor. Hours by arrangement. Mr. Garfield.

This is an advanced course in the psychodynamics of personality. The first semester is concerned largely with an evaluation of current problems, theories and research in the area of personality. Attention is given to both experimental and clinical approaches. During the second semester emphasis is placed on the behavior disorders as elaborations of psychodynamic processes. Related clinical problems and methods of personality evaluation are considered.

399. **Thesis Preparation.** Open only to Master's candidates.

499. **Thesis Preparation.** Open only to Ph.D. candidates.

**Rural Sociology**

See Sociology.

**Social Work**

SOCIOMETRY AND ANTHROPOLOGY

[301. Immigration and Internal Migration. Second semester. Three credits. Three class periods. Open to graduate students, and to others only with consent of instructor. Alternate years; to be given in 1950-51.]

Mr. ————.
The sociology of human migration with special emphasis upon the importance of population movements in Connecticut.

305. Investigation of Special Topics. Either semester. Credits and hours by arrangement. Open to graduate students and to others only with consent of a member of the sociology staff. Special topical readings or investigations, according to the needs of each student.

Mr. Dahlke.

307. History of Social Thought. First semester. Three credits. Three class periods. Open to seniors and graduate students with consent of instructor. Hours by arrangement.

An historical study of the development of sociology to the modern period. Emphasis is placed on the relation of sociological thought to prevailing social and intellectual conditions.


Mr. Barnett.
A critical examination of the sociological systems of such writers as Marx, Durkheim, Max Weber and Pareto.]

311. Social Research. First semester. Credits and hours by arrangement. Prerequisite: A course in statistics. Open to graduate students, and to others only with consent of instructor. A study of the theory and application of research methods in social investigation.

Mr. Whetten.

315. The Community. Second semester. Three credits. Three class periods. Open to graduate students and to others only with consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement.

Mr. Hypes.
A critical analysis of current theories of the nature of the community, its types, functions, processes, agencies and values. Emphasis is given to community surveys and community organization.

320. Seminar. Either semester and summer. Credits and hours by arrangement. Open only with consent of instructor. Mr. Barnett and Departmental Staff. Discussion of important sociological literature, with research projects by students in the seminar. Lectures, readings, and reports.

325. Seminar in Rural Sociology. Second semester. Credits and hours by arrangement. Open to graduate students, and to others with consent of instructor.

Mr. Whetten.
Readings, lectures and reports.

330. Current Problems in Anthropology. First semester. Three credits. Three class periods. Prerequisite: Sociology 220. Open to graduate students and to seniors with consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement.

Mr. Burrows.
An examination of objectives, methods and conclusions in some of the areas of most active research in anthropology. Emphasis is placed on studies of the role of culture in personality formation; acculturation; and practical applications of anthropology to such matters as government of primitive peoples and research on social problems of our civilization.

350. Family Organization. Second semester. Three credits. Three class periods. Prerequisite: Sociology 250. Open to graduate students, and to others with consent of instructor. TTThS2.

Mr. Hypes.
This course deals in a mature way with a number of the forces that play upon the modern family as a group of interacting personalities, and examines some of the more important problems of family organization and disorganization, education for parenthood, and agencies that deal with domestic problems.

(Formerly number 251.)

399. **Thesis Preparation.** Open only to Master's candidates.

499. **Thesis Preparation.** Open only to Ph.D. candidates.

**Zoology and Entomology**

**Zoology**

300. **Independent Study.** Either or both semesters. One credit each semester. Open only with consent of instructor. Hours by arrangement. **Departmental Staff.**

A reading course of advanced character for those wishing to pursue special work in zoology. It may also be elected by students preparing to be candidates for degrees with distinction.

303. **Research in Zoology.** Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. **Departmental Staff.**

Conferences and laboratory work covering selected fields of zoology.

310. **Seminar.** Either semester. One credit. One class period. Th9.

**Departmental Staff.**

Study and discussion of biological research, book reviews and current periodicals.

315. **Developmental Physiology.** Second semester. Four credits. Two class periods and two 2-hour laboratory periods. Prerequisite: Zoology 215 and 231. Alternate years; to be given in 1949-50. **Th6, 7-8. Mr. Clark.**

Functional aspects of the organization and differentiation of the vertebrate embryo. Laboratory emphasizes experimental techniques and observational methods in the study of embryonic behavior.

[316. **Embryology of Invertebrates.** Second semester. Four credits. Two class periods and two 2-hour laboratory periods. Alternate years; to be given in 1950-51. Hours by arrangement. **Mr. Clark.**

A survey of developmental patterns in marine and inland invertebrates. Laboratory includes study of prepared slides, as well as observational and experimental exercises on living forms. Field trips are required.]

[320. **Advanced Invertebrate Zoology.** Second semester. Four credits. Two class periods and two 3-hour laboratory periods. Open only with consent of instructor. Alternate years; to be given in 1950-51. Hours by arrangement. **Mr. Rankin.**

A study of various invertebrate phyla, exclusive of protozoa, helminths, and insects, with particular reference to development, regeneration, and phylogeny. Classwork will include discussion of current literature. Laboratory will include as many field trips as possible to a variety of habitats, as well as study of and experimentation of the morphology and physiology of particular species.]

399. **Thesis Preparation.** Open only to Master's candidates.

**Genetics**

301. **Research in Genetics.** Either or both semesters. Credits and hours by arrangement. Prerequisite: Genetics 241 and consent of instructor. **Mr. Bushnell.**

330. **Experimental Genetics.** First semester. Two credits. Two 3-hour laboratory periods. Prerequisite: Genetics 210 and consent of instructor. Alternate years; to be given in 1949-50. Hours by arrangement. **Mr. Bushnell.**
Primarily a laboratory course introducing the student to methods used in the induction of mutations and the means of testing for them. Both chromosomal and gene mutations are considered. Analysis of the effects of radiation and other agents on mutation. Consideration of the types of mutations produced.

[331. THEORETICAL GENETICS. First semester. Two credits. Two one-hour discussion periods. Prerequisite: Genetics 210 and consent of instructor. Alternate years; to be given in 1950-51. Hours by arrangement. MR. BUSHNELL.

A study of the distribution of genes in nature, including analysis by the gene frequency method. Such problems as those of polyploidy, systems of mating, species hybridization, effects of environment, gene stability, and origin of hereditary differences are considered.]

399. THESIS PREPARATION. Open only to Master's candidates.

499. THESIS PREPARATION. Open only to Ph.D. candidates.

PARASITOLOGY

308. RESEARCH IN PARASITOLOGY. Either or both semesters. Credits and hours by arrangement. Open only with consent of instructor. Conferences and laboratory work. MR. PENNER.

[344. HELMINTHOLOGY. Second semester. Three credits. Two class periods and one three-hour laboratory period. Prerequisite: Zoology 244 and consent of instructor. Alternate years; to be given in 1950-51. Hours by arrangement. MR. PENNER.

A study of the morphology and physiology of the parasitic worms. Methods of culture, preparation for study, and experimental determination of life cycles emphasized in the laboratory.]

ENTOMOLOGY

305. RESEARCH IN ENTOMOLOGY. Either or both semesters. Credits and hours by arrangement. Conferences and investigation. Open only with consent of instructor. MR. DECOURSEY, MR. MANTER.

399. THESIS PREPARATION. Open only to Master's candidates.

499. THESIS PREPARATION. Open only to Ph.D. candidates.
LIST OF PERSONS WHO RECEIVED THE MASTER'S DEGREE IN 1948

Name, College, and Title of Thesis                         Field
Edward Charles Amekko, The University of Connecticut    Education
Plan B

Clark Lambert Bailey, Willimantic State Teachers College Education
Plan B

Charles J. Bannon, Rensselaer Polytechnic Institute       Education
Thesis: Some Characteristics of Students Receiving Degrees
with Distinction from the University of Connecticut,
1942 to 1947.

William Hoar Bolger, The University of Connecticut       History
Thesis: A Study of Charles A. Beard’s Economic Interpretation
of the Constitution of the United States.

Harry Edward Bowen, The University of Connecticut        Bacteriology
Thesis: The Antigenicity of Human Cancer and its Possible
Relation to Virus Etiology.

William Franklin Brill, The University of Connecticut    Chemistry
Thesis: The Preparation of Amino Ethers and Disubstituted
Unsymmetrical Pentamethyleneamines from Chloro-
methyl Ether and Butadiene.

Marion Fraser Brundage, The University of Connecticut    English
Plan B

Arthur Earl Chatterton, Yale University                  Education
Plan B

Minna Jones Clark, Bryn Mawr College                    Sociology
Plan B

Sidney Arthur Cohn, The University of Connecticut       Zoology
Plan B

Katharine Gordon Collamore, The University of Connecticut English
Plan B

Wilbur Arthur Crockett, The University of Massachusetts English
Thesis: The Poetry of Abbie Huston Evans, with a Biographi-
cal Note.

George Arthur Ecker, The University of Connecticut      Agricultural
Thesis: Seasonal and Secular Changes in the Consumption and
Demand for Eggs, 1929-1942.

Louise Marion Facius, Radcliffe College                  Education
Plan B

Audrey Margaret Fagan, Teachers College of Connecticut  Education
Plan B

Edward Bruno Fillback, State Teachers College, Fitchburg, Massachusetts.  Education
Plan B
Name, College, and Title of Thesis

Mary Loretto FitzPatrick, Teachers College of Connecticut
Plan B

George Masaaki Fukui, The University of Connecticut
Thesis: The Liberation of Endotoxin from Salmonella Typhimurium with High Frequency Sound Waves.

Walter Lewis Gerke, Bates College and Teachers College of Connecticut
Plan B

Sophie Lucy Gianninito, The University of Connecticut
Plan B

Rhoda Goldsmith Gruen, The University of Connecticut
Plan B

Stedman Charles Herman, The University of Connecticut

Agnes Elizabeth Jennings, Connecticut College
Plan B

Arthur Walter Kairott, Teachers College of Connecticut
Plan B

Gordon Abbott King, The University of Connecticut

Margaret Mary Lahey, Trinity College, Washington, D. C.
Plan B

John Kenneth Linaberry, New Jersey State Teachers College, Newark, and Rutgers University
Plan B

James Martin Mahoney, The University of Connecticut
Plan B

William Marcuse, The University of Connecticut
Plan B

William Rosewarne Miller, Purdue University
Thesis: Aspects of Waterfowl Management for the Barn Island Public Shooting Area.

Dorothy Louise Nelson, Mount Holyoke College
Plan B

Anthony Stanley Rojko, The University of Massachusetts

Irwin David Rosenman, University of Pennsylvania

Field
Education
Bacteriology
Education
Spanish
Sociology
Chemistry
Spanish
Education
Agricultural Economics
Education
Education
Government and International Relations
Economics
Wildlife Management
Education
Agricultural Economics
Chemistry
Name, College, and Title of Thesis

Eli Schwartz, University of Denver
Plan B
Field Economics

Arthur Mark Selvi, College of Geneva, Switzerland, and University of Padua, Italy
Thesis: An Analysis of Educational Thought in Post-War Italy in the Light of its Historical Development.
Field Education

Muriel Singer, The University of Connecticut
Plan B
Field History

Anna Marie Skehan, Teachers College of Connecticut
Plan B
Field Education

Sarah Clarinda Sloat, The St. Lawrence University
Plan B
Field Psychology

Lucille Hermoine Spicer, The College of St. Catherine
Field English

Marie McCaffery Stewart, Teachers College of Connecticut
Plan B
Field Education

Clarence Leon Tappin, Amherst College
Thesis: An Experiment in the Use of the Army Utility Vocabulary in Second Year High School Spanish.
Field Education

Anne Veronica Torrant, Teachers College, Columbia University
Plan B
Field Education

Nathalie Smith Turner, American International College
Plan B
Field Social Work

Ferdinand Decatur Wharton, The Agricultural and Technical College of North Carolina
Thesis: The Vitamin A Requirement of Growing Turkeys.
Field Poultry Husbandry

Frederick DeForrest Williams, Middlebury College
Plan B
Field History

Naomi Terrell Wooding, Mount Holyoke College
Thesis: The Viability of the Causative Agents of Certain Bovine and Avian Diseases on Burlap.
Field Bacteriology
SPECIFICATIONS FOR PRINTING OF THESIS ABSTRACTS

6. Type page: 27 x 45 picas

7. Binding: saddle stitched, 2 wires

8. Cover: self cover

9. Proof: both galley and page

10. Time allowance for printing, etc.: student to make own arrangements with printer