1964

Bulletin - Western Michigan University: The Graduate Catalog
1964-1965

Western Michigan University

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graduate Calendar of Events</td>
<td>3</td>
</tr>
<tr>
<td>Board of Trustees</td>
<td>5</td>
</tr>
<tr>
<td>Administration</td>
<td>6</td>
</tr>
<tr>
<td>Section I Procedures and Regulations</td>
<td>8</td>
</tr>
<tr>
<td>Admission</td>
<td>8</td>
</tr>
<tr>
<td>Re-entry</td>
<td>8</td>
</tr>
<tr>
<td>Permission to Enroll</td>
<td>8</td>
</tr>
<tr>
<td>Admission to Candidacy</td>
<td>10</td>
</tr>
<tr>
<td>Requirements for the Degree</td>
<td>10</td>
</tr>
<tr>
<td>Registration, Student Load, and Fees</td>
<td>12</td>
</tr>
<tr>
<td>Fellowships and University Services</td>
<td>14</td>
</tr>
<tr>
<td>Section II Graduate Fields and Programs</td>
<td>16</td>
</tr>
<tr>
<td>Programs Leading to the Master's Degree</td>
<td></td>
</tr>
<tr>
<td>Biology</td>
<td>16</td>
</tr>
<tr>
<td>Blind Rehabilitation</td>
<td>17</td>
</tr>
<tr>
<td>Business Administration</td>
<td>18</td>
</tr>
<tr>
<td>Chemistry</td>
<td>18</td>
</tr>
<tr>
<td>Economics</td>
<td>19</td>
</tr>
<tr>
<td>Education</td>
<td>19</td>
</tr>
<tr>
<td>English</td>
<td>23</td>
</tr>
<tr>
<td>Geography</td>
<td>24</td>
</tr>
<tr>
<td>History</td>
<td>24</td>
</tr>
<tr>
<td>Librarianship</td>
<td>25</td>
</tr>
<tr>
<td>Mathematics</td>
<td>26</td>
</tr>
<tr>
<td>Medieval Studies</td>
<td>27</td>
</tr>
<tr>
<td>Music</td>
<td>27</td>
</tr>
<tr>
<td>Occupational Therapy</td>
<td>28</td>
</tr>
<tr>
<td>Physics</td>
<td>29</td>
</tr>
<tr>
<td>Political Science</td>
<td>29</td>
</tr>
<tr>
<td>Psychology</td>
<td>30</td>
</tr>
<tr>
<td>Sociology and Anthropology</td>
<td>30</td>
</tr>
<tr>
<td>Speech Pathology</td>
<td>31</td>
</tr>
<tr>
<td>Sixth-Year Programs</td>
<td></td>
</tr>
<tr>
<td>Educational Administration</td>
<td>33</td>
</tr>
<tr>
<td>School Psychological Examiner</td>
<td>34</td>
</tr>
<tr>
<td>Section III Description of Courses</td>
<td>36</td>
</tr>
<tr>
<td>School of Applied Arts and Sciences</td>
<td></td>
</tr>
<tr>
<td>Agriculture</td>
<td>39</td>
</tr>
<tr>
<td>Distributive Education</td>
<td>39</td>
</tr>
<tr>
<td>Home Economics</td>
<td>40</td>
</tr>
</tbody>
</table>

1
Industrial Education ........................................ 43
Occupational Therapy .................................... 47
Paper Technology .......................................... 48
Vocational Division ......................................... 49

School of Business
Accounting .................................................. 53
Business Education ....................................... 55
General Business ......................................... 55
Management ................................................ 57
Marketing ................................................... 59

School of Education
Education .................................................... 63
Physical Education for Men ............................ 77
Physical Education for Women ......................... 79

School of Graduate Studies
Graduate Studies .......................................... 83
Librarianship ............................................... 84

School of Liberal Arts and Sciences
Art ............................................................. 91
Biology ....................................................... 92
Chemistry .................................................... 97
Economics .................................................. 99
English ....................................................... 103
Geography and Geology ................................. 106
History ...................................................... 110
Language .................................................... 116
Mathematics ............................................... 117
Music ........................................................ 122
Philosophy and Religion ................................ 125
Physics ...................................................... 126
Political Science ......................................... 128
Psychology ................................................. 133
Science Division .......................................... 136
Social Science Division .................................. 137
Sociology and Anthropology ......................... 138
Speech ........................................................ 142
CALENDAR OF GRADUATE EVENTS
1964 - 1965

Summer Session, 1964

June 15, Monday ........................................... Final registration
June 16, Tuesday ........................................... Classes begin
June 22, Monday ........................................... Graduation applications due
July 3, Friday ........................................... Final day for dropping courses
July 13, Monday ........................................... Theses due from summer graduates
July 21, Friday (6:30 p.m.) ................................ Commencement
July 27, Monday ........................................... Final registration post session
July 29, Wednesday (7:00 p.m.) .................. Final communications test
August 7, Friday ........................................... Summer sessions classes and
                                                     eight-weeks sessions close

Fall Semester, 1964-1965

September 12, Saturday (8:20 a.m.) ............ Final communications test for out-of-state students
September 12, Saturday ........................................ Final registration
September 15, Tuesday (8:00 a.m.) ................ All classes begin
September 19, Saturday ........................................ Final day to add classes
October 9, Friday ........................................... Graduation applications due
November 7, Saturday ........................................ Final day for dropping courses
November 25, Wednesday (12:00 noon) ........ Thanksgiving recess begins
November 27, 28 (Friday and Saturday) .... University offices close
November 30, Monday ....................................... Classes resume
December 12, Saturday (2:00 p.m.) ............. Christmas recess begins
December 24, Thursday ..................................... University offices close
December 31, Thursday ..................................... University offices close
January 4, Monday (8:00 a.m.) ....................... Classes resume
January 6, Wednesday ..................................... Theses due from fall graduates
January 19, Tuesday ....................................... Classes end
January 21 to 29 (Thursday-Friday noon) .......... Final examinations
January 23, Saturday (2:00 p.m.) .................. Mid Year Commencement
Spring Semester, 1965

February 6, Saturday .........................Final registration
February 8, Monday (8:00 a.m.) ..................All classes begin
February 13, Saturday .......................Final day to add classes
February 19, Friday .........................Graduation applications due
March 13, Saturday .......................Final day for dropping courses
April 16, Friday ....................Classes recess 12 noon to 2 p.m. only
April 17, Saturday (2:00 p.m.) ....................Easter recess begins
April 26, Monday (8:00 a.m.) ..................Classes resume
May 22, Saturday .....................Final examinations (Sat. classes only)
May 24, Monday .......................Theses due from spring graduates
June 1, Tuesday (10:00 p.m.) ..................Classes close
June 3, 11 (Thursday-Friday) .....................Final examination
June 12, Saturday (9:30 a.m.) ..................Commencement
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Mildred Swanson Johnson, Muskegon  
Dwight L. Stockel, Kalamazoo  
Fred W. Adams, Grosse Pointe  
Alfred B. Connable, Kalamazoo

Term expires
December 31, 1964
December 31, 1964
December 31, 1966
December 31, 1966
December 31, 1968
December 31, 1968
December 31, 1970
December 31, 1970

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Graduate Studies Council, 1964-65

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Betty Taylor, Ph.D., Department of Home Economics
An independent graduate program leading to the degree of Master of Arts in various curricula in the field of Education was first offered at Western Michigan University in the fall semester of 1952-53. Since then programs that lead to the Master of Arts degree in Biology, Blind Rehabilitation, Chemistry, Economics, English, Geography, History, Librarianship, Mathematics, Music, Occupational Therapy, Physics, Political Science, Psychology, Sociology, and Speech Pathology have been developed. The Master of Business Administration degree is also offered.

A Specialist in Education diploma is now offered for completion of a sixth-year program in School Administration; including Directors of Curriculum, Guidance, Special Education; and in School Psychological Examiner.
SECTION 1

GRADUATE SCHOOL
PROCEDURES AND REGULATIONS

Admission

All students must be admitted to the School of Graduate Studies before they may register for graduate credit except in extension classes. Students in extension classes must be admitted before the completion of courses or credit will not be granted.
Specific instructions for admission are found below.

Re-entry

Students who have once been admitted to the School of Graduate Studies need not file for re-entry so long as they attend classes on campus at least once each year. Those who wish to register for classes on campus after an absence of two semesters and one summer session should file for re-entry by notifying the graduate office of their intention prior to the dates indicated below for the receipt of applications.
Students who have taken classes by extension or in a residence center must file for admission to take courses on campus by notifying the Graduate Office of their intention to do so prior to the dates indicated below.

Permission to Enroll

A student who desires admission to the School of Graduate Studies should contact the Graduate Office and obtain an Application for Permission to Enroll. These should be completed and returned to the Graduate Office, together with a transcript of credits from all institutions of higher education attended previously. The student should consult this Bulletin: School of Graduate Studies for the exact title of the curriculum desired. The application will then be processed and the department or school offering the curriculum selected by the student will determine whether the student has met the prerequisites for admission to that curriculum. The student will be required also to take an English examination before final admission is granted to study in a specific curriculum. If a student wishes to elect classes for his own enrichment only, or only for fulfilling certification requirements, either on campus or by extension, he need not take the English examination. Such a student should request non-degree admission.
When the application is processed, the student will be notified concerning his admission status. In order to insure the processing of applications, the student must apply for admission not later than:

- **Fall Semester**: August 1
- **Spring Semester**: January 1
- **Summer Session**: June 1

(NOTE: Foreign students must apply for admission one month before the above dates.)

The following types of admission are granted:

1. **Admission Without Reservations.** This type of admission is awarded to a student whose previous academic record merits such consideration and who satisfactorily passes the English examination and meets the requirements for the curriculum selected.

2. **Tentative Admission Pending Receipt of the Bachelor’s Degree.**
   A student may receive tentative admission during the final semester of his undergraduate work. Final admission will be determined when a transcript is submitted giving evidence of satisfactory completion of the bachelor’s degree. Such admission requires the completion of the English examination.

   Senior students at Western Michigan University, who need six hours or less to complete the requirements for the bachelor’s degree, may seek admission to the School of Graduate Studies during the semester prior to graduation. If admission is granted, the student may elect graduate courses, in addition to those required at the undergraduate level to complete the bachelor's degree, to encompass a full academic program. Such dual enrollment is permitted for one semester only. Graduate credit thus earned, may not be used to meet undergraduate requirements.

3. **Admission to Non-degree Status.** A student who does not desire to enroll in a degree program but plans only to take courses, should indicate his intention on Line 4 of the Application by entering the word “non-degree.” A transcript of his undergraduate work must be submitted. A “non-degree” student need not take the English examination. The School of Graduate Studies gives no assurance that work taken as a non-degree student will be counted toward graduation or that the student will be later accepted into a degree program.

4. **Admission with Reservations.** If a student’s record evidences low scholarship in certain academic areas, or if his score on the English examination falls below the expected criterion, he will be expected to complete extra requirements to remedy such deficiencies. Any extra requirements imposed at the time of admission should be completed before the student is admitted to candidacy for the master's degree.
5. **Admission from a Non-Accredited College.** A student who has received a bachelor's degree from a non-accredited college, but who otherwise meets all the requirements for admission may be permitted to elect six hours of graduate work with the stipulation that his admission will be reviewed after the completion of the six hours. This admission will also require an English examination.

6. **Admission with an M.A. Degree.** A student who has already received a master's degree may receive admission without reservations by submitting an application and transcript showing receipt of this degree. He may enter a curriculum of his choice or non-degree. The English examination is not required.

7. **Admission for Extension Courses.** All students enrolled in graduate extension courses must be admitted to the School of Graduate Studies before the completion of the courses or credit will not be granted. No English examination is required for such admission if the student enrolls in a non-degree status. However, the student must submit an application and an undergraduate transcript indicating the receipt of the bachelor's degree. No assurance is given to the student who receives such admission that the courses elected will be accepted toward a degree program if, at a later date, he desires to work toward the master's degree. If the student wishes to be admitted to a specific curriculum he must take the English examination. Extension students desiring a degree should seek admission to a specific curriculum as soon as possible.

8. **Admission as Guest Matriculant.** A student who is already enrolled in the graduate school of another college or university may enroll for courses at Western Michigan University as a Guest Matriculant. Application forms for such admission are available at the Graduate Office.

**Admission to Candidacy for the Master's Degree**

A student who wishes to complete the master's degree at Western Michigan University must apply for candidacy before the beginning of the first semester following the completion of ten hours of graduate work from Western Michigan University. These ten hours may include both residence and extension courses. Special permission must be secured from the Dean, School of Graduate Studies if later application is desired.

**Requirements for the Degree**

The requirements of the master's degree include the following:

**Admission and Candidacy:** All students must meet the requirements for admission to one of the graduate programs and be admitted to candidacy at the completion of ten hours of graduate work.
Minimum Credit Hours: A minimum of thirty hours of graduate work is required. At least fifteen hours of the program must be earned in courses restricted to graduate students.

B Average: An average of B or better in all courses earned on campus, as well as an over-all average of B. A B average is equivalent to a point-hour ratio of 3.0 under the following grading system:

\[
\begin{array}{c|c|c}
A & 4 & C = 2 \\
B & 3 & E = 0 \\
\end{array}
\]

Note: Grades of Incomplete will ordinarily become E unless removed within one calendar year. Students who seek an extension of time must notify the Graduate Office within the year, indicating the circumstances that warrant such consideration. This ruling does not apply to the course, Thesis 700.

Residence Credit: Of a total thirty semester hours a minimum of eighteen hours (see exception below) must be elected in residence credit from the School of Graduate Studies. This election must include on-campus work during one semester (10 hrs. minimum) or summer session (5 hrs. minimum) on a full-time basis for students who are employed on a twelve-month basis in one position. These students must register for four consecutive semesters of on-campus work.

1. Extension Credit: A maximum of twelve hours of graduate work may be elected through the Extension Division of Western Michigan University as part of a student's program provided the courses are approved by the student's curriculum adviser.

2. Residence Center Credit: A student who takes graduate work from an approved Residence Center of Western Michigan University, may satisfy the residence requirement by completing 20 hours of work from the offerings of the Residence Center and on campus. Ten hours, however, must be taken in courses offered on campus including one registration on campus for a summer or semester on a full-time basis.

3. Transfer Credit: A maximum of six hours of graduate work may be transferred from other accredited graduate schools toward the master's degree with the approval of the student's curriculum adviser.

4. Time Limit: All work accepted for the degree program must be elected within six years from the date of graduation.

5. Graduation Application: The student must file a graduation application at the time of registration for his last semester. If the last semester of work is taken in the field, application must be made at class registration time in the field. Students attending another University for their last semester should contact the School of Graduate Studies, Western Michigan University at registration time.
Registration, Student Load and Fees

Registration: Registration will be held on the dates listed in the Calendar of Graduate Events on p. 4 of this bulletin. The hours of registration are listed in the Schedule of Classes under the heading, Procedure for Registration. The Schedule of Classes will be sent upon request and should be consulted for details regarding the time and place of meeting of graduate classes.

Changes in Enrollment: Any changes in graduate enrollment must be made by the end of the fifth day of the summer session and by the end of the first complete week of each semester. A student may drop graduate courses through the third week of the summer session or the sixth week of the fall or spring semester. The forms for requesting such changes may be secured at the Graduate Office.

Student Load: The load for graduate students is governed by the following regulations:

1. Part-time graduate students, if employed during the fall and spring semesters as full-time teachers or school administrators, may elect graduate courses granting not in excess of four hours of credit. An exception to this rule is made with the course, Thesis 700, which the student may elect during one semester for six hours of credit. Students employed full time in other fields may be allowed to elect a maximum of six hours of graduate credit with permission of the Dean.

2. With permission of the Dean, a student employed full time in a field of education may elect graduate courses granting five hours of credit provided such credit shall not involve more than two graduate courses. Such an exception may be granted only once during the work for the master's degree. These restrictions apply to all graduate courses a student may elect during a semester whether taken on campus, in extension and/or at some other institution.

3. A normal load for a graduate student devoting full time to graduate study is twelve semester hours. With permission of the Dean, a student may elect graduate courses granting not in excess of fifteen credit hours.

4. All graduate students may elect not in excess of six hours during a regular six-weeks summer session or eight hours during the eight-weeks session. A student may elect a maximum of two hours of graduate credit in a post-session workshop. Exceptions to this rule will not be made.

Tuition and Fees: The following fees will be charged for graduate study:
# SEMESTER AND SUMMER SESSION FEES

<table>
<thead>
<tr>
<th>Sem. Hrs.</th>
<th>Tuition</th>
<th>Local</th>
<th>Total</th>
<th>Tuition</th>
<th>Local</th>
<th>Total</th>
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<tr>
<td>1 - 2</td>
<td>$13.00</td>
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<td>67.00</td>
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<td>98.00</td>
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<td>5 - 6</td>
<td>38.00</td>
<td>37.00</td>
<td>75.00</td>
<td>100.00</td>
<td>37.00</td>
<td>137.00</td>
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**GRADUATE STUDENTS ARE LIMITED TO SIX SEMESTER HOURS IN SUMMER SESSION**

| 7 - 8     | $50.00  | $43.00| $93.00| $134.00 | $43.00| $177.00|
| 9 - 10    | 63.00   | 50.00 | 113.00| 167.00  | 50.00 | 217.00|
| 11 or more| 75.00   | 50.00 | 125.00| 200.00  | 50.00 | 250.00|

## POST-SUMMER WORKSHOP

| 1         | $7.00   | $12.00| $19.00| $17.00  | $12.00| $29.00|
| 2         | 13.00   | 24.00 | 37.00 | 34.00   | 24.00 | 58.00 |

Late Enrollment Fee: By action of the State Board of Education, all students who enroll after the regular registration days of a session will be charged an additional fee of $5.00. Checks not honored by the bank constitute late enrollment and are subject to the Late Enrollment Fee. Graduate students will be required to pay late enrollment fees if they enroll after the last regular registration day or on the second day of summer session. **No enrollment is permitted after these days.**

Policy for Refunds and Change of Credit Load. All changes in registration or complete withdrawals must be cleared with the Graduate Office. Tuition and Local Fees will be refunded if proper application is made at the Business Office within the prescribed time limits and after the student has completed his official withdrawal or reduction in academic load. The refund date will be determined by the date of completion of official withdrawal. All refund requests must be accompanied by the student’s final program card and activity ticket. A refund will not be granted for reducing the credit hour load after the final day for adding a course. Tuition and Local Fees will be refunded according to the following schedule:

1. Seven calendar days or less after the last official registration day—90% of total.
2. No refunds are made after the seventh day of the summer session. More than seven calendar days and less than twenty-two days after the last official registration day of the semester—60% of total.
3. More than twenty-one calendar days and less than thirty-six days after the last official registration day—40% of total.
4. More than thirty-five calendar days and less than fifty days after the last official registration day—20% of total.
5. No refund will be granted if the student withdraws after the forty-ninth calendar day after the last official registration day.
6. No refund will be granted unless applied for by the fifty-sixth calendar day after the last official registration day of the semester in which the student withdraws.

7. No refund will be made to a student eligible for benefits under Act 245 of the Public Acts of 1935, as amended, unless request is made no more than one week after registration.

8. Refunds are not automatic but must be applied for at the Business Office within seven days after withdrawal.

9. The above refund policy does not apply to late enrollment fees.

Fee for Applied Music: A special departmental fee is charged for each registration in an Applied Music course. The fee for one hour per week of private instruction is $75 per semester or $30 for the summer session.

Audit Status: A graduate student may enroll as an auditor for a class for which he does not desire credit or a grade. Such auditors will pay the regular graduate fees. In order to have the course entered on the student's permanent record with the designation “audit”, he must attend at least three-fourths of all class sessions and give evidence to the instructor that his role as an auditor has been satisfactory. No student may change from the audit status to regular enrollment or vice versa after the close of registration.

Fellowships and University Services

Graduate Fellowships: Fellowships valued at $2,000 for the academic year will be made available to selected students holding bachelor's degrees from approved colleges and universities. These fellowships are granted on the basis of merit to persons planning to pursue full-time work on the campus leading to advanced degrees. Such persons must possess a combination of qualities indicating potential leadership in their respective fields with specific emphasis on high scholarship and desirable personal attributes.

Professional participation of about fifteen hours per week is required of fellows, consistent with their educational aims and objectives. Candidates may carry from eight to twelve semester hours of graduate work each of the two semesters. A stipend is provided for tuition, and fees are waived. The application forms may be secured from the Graduate Office. All applications, transcripts, and letters of recommendation must be submitted by March 1.

Elmer H. Wilds Graduate Award: Each calendar year the Graduate Council may select from among the outstanding graduate students, the one whose achievement and potential bear evidence of outstanding educational leadership. This student will be designated as the Elmer H. Wilds Scholar. In order to be eligible for the award, a student must have the following qualifications:
1. A point-hour ratio of at least 3.9 for the total graduate program including transferred credit.

2. A high degree of integrity as revealed in the student's relationships with a faculty and reports of those who work with him.

3. A high moral standard as revealed in the student's personal habits.

4. Attention to personal appearance.

5. A high degree of ability to communicate in class and in conversation.

**Loans:** Graduate students who enroll for a minimum of 10 hours of on-campus credit in a semester may qualify for some type of student loan. Students desiring information regarding a student loan should contact the office of the Administrator of Scholarship and Loans.

**The Graduate Student:** The Graduate Student, a weekly publication, is available to graduate students and faculty each Saturday morning on which classes meet. Students who are not enrolled in Saturday classes may secure copies in the Graduate Office. All graduate students should read the bulletin for information concerning the Graduate School. During the summer session such announcements are published in the *Summer Session Events.*

**Housing:** All questions about room, board, and other living expenses should be addressed to the Dean of Men or Dean of Women. Graduate students are subject to the rules of the Dean of Men and the Dean of Women and to other general regulations of this institution.

At the present time, the residence halls are used almost exclusively for undergraduate students. As the need increases for on-campus housing for graduate students, efforts will be made to provide a floor or wing exclusively for upperclassmen and graduate students. When graduate students accept quarters in a residence hall, they will be expected to accept the terms and conditions of the contract.

**Placement Service Open to Graduate Students:** Employing officials representing business, industry, governmental agencies, and educational institutions frequently have desirable positions for which they are seeking candidates with training beyond the bachelor's degree. Any graduate students who wish to be considered for such positions when they are available should be on the active placement list.

Enrollment in the School of Graduate Studies entitles any student to free placement service whether or not his undergraduate work was taken at Western Michigan University. Students not already registered with the Placement Office are invited to do so. Those graduate students formerly enrolled with the Placement Office may reactivate their credentials by furnishing the office with current information concerning their employment and advanced study.

Complete information and registration materials may be secured in the Placement Office, Administration Building.
SECTION II
GRADUATE FIELDS AND PROGRAMS

General Requirements

Each degree candidate must choose a graduate program that is compatible with his professional objectives. The programs listed on the following pages have been developed to provide students with the basic experiences that implement these objectives. The programs are, however, sufficiently flexible to allow for the differing needs of individual students.

It is obvious that growth in personality and the development of professional abilities are aims of primary importance in graduate education. Hence, through the counseling process, graduate advisers will help the students choose courses, both cultural and professional, to meet their individual needs. Courses and experiences should be chosen so that the graduate student becomes a more mature and professionally proficient person—a person with greater professional skill, increased ability to analyze and interpret life situations, and greater insight into problems involved in professional leadership.

Many of the courses listed will not be offered every semester or Summer Session. By studying “Section III, Description of Courses,” the student will find the session or sessions when the desired courses are available. Occasionally a student will find that some of the suggested courses are similar to those he has elected at the undergraduate level. In such cases, with the approval of the adviser, substitutes may be made provided the general requirements for the degree are satisfied.

BIOLOGY

Edwin B. Steen, Adviser

The master’s degree in Biology provides a general background in the field with a limited amount of specialization in the area of the student’s major interest. It is designed to meet the needs of people in teaching, research, laboratory and field work, and conservation. It may be used as a foundation for continued graduate work leading to a doctor’s degree at another institution, or may be considered terminal.

To satisfy the requirements for the master’s degree in Biology, a student must successfully complete a minimum of twenty-four hours of graduate work in Biology with the remaining six hours in a related field or fields. The choice of courses will be made with the recommendation of the student’s advisory committee and must be related to the student’s goals. Successful completion of a qualifying examination is required for admission to candidacy in the Biology program.
A thesis must be prepared under the direction of the advisory committee. The chairman of the student's advisory committee will be a member of the graduate faculty having competence in the area of the student's major interest. Specialization is permitted in any one of the following areas: botany, zoology, ecology, physiology, genetics, parasitology, public health, and the teaching of biology.

**BLIND REHABILITATION PROGRAMS**  
Donald Blasch, Adviser

Western Michigan University, in cooperation with the Vocational Rehabilitation Administration, Office of Health, Education, and Welfare, is offering the following graduate program in Blind Rehabilitation:

**Orientation and Mobility Specialists**

The purpose of an Orientation and Mobility Specialist is to teach blind persons to move about effectively, efficiently, safely and gracefully in familiar and unfamiliar environments. An essential part of the re-education of the blind is to train them to utilize more effectively their senses that are still intact.

Students will be selected for this Program on the basis of demonstrated mature judgment, emotional stability, leadership qualities, and good academic ability. They should have completed their bachelor's degree, preferably with some background in Education, Sociology and the biological sciences. They must be in good physical health and have normal or correctable vision to approximately 20/20.

The Program requires three semesters for completion. The first two semesters are spent in residence at Western Michigan University in academic study, together with elementary and intermediate training in Orientation and Mobility on an individual basis. The third semester will involve an internship at Veterans Administration Hospital, Hines, Illinois, where the trainees will receive clinical training and practicum in Orientation and Mobility. The successful completion of 37 semester hours are required to receive the degree of Master of Arts.

**Home Teachers of the Adult Blind**

The clinical training of Home Teachers of the Adult Blind has been established to prepare men and women to teach blind adults in their homes and communities. Their purpose is to assist the blind individual to achieve his maximum degree of independence and personal and social fulfillment.

The prerequisite for admission is a bachelor's degree from an accredited college or university with a major in the behavioral sciences. Successful completion of 40 semester hours of graduate credit is required for the master's degree. Twenty-eight semester hours will be earned during two semesters of academic study in residence at Western Michigan University. Twelve semester hours will be earned during two additional semesters.
semesters of internship and residency in field placements at accredited agencies for the blind.

A professional paper is also required.

**BUSINESS ADMINISTRATION**  Edwin Grossnickle, Chairman of Advisers

The Master of Business Administration degree program has been established to prepare men and women to operate effectively in administrative positions in business and government. The degree is designed to meet the needs of students with baccalaureate degrees in business, liberal arts, science, engineering and related fields, who wish training in one or more areas of business administration. The participant is challenged to develop the judgment, discriminating capacity, knowledge and understandings that will permit him to work efficiently in administrative and other leadership roles. Under the guidance of the graduate staff of the School of Business, the participant is provided personal programming in the selection and arrangement of his courses.

Successful completion of a minimum of thirty hours of graduate credit is required for the Master of Business Administration degree. Additional work in the School of Business may be expected from students who have not taken courses in at least three of the areas of accounting, business law, management, marketing, finance, and quantitative.

The requirements for the degree include (1) the selection of an area of concentration; (2) the completion of a minimum of twenty to twenty-four hours in business, which may include the thesis; (3) up to fifteen hours of economics in the candidate’s combined undergraduate and graduate programs; (4) a minimum of six to ten hours of graduate work in a related field or fields, which may include economics; (5) additional credit for fulfilling the degree requirements in subject-matter areas that meet the educational objectives of the student; and (6) the completion of courses, or demonstrated competence, in not less than three of the subject areas of accounting, finance, management, marketing, general business and, in addition, the required area of economics.

The Graduate Committee of the School of Business may require that tests be taken for entrance to, or graduation from, the MBA degree program. For the part time student, residence requirements may be fulfilled by taking one or more courses during four consecutive semesters, excluding summer sessions.

**CHEMISTRY**  Lillian H. Meyer, Adviser

The master’s degree in Chemistry is planned to provide a broad background in the various fields of chemistry with concentration in one.

Entrance requirements include admission to the School of Graduate Studies and the attainment of a satisfactory grade in qualifying examinations covering the fields of General, Analytical, Organic, and Physical Chemistry. These examinations may be taken on the following dates:
June 15, 1964, 9:00 a.m. and 1:00 p.m.—any; September 10, 1964 or February 4, 1965—9:00 a.m.—General, 1:00 p.m.—Analytical; September 11, 1964 or February 5, 1965—9:00 a.m.—Organic, 1:00 p.m.—Physical. Deficiencies indicated by these examinations may be removed only by the completion of appropriate undergraduate courses with a minimum grade of B.

The student is required to elect a minimum of twenty to twenty-four hours in the field of Chemistry, including the thesis. A final oral examination by the student's graduate committee is a requirement for the degree. Course work will also include from six to ten hours in a related field or fields. The course sequence will include (if not previously elected):

2. 520 Advanced Analytical Chemistry.
3. 505 Chemical Literature.
4. 601 Graduate Seminar, to be elected for two semesters.
5. Thesis.

**ECONOMICS**

Robert S. Bowers, Adviser

In order to earn the Master of Arts degree in Economics, the following departmental requirements must be met:

1. For admission to candidacy, satisfactory completion, at the graduate and/or undergraduate levels, of a total of at least twenty-four hours in the social sciences with a minimum of ten hours in economics, or in equivalents approved by the graduate adviser.
2. For graduation, satisfactory completion of a minimum of twenty to twenty-four hours of graduate work in the field of economics and from six to ten hours in a related field or fields. Specific graduate requirements for the offerings in economics include (a) six hours of course work in economic thought and theory; (b) a minimum of six hours in one of the following areas of concentration: economic theory, labor economics, governmental economics and regulated industries; (c) a course in economic statistics and a seminar in the area of concentration.
3. Upon recommendation of the major professor, the completion of a thesis.
4. Successful completion of an oral examination if required by the department.

**EDUCATION**

William P. Viall, Chairman of Advisers

The degree of Master of Arts in the field of Education is awarded in twenty-four curricula. These curricula are planned to prepare personnel for various levels of, and positions in, education. The student
should choose the one that most nearly fits his vocational objective. Students applying for candidacy in these curricula are expected to have completed a minimum of fifteen hours of undergraduate work in professional education or the equivalent.

The graduate programs for all these curricula, with the exception of Teaching in the Junior College and School Psychology, have the same general requirements. The thirty hours of graduate work required as a minimum for graduation are elected from the following three groups:

1. Ten hours from the courses offered by the department of Education, including (a) three of the following courses: 601 Introduction to Research, 602 School Curriculum, 603 Foundations of American Education, and 604 Educational Psychology; (b) four hours in education courses oriented to the student's curriculum.

2. Ten hours from the graduate courses offered by departments other than Education. The courses from this group will vary according to the student's curriculum.
   a. The students who enroll in curricula designed for secondary teachers in specific teaching fields may elect all of these courses from their major departments.
   b. Those students who enroll in curricula designed to serve elementary and junior high school teachers and those in special education may elect courses from departments in which their backgrounds need supplementing.
   c. The students who enroll in curricula designed for the preparation of superintendents, principals, counselors, and curriculum coordinators may be expected to elect, in addition to those courses described above, courses that will contribute to their understanding of the human relations involved in the positions for which they are preparing.

3. Ten hours of electives chosen by mutual agreement of the student and adviser. Here there is likely to be considerable variation among the selections made by students in different curricula. These courses may be an extension of both (1) and (2). If the student writes a thesis, the six hours of credit are usually assigned to this group.

Curricula in Education

Twenty-four curricula are offered in the field of Education. The names of these curricula, the graduate advisers, prerequisites and special requirements are listed below:

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Advisers</th>
<th>Minimal Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum Development and Coordina-</td>
<td>Dorothy McCuskey</td>
<td>A minimum of one year of teaching</td>
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<td>tion</td>
<td></td>
<td>experience before candidacy</td>
</tr>
</tbody>
</table>

20
<table>
<thead>
<tr>
<th>Elementary Administration and Supervision</th>
<th>James A. Davenport</th>
<th>A minimum of one year of teaching experience before candidacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Administration and Supervision</td>
<td>Harold W. Boles</td>
<td>A minimum of one year of teaching experience before candidacy</td>
</tr>
<tr>
<td>Guidance and Personnel</td>
<td>Robert L. Betz</td>
<td>A minimum of one year of teaching experience (or equivalent) before graduation</td>
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<tr>
<td></td>
<td>Kenneth B. Engle</td>
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<td></td>
<td>Arthur J. Manske</td>
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<tr>
<td>Orientation and Mobility Specialist</td>
<td>Donald Blasch</td>
<td>See page 17</td>
</tr>
<tr>
<td>Home Teachers of the Adult Blind</td>
<td>Ruth Kaarlela</td>
<td></td>
</tr>
<tr>
<td>Secondary Administration and Supervision</td>
<td>Donald C. Weaver</td>
<td>A minimum of one year of teaching experience before candidacy</td>
</tr>
<tr>
<td>Special Education</td>
<td>Kristen D. Juul</td>
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<tr>
<td>Emotional Disturbed</td>
<td>Joseph J. Eisenbach</td>
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<tr>
<td>Mentally Retarded</td>
<td>Isadore Turansky</td>
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<tr>
<td>Crippled and Home Bound</td>
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</tr>
<tr>
<td>Teaching in the Elementary School</td>
<td>Sara R. Swickard</td>
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<td></td>
<td>Louis A. Govatos</td>
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<td></td>
<td>Vern Farrow</td>
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<td></td>
<td>William Ward Sinclair</td>
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</tr>
<tr>
<td>Teaching in the Junior High School</td>
<td>Clara R. Chiara</td>
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</tr>
<tr>
<td>Teaching of Art</td>
<td>Harry S. Hefner</td>
<td>Twenty-five hours in art or the equivalent</td>
</tr>
<tr>
<td>Teaching of Business Education</td>
<td>E. L. Marietta</td>
<td>Minor in business or the equivalent</td>
</tr>
<tr>
<td>Teaching of Distributive Education</td>
<td>Adrian Trimpe</td>
<td>Must qualify for a vocational certificate as a coordinator</td>
</tr>
<tr>
<td>Teaching of Home Economics</td>
<td>Eunice E. Herald</td>
<td>Minor in home economics</td>
</tr>
<tr>
<td>Teaching of Industrial Education</td>
<td>Charles G. Risher</td>
<td>Minor in industrial education</td>
</tr>
</tbody>
</table>
Teaching of Literature and Language  
David F. Sadler  
Minor in English

Teaching of Music  
Elwyn F. Carter  
Major in music

Teaching of Physical Education  
George G. Dales  
Minor in physical education

Teaching of Science and Mathematics  
Charles H. Butler  
Minor in one department of the division of science and mathematics

Teaching of Social Sciences  
Leonard C. Kercher  
Twenty hours in combined fields of economics, history, philosophy, political science and sociology

Teaching of Speech Correction  
Robert J. Erickson  
Nine hours of undergraduate speech correction before or in conjunction with graduate work, and consent of adviser

Teaching of General Speech  
Zack York  
Minor in speech with suitable cognates

Visiting Teacher  
Nellie N. Reid  
Roland S. Strolle  
Selected courses in social work to be taken at the University of Michigan

School Psychologist  
Stanley Kuffel  
Michigan teaching certificate and major or minor in psychology to include courses deemed advisable by the Psychology Department. Two years of teaching experience required before graduation

To satisfy the requirements in this curriculum, the student must elect courses from the offerings in education and psychology as follows: Educ. 533, 534, 585, 604, and 610; Psych. 560, 624, 650, 651, 661, 662, 680, 681, and 682. Substitutions may be made in certain cases with the consent of the graduate adviser.

The psychology courses deemed advisable for a background in this program include Abnormal Psychology, Psychology of Personality, Lab-
oratory in Psychological Testing, Elementary Statistical Methods in Psychology, Mental Testing, Elementary Experimental Psychology, Learning and Memory, or their equivalents. They must be taken either at the undergraduate level or made up with additional graduate courses. A minimum of thirty hours in courses approved by the Psychology Department will qualify a student for a masters degree in School Psychology.

A minimum of thirty-six hours in courses approved by the State Department of Public Instruction in the areas of sociology, psychology and education, twenty-four of which are on the graduate level, will entitle the student to apply for certification as a School Psychological Diagnostician. The pattern of courses to be followed will be arranged through a conference with the adviser.

Teaching at the Junior College Level

Edward Heinig

A certificate to teach in Michigan or consent of adviser.

The requirements for this curriculum include courses in education and in the student's major and minor fields.

1. Six hours from the following professional courses: Educ. 601 Introduction to Research, 650 Growth and Development in Later Adolescence, 690 The Community College, and 670 Directed Teaching.

2. A minimum of sixteen hours in the student's major. It is assumed that the student will also have completed an undergraduate major in this field.

3. A maximum of eight hours may be elected from the student's minor area or cognate courses related to the major field.

ENGLISH

David Sadler, Adviser

The master's degree program in English is designed to improve the student's proficiency in criticism and writing and to increase his understanding of literature and language. Requirements for the degree are these:

1. An acceptable undergraduate major in English or some other preparation accepted as the equivalent by the English Department.

2. Completion of twenty to twenty-four semester hours of graduate work in English, including 568 Literary Criticism, 574 Structure of Modern English, 660 Methods of Research in English and 661 Seminar in English.

3. Completion of six to ten semester hours of graduate work in appropriate cognate fields.

4. Reading knowledge of a foreign language appropriate to the student's program of study.
GEOGRAPHY

In order to earn a master's degree in Geography, a student must satisfy the following departmental requirements:

1. An undergraduate major in Geography or its equivalent.
2. Thirty hours of graduate credit in Geography and cognate fields with at least twenty hours in Geography.
3. An acceptable thesis and/or field assignment, or two approved research papers.
4. Demonstrated competence in:
   a. Field procedures.
   b. Documentary analysis.
   c. Cartographic and statistical presentation of data.
   d. General physical and cultural patterns.
   e. Philosophy of Geography.
5. Completion of required courses: 652, 661, and 664.
6. Completion of 4-6 hours in one area of regional concentration chosen from Africa, Asia, Europe and U.S.S.R., Latin America, Anglo-America, or any other approved area.
7. Completion of 4-6 hours in one area of systematic concentration chosen from Physical Geography, Urban Geography, Political and Historical Geography, Conservation and Resources, Economic Geography, or any other approved area.
8. An oral examination.

HISTORY

In order to earn the Master of Arts degree in History, a student must satisfy the following departmental requirements:

1. For admission to candidacy, either (a) completion of thirty hours of undergraduate credit in the social sciences and closely related subjects, including at least fifteen hours of History, or (b) possession of other preparation accepted as the equivalent by the departmental committee.
2. Completion of a minimum of twenty to twenty-four hours of work in history, including 592 The Literature of History or 593 The Philosophy of History, 690 Historical Method, and one seminar. From six to ten hours will be required from the offerings of related departments.
3. The preparation of an acceptable thesis for which six hours of credit will be awarded. Under certain conditions, the department may waive this requirement.
4. Distribution of credit among the following fields of history in such manner that, together with his credits in advanced undergraduate courses, the candidate shall have earned not less than eight hours in each of three fields, including one European and one United...
States: (a) United States to 1865 and contemporary Latin America; 
(b) United States since 1865 and contemporary Latin America; 
(c) Ancient and Medieval; (d) Modern Europe, 1500-1815; (e) Modern 
Europe, 1815 to the present; (f) Russia and the U.S.S.R.; 
(g) Far East.

5. Satisfactory completion of comprehensive examinations adminis-
tered by the department.

LIBRARIANSHIP

Jean E. Lowrie, Adviser

The Department of Librarianship is accredited by the American 
Library Association and is a member of the Association of American 
Library Schools. The purpose of the Librarianship curriculum is to 
prepare qualified college graduates for the library profession. The Li-
brarianship curriculum involves a basic general program of studies at 
the graduate level in the five major areas of library science: (1) history, 
philosophy and background of libraries in society; (2) technical proc-
eses; (3) library resources; (4) library clientele; (5) library organization 
and administration. The program prepares candidates for the 
differentiated services in college or university, school, public and special 
libraries. In addition to the general admission requirements, the student 
must:

1. Evidence ability, on the basis of his scholastic record and personal 
characteristics, to do graduate work in library science.

2. Present a reading knowledge of at least one modern foreign 
language. This requirement may be met either by completing one 
aacademic year of study at the college level or by passing a proficiency 
examination.

In order to earn the Master of Arts degree in Librarianship, a student 
must satisfy the following departmental requirements:

1. Successfully complete thirty to thirty-four hours of approved 
graduate courses with a minimum of twenty semester hours in 
library science at the graduate level. The program is developed in 
conference with his graduate adviser.

Candidates without previous training in library science will 
need to take the Required Courses as specified in the following list 
plus Elective Courses in the fields of their special interest to total 
thirty-four semester hours.

2. Submit a satisfactory research paper required as partial fulfill-
ment of a course requirement or, with the consent of the graduate 
adviser, complete a thesis for six semester hours of credit.

3. Two semesters of resident study or the equivalent in summer 

sessions.

Specialization is available in various types of library service, e.g. 
school libraries, and special departments in public libraries such as those 
serving children, the adult reader, and the young adult. Programs may
also be arranged for candidates who wish to specialize in college, university or special library service such as industrial, art or music, etc.

Candidates preparing for school library service must meet the teacher certification requirements in the state in which they wish to be employed.

Colloquium. Regular series of lectures, discussions, field trips and film demonstrations by eminent librarians, members of the staff and leaders in fields related to library interests. Required both semesters for full-time graduate students. Part-time graduate students are expected to arrange for attendance at least one semester. (No credit)

NOTE: Students who have an undergraduate minor in Librarianship may elect courses from other departments for a total of six to eight semester hours. The total number of hours required for these students is thirty instead of the thirty-four required for those with no previous library science courses.

Required Courses: Lib. 510, 512, 530 or 531, 600 and 629 or Ed. 601.

Course descriptions and courses to be chosen as electives in Library Science will be found under the listings for the Department of Librarianship on pages 85-89.

At the time of application for candidacy, the student must have completed at least two of the following courses: Lib. 510, 512 and 530.

Graduate Program for the Instructional Materials Center Specialist

Because of the increasing demand for school personnel with training in the administration of school libraries and also in the administration of audio-visual materials and equipment, the Department of Librarianship now offers a graduate curriculum for preparation of the Instructional Materials Center Specialist.

Prerequisite: Teaching certificate and one year of experience in classroom or in school library.

MATHEMATICS

The degree of Master of Arts in Mathematics extends the student’s knowledge in the areas of algebra, analysis, applications, geometry, and statistics. The program permits specialization in preparing for advanced study and provides additional training for teachers of mathematics and students seeking employment in industry.

In addition to the general admission requirements, the student in the field of Mathematics must satisfy the following:

1. Complete with satisfactory grades an undergraduate major in Mathematics. If the student’s undergraduate program in Mathematics does not meet approved standards, he may be required to elect additional courses or otherwise satisfy the requirements of the department.
2. Complete twenty to twenty-four hours of approved course work in Mathematics to include 630 Abstract Algebra I and 670 Real Analysis I.
3. Prepare an acceptable thesis if required by his graduate adviser and committee.
4. Present six to ten hours of credit from other related departments.
5. Present credits in at least two mathematics seminars.
6. Pass a final oral examination in his field.

MEDIEVAL STUDIES  John R. Sommerfeldt, Adviser

The degree of Master of Arts in Medieval Studies is designed to provide a broad background in medieval history, languages, literatures, philosophy and theology. The program is available to students with undergraduate majors in history, art, philosophy, music, English, German, French, Spanish, Italian, or Latin, or other preparation accepted as the equivalent by the Graduate Committee.

The requirements for the degree are as follows:
1. Before admission to candidacy, the student is expected to present (a) an elementary reading knowledge of Latin and either German or French, (b) six hours of a survey course in medieval history, and (c) course work in philosophy.
2. The course work includes (a) ten hours of medieval history, (b) a minimum of nine hours of medieval philosophy and theology, (c) six hours of medieval literature, and (d) a course in research methods.
3. The preparation of an acceptable thesis.

MASTER OF MUSIC DEGREE  Charles Osborne, Adviser

The Master of Music degree is designed for professional advancement as well as for cultural attainment. This program is an extension of the Bachelor of Music curriculum and is planned to enhance the teaching and performing ability of the student. The degree Master of Music may be obtained in any one of three areas of concentration: 1) Applied Music, 2) Theory-Composition, or 3) Music Education; i.e., the student may obtain a Master of Music degree in Applied Music, etc.

The student must successfully complete 14 semester hours in the major area in which he wishes to concentrate. In addition to a major area, a student will choose two minors from among 1) Music Education, 2) Music Literature, 3) Theory, and 4) Applied Music. The minors will consist of six semester hours each. To complete the necessary 30 semester hours of graduate credit the student will select, in consultation with his advisor, four semester hours outside of the field of music.

A comprehensive examination will be administered to the student upon entering the curriculum. The results of this test will be used to
OCCUPATIONAL THERAPY

Dean R. Tyndall, Adviser

The master's degree program in Occupational Therapy is designed to prepare students for administrative and supervisory positions in the field. In addition to meeting the general admission requirements, the candidate must have completed a bachelor's degree in Occupational Therapy or in a related field with a certificate in Occupational Therapy. A year of experience between undergraduate and graduate studies is recommended.

In order to qualify for a master's degree the student must successfully complete thirty semester hours of approved graduate courses according to the following pattern:

1. Ten hours selected from basic courses related to Occupational Therapy, i.e., Biology, Education, Psychology and Sociology. The course, Education 601, Introduction to Research, is requirement in this group.

2. Fourteen hours from the following courses in Occupational Therapy: 632 Supervision of Occupational Therapy, 633 Administration of Occupational Therapy, 712 Professional Field Experience (in Organization and Administration of Occupational Therapy offered in cooperation with the Occupational Therapy Department of the Veteran's Administration Hospital, Hines, Illinois, and offered during the summer program), 630 Professional Literature, and 650 Clinical Training and Scheduling.

3. The remaining six hours may be selected with the help of the graduate adviser from the following group: Business 551, 552, 556; Psychology 542, 644, 645, 646; Occupational Therapy 502.
PHYSICS

Paul Rood, Adviser

The degree of Master of Arts in the field of physics provides training in both theoretical and experimental physics useful to scientists and teachers interested in research in physics.

The requirements for a Master’s Degree in physics are as follows:

1. The completion of an undergraduate major in physics or its equivalent.

2. At least 6 semester hours must be earned in the Mathematics Department chosen, in consultation with the graduate adviser, from the following: 500, Advanced Differential Equations; 507, Numerical Analysis; 530, Vectors and Matrices; 570 and 571, Advanced Calculus; 676, Complex Variables.

3. The following graduate courses to be taken in the Physics Department: 622, Quantum Mechanics; 624, Statistical Mechanics; 630, Analytical Mechanics; 662, Electricity and Magnetism.

4. At least 6 semester hours from the “500” courses in physics.

5. Satisfactory completion of a Master’s thesis based either on an experimental or theoretical problem, under a member of the graduate faculty in physics.

POLITICAL SCIENCE

William V. Weber, Adviser

In addition to the admission requirements of the Graduate School and the Department, a student must satisfy the following to earn the Master of Arts degree in Political Science:

1. Complete a minimum of twenty-four hours of graduate work in Political Science among the three areas of study listed below with at least four hours of credit in each:
   a. American Government and Administration.
   b. International Relations and Comparative Government.
   c. Political Theory and Methodology.

2. A thesis for six hours of credit will ordinarily be required. This requirement may be waived on recommendation of the Departmental adviser with the approval of the Graduate Committee and the head of the Department in which case a research paper will be required.

3. Complete six hours in appropriate cognate areas.

4. Before being recommended for the Degree of Master of Arts in Political Science, the student will be required to pass an oral examination. The examination will cover the Thesis or research paper, the subject matter of the student’s area of emphasis, including bibliography, and the adequacy of his preparation in the general field of Political Science.
PSYCHOLOGY  
Stanley Kuffel, Adviser

In order to qualify for a master's degree in Psychology, a student must meet all the regular admission standards as well as those of the Psychology Department. In general, the requirements for the degree are as follows:

1. Completion of a major or broad minor in Psychology at the undergraduate level with satisfactory grades.
2. Completion of at least twenty hours of graduate credit in Psychology with ten hours in an allied field or fields. The distribution of credit will be determined in conference with the adviser and according to the area of psychology in which the student wishes to specialize.
3. A thesis for six hours of credit will ordinarily be required. This requirement may be waived with the approval of the student's adviser.
4. The areas in which a student may specialize are these:
   a. General—for those whose aim is to teach psychology at the college level and who intend to enroll for the doctorate.
   b. Industrial—for those wishing to specialize in industrial psychology. Five courses should be selected from Psychology 516, 517, 542, 560, 644, 645, 646.
   c. Clinical—for those interested in case work and counseling. This program requires a total of sixty semester hours and will include the following:
      (1) General Psychology Core (15 to 18 hrs.) from Psychology 516, 517, 534, 510, 512, 514, 615.
      (2) Clinical Courses (13 to 15 hrs.) from Psychology 624, 682, 661, 651, 650, 681, 684, 685, 616.
      (3) Completion of a thesis.
      (4) Courses outside the Psychology Department (6 to 10 hrs.). May select from Special Education, Speech Correction, etc.
      (5) Internship (12 to 15 hrs.)—supervised practice in a clinical setting.

SOCIOLOGY AND ANTHROPOLOGY  Jerome G. Manis, Adviser

The master's degree program in Sociology is designed to (1) give students a mature understanding of the significant factors and processes of contemporary society, (2) advance the preparation of those planning to teach in the social-science field, (3) lay the foundation for more advanced graduate work in Sociology, and (4) provide professional training for a variety of occupational opportunities in government, industry, research organizations, welfare agencies and correctional systems.

In order to earn the Master of Arts degree in Sociology, a student must satisfy the following departmental requirements:

30
1. Have completed at least twenty-four hours of undergraduate work in the Social Sciences with a minimum of twelve semester hours in Sociology, or in equivalent course work approved by the departmental graduate adviser.

2. After admission but before applying for candidacy, pass a qualifying examination. The examination periods will be held once each semester: fall, spring and summer.

3. Complete twenty to twenty-four hours of graduate work in Sociology courses selected in consultation with the departmental adviser, and six to ten hours of graduate work in appropriate cognate areas.

4. Complete an original thesis or essay, using approved methods for investigating a sociological topic. The thesis is required for students planning, and considered qualified, for doctoral studies.

5. Before receiving the master's degree, pass an oral examination on the thesis or the essay. The examination will deal with the relationship of the thesis or essay to the field of Sociology.

SPEECH PATHOLOGY AND AUDIOLOGY

Robert Erickson, Adviser

The master's degree program in Speech Pathology and Audiology is designed to provide academic and practicum experiences basic to the development of increased clinical and administrative competence in the profession of speech and hearing therapy. The master's program usually will be planned, with emphasis in one of the following areas: (a) public school speech and hearing therapy, (b) clinical speech and hearing therapy, (c) audiology, or (d) special education.

In addition to meeting the regular admission standards of the Graduate School, students wishing to qualify for the master's degree in Speech Pathology and Audiology must fulfill the following requirements:

1. (a) Completion of an undergraduate major or minor in speech correction, or
   (b) Completion of an undergraduate major or minor in Psychology, Sociology, Education, or other curriculum accepted by the department, plus 12 semester hours of undergraduate courses in speech correction. Undergraduate deficiencies may be removed during the time that graduate courses are being completed.

2. Accumulation, during the final two years of undergraduate work, of a point-hour ratio of at least a B.

3. Successful completion of a personal screening interview by the director of the graduate program in Speech Pathology and Audiology.

4. Completion of the following core of required courses in Speech Pathology and Audiology: 550, 552, 558, 559, 654, 656, 658, 659.
5. Completion of at least four semester hours of elective courses in Speech Pathology and Audiology, to be selected from the following: 554, 556, 653, 712.

6. Students who demonstrate research aptitudes and interest are encouraged to present a thesis. Students who anticipate continued graduate work toward a doctoral degree are required to present a thesis. Six semester hours of credit are granted for completion of a thesis.

7. Students who desire to qualify for clinical certification by the American Speech and Hearing Association must complete at least 275 hours of supervised clinical practicum experience.
SIXTH-YEAR PROGRAMS

The Sixth-Year Programs lead to the degree, Specialist in Education, and are offered in the areas of School Administration; including Directors of Curriculum, Guidance, Special Education; and in School Psychological Examiners. The degree is awarded after satisfactory completion of a minimum of 60 semester hours of graduate work beyond the bachelor's degree. A student is ordinarily admitted to the program after the completion of a Master's degree with a point-hour ratio of at least 3.5 (B=3, A=4) in all graduate work elected previously. Students must attain that point-hour ratio in order to be eligible for candidacy at the completion of the 40th semester hour beyond the bachelor's degree and for graduation.

All applicants are expected to attain the appropriate percentile on the appropriate norms of the Graduate Record Examinations that are administered and give evidence of ability to communicate satisfactorily both in speech and in writing.

As part of the requirements, students must enroll for one semester of residence work after having completed a Master's degree or its equivalent.

SCHOOL ADMINISTRATION  William P. Viall, Chairman of Advisers

The program in School Administration is designed to produce educational leaders who are competent persons, broadly and deeply educated, and well versed in the professional qualifications required of their respective educational tasks. Students may elect majors at the sixth-year level in the General Administration, Secondary Administration, Elementary Administration, Curriculum Development, Guidance, and Special Education.

The selection of applicants for the advanced program will ordinarily be made at the end of the fifth-year program on the basis of undergraduate and graduate records, attainment of satisfactory scores on the Graduate Record Examination, recommendation of faculty members, successful teaching and/or administrative experience, completion of examinations as determined by the School of Education Candidacy Board, and the promise of leadership qualities.

The two-year program beyond the bachelor's degree consists of a minimum of sixty hours of graduate work, including at least fifty-four hours of credit in graduate courses and from four to six hours of credit in a field project or internship. The graduate course work will be planned by a graduate committee and will include:

1. Fourteen hours to be selected from a basic core of offerings in the field of education.
2. At least fourteen hours in a major area of concentration.
3. Twenty hours in cognate fields outside of education.
4. Twelve hours of electives.
Application for candidacy for the specialist program must be made at the completion of forty hours of academic work. Graduation requirements include a high scholastic average, the completion of a written project, and an oral examination as prescribed by the candidate's graduate committee.

SCHOOL PSYCHOLOGICAL EXAMINER  Stanley Kuffel, Adviser

This program provides for the training of persons preparing for the position of School Diagnostician or School Psychological Examiner, as well as basic pre-doctoral study in School Psychology. Successful completion of this program is a requirement for certification as a School Psychological Examiner in the State of Michigan.

The program is designed to prepare the student in the use of the principles and techniques of psychology in the school setting. The training includes work in testing, interviewing, and psychological counseling. The student will be expected to acquire a knowledge of the deviant and exceptional child and of the basic techniques used in psychological research.

Admission requirements include the following:

1. Nine to fifteen hours of undergraduate psychology courses including Elementary Statistics and Experimental Psychology or their equivalents. Additional work to remedy deficiencies may be taken prior to application for candidacy.

2. Successful teaching experience or the evidence of potential for success in the field of education.

3. Attainment of a satisfactory score on the Graduate Record Examination and satisfactory completion of any examination that may be deemed desirable by the graduate committee.

A student may be admitted to the program either on completion of the bachelor’s or master’s degree. A student will be expected to apply for admission to candidacy upon the completion of twenty semester hours beyond the bachelor’s degree or upon the completion of ten semester hours beyond the master’s degree. It will be necessary also for the student to successfully complete a qualifying examination before admission to candidacy. This examination will be administered by the graduate committee.

In order to qualify for the Specialist degree in this field, the student must elect courses from the following groups:

I. Twelve to seventeen hours from the General Psychology Core including Psychology 510, 512, 514, 516, 517, and 615.

II. Eighteen to twenty-two hours from Clinical and School Psychology courses including Psychology 561, 616, 624, 650, 651, 661, 680, 681, 682, 684, and 685.

34
III. Fifteen to sixteen hours from courses outside the Psychology Department including Education 530, 532, 533, 534, 540, 551, 580, 581, 585, 587, 604, 610, and 660; Speech 656.

IV. Fifteen to eighteen hours of internship to include 500 or more clock hours of supervised practice.
SECTION III
DESCRIPTION OF GRADUATE COURSES

Two types of courses are offered in the School of Graduate Studies: (1) Those numbered 600 and above open only to graduate students, and (2) those numbered 500 through 599 open to both upperclassmen and graduate students. In all courses open to both upperclassmen and graduates, a distinction is made between the work expected from graduate students and that from undergraduates. The work expected from graduates may be of higher quality or greater quantity or both. This applies to courses offered in extension as well as in residence. The student should consult the Schedule of Classes for hours, days of week and place of meeting for all classes.
School of
Applied Arts and Sciences

GEORGE E. KOHRMAN,
Dean

Graduate Offerings:
Agriculture
Distributive Education
Home Economics
Industrial Education
Occupational Therapy
Paper Technology
Vocational Division
SCHOOL OF APPLIED ARTS AND SCIENCES

The School of Applied Arts and Sciences includes the following department: Agriculture, Distributive Education, Engineering and Technology, Home Economics, Industrial Education, Military Science, Occupational Therapy and Paper Technology.

The School of Applied Arts offers a graduate program in Occupational Therapy and cooperates with the School of Education in providing teacher-education programs in Teaching of Distributive Education, Teaching of Home Economics and Teaching of Industrial Education (See Education, Section II of this bulletin for these programs).

AGRICULTURE

Baker, Head.

For Graduates and Upperclassmen

530 Agriculture in Michigan 2 hrs. Spring

A survey of Michigan agricultural production including the areas, volume and types of production, and the marketing systems in operation. This course deals with relationships between Michigan agriculture and national and international production. Different types of agricultural education in Michigan will be studied.

For Graduates Only

600 Soil Science 2 hrs. Fall

Treats soil as an organic resource. Soil formation, composition and classification are related to various physical, chemical and biological factors in the environment. Consideration is given to soil fertility, water retention and runoff, plant growth and land use as they are affected by these factors.

DISTRIBUTIVE EDUCATION

Trimpe, Head.

Open to Graduates and Upperclassmen

500 Seminar in Distributive Education 2-4 hrs. Summer

An intensive study of problems related to distribution and education for distribution. This seminar is especially recommended for seniors and graduates in the distributive education department.
570 Organization and Operation of Distributive Education

Deals with the organization and operation of distributive education in relation to the total education program. It is concerned with preparatory, cooperative and adult programs. Consideration is given to advisory committees and local, state and federal relationships.

571 Job Supervisory Training

Provides for mastery of the techniques and skills used in supervision of employees. It deals with conference leading, how to train, how to develop the skills of leadership and the corrective interview. This training is useful for vocational teachers and those preparing for supervisory positions.

572 Teaching Techniques for Cooperative Education

Deals with the methods and techniques used in teaching the related subjects to students on cooperative work-study programs. Special emphasis will be given to group and individual methods of instruction.

573 Coordination Techniques in Cooperative Education

A study of the duties and responsibilities of the coordinator. Includes the organization of training programs, supervision of trainees on the job and the development of working relationships among the school, business and home.

598 Readings in Distributive Education

Directed, individual study of topics and areas of interest which are not otherwise treated in departmental courses. Consent of Department Head.

HOME ECONOMICS

Herald, Head; Professor Taylor; Associate Professor Savage.

Open to Graduates and Upperclassmen

500 Textile Fiber Clinic Workshop (June 29-July 10) 2 hrs.

A workshop type program. Specialists and visual aids will present the newest information on textiles. To be followed by a study of methods implementing the new learnings.

510 Advanced Nutrition 3 hrs. Fall

Study of recent developments in nutrition through readings and experiences. Prerequisite: Nutrition and Meal Planning and Food Preservation.

512 Institutional Management 3 hrs.

Study of institutional administration, job analysis, labor policies, personnel problems and cost control in different types of food-service
institutions. Prerequisite: Meal Planning and Food Preservation. Not offered 1964-65.

514 Food Technology 2 hrs. Spring
Food preparation with special emphasis on individual problems related to school food teaching units. Study of commercial food preparation.

516 Consumer Buying 2 hrs. Summer
Study of marketing problems and consumer credit. Students work on individual problems which concern the technique of buying a specific type of consumer goods.

518 Experimental Foods 2 hrs.

520 Demonstration Techniques 2 hrs.
A study of principles and techniques for demonstrations in all areas of home economics. Practice will be included. Offered for homemaking teachers, demonstration agents and home economists in business. Not offered 1964-65.

550 Family Living in the Schools 2 hrs.
Problems of organizing materials in Family Living for the purpose of teaching classes and working the groups in the school program. Not offered 1964-65.

552 The Homemaking Center and Equipment 2 hrs. Fall
Consideration of fundamentals in planning laboratory and living area in terms of needs with special emphasis on built-ins, furnishings and equipment. Selected problems to be chosen by the individual.

554 Housing 2 hrs. Spring
A study of economic and social aspects of housing. Single, duplex and multiple housing problems are considered. Prerequisite: Home Furnishings, or consent of the instructor.

598 Readings in Home Economics 2-4 hrs. Summer, Fall, Spring
Graduate students who have completed an undergraduate degree in Home Economics or related fields may enroll with permission of the head of the department to do supplementary work in a specific area to meet requirements for graduate courses.

Open to Graduates Only

600 Advanced Clothing Techniques 2 hrs.
Planned to meet the needs of the advanced student in clothing construction techniques. Prerequisites: Clothing, Family Clothing and consent of instructor. Not offered 1964-65.
602 Advanced Tailoring Techniques

Workshop (July 13-July 24)  2 hrs.

Specialized tailoring techniques in coats and suits. Problems in the use and performance of new textiles in clothing included. Prerequisite: Tailoring and Advanced Clothing, or consent of instructor.

618 Teaching Specific Areas of Home Economics  2 hrs.

An intensive study of problems in the specialized areas of Home Economics such as: Foods and Nutrition, Home Furnishings, Textiles and Clothing, Methods, etc. May be enrolled in more than once. Maximum credit not to exceed 4 hours.

636 Teaching for Independent Living  3 hrs. Spring

Designed to provide a practical background and a basic understanding of problems found in the homes and communities of the home bound. This course will be concerned with general home problems related to management, personal adjustment and care of the family members.

640 Supervision of Home Economics

Workshop (June 16-June 26)  2 hrs.

New developments in the teaching of home economics and the supervision of student teaching will be studied. Problems of the students will receive major consideration.

642 Coordinated Program in Home Economics  6 hrs.

A workshop type program for experienced teachers. Three areas of homemaking will be emphasized. Clothing construction problems of teachers, teaching of foods on a meal basis and problems in teaching family living. Special consultants will be secured to assist the staff. Not offered 1964-65.

644 Curriculum Planning in Home Economics  2 hrs.

Consideration of changes in family living and society in relationship to the developmental needs of students as a basis for curriculum building in junior and senior high school. Programs in homemaking education. Not offered 1964-65.

646 Evaluation in Home Economics  2 hrs.


648 Adult Education in Homemaking  2 hrs. Fall

A study of the developmental needs of adults and changes in society affecting families as a basis for developing adult programs in homemaking education.

650 Advanced Study of Home Management  2 hrs.

Emphasis on the philosophy, current concepts and methods of home management. Attention will be given to the newer aspects of time and
motion study with special projects in work simplification. Analysis of the use of resources for achieving goals in stages of family life cycle. Prerequisite: 350-352. Not offered 1964-65.

INDUSTRIAL EDUCATION

Feirer, Head; Associate Professor Lindbeck and Risher; Assistant Professor Stegman.

Open to Graduates and Upperclassmen

506 Furniture Construction 2 hrs.

The use of power machinery in furniture and cabinet construction. Special emphasis is given to the following: (1) operation of woodworking machines and equipment, (2) project design and construction, (3) shop safety, (4) plywood, and (5) furniture construction. A written report in an area of a special interest will be required for graduate credit. Not offered 1964-65.

508 Building Construction Techniques 2 hrs.

Examines modern construction methods in the area of cement, metal, electricity, wood, glazing and other related areas as applied to home building. It also studies construction methods both in custom building and in prefabrication. Not offered 1964-65.

524 Architectural Planning and Design 2 hrs. Fall

Architectural details, plans, elevations, rendering, tracing and blueprinting, and estimating to simple one- and two-story buildings. Outside reading for architectural appreciation. Prerequisite: 120, 226 or equivalent.

525 Architectural Planning and Design 2 hrs. Spring

Plans, elevations, details, mechanical perspective, rendering, tracing, and prints of a modern house. Emphasis placed on styles of architecture and architectural appreciation. Prerequisite: 524.

538 Problems in Metalworking 2 hrs. Summer

Practical laboratory experiences in forging, foundry, heat treating, machine shop, and arc and acetylene welding. Course will emphasize methods of selecting and developing course materials for junior and senior high school students. Course content will be adapted to meet the needs of individual students.

540 Industrial Arts for the Elementary School 2 hrs. Summer, Fall

Deals with the problems of organizing and teaching industrial arts for the elementary grades. Course materials, techniques and methods in the industrial and craft areas will be stressed.
**542 Course Planning and Construction**  
2 hrs. Fall, Spring  
Principles and techniques of selecting and analyzing suitable teaching activities and arranging such material into a functional instructional order. Instructional units prepared will be based on an analysis of a trade, occupation or activity. Opportunity will be provided to prepare a detailed course of study.

**570 Arts and Crafts Techniques**  
2 hrs. Summer  
Advanced laboratory experiences in the fields of internal plastic carving, leather work, model work, archery, photography and related crafts in conjunction with a study of current technical literature in these areas. Course content will be adapted to individual needs.

**572 Arts and Crafts for Teachers**  
2 hrs. Summer, Spring  
Covers craft techniques in the areas of art metal, jewelry, leather, plastics, wood crafts and other related experiences. Teaching procedures, methods and materials will be emphasized. Prerequisite: 174.

**573 Mechanics and Conditioning of Equipment**  
1-2 hrs. Summer, Spring  
A study of the cutting mechanics of wood, metal and synthetic materials. Practice in installation, adjustment, preventive maintenance and conditioning of power equipment will be included. Particular emphasis will be given the relationship between proper installation and condition to efficient machine operation.

**582 Aviation for Classroom Teachers**  
2 hrs. Fall, Spring  
Designed for elementary and secondary school teachers desiring an understanding of various phases of aviation and their relation to social, political, economic and educational problems in the modern world. Opportunities will be provided to analyze various educational activities that are appropriate to different grade levels, and provision will be made for visiting airports and acquiring some flight experience.

**588 Advanced Power Laboratory**  
2 hrs.  
Designed to enable teachers to add a power mechanics area to existing Industrial Arts Programs. The course will include a study of internal combustion engine operating principles. Laboratory experiments will be conducted in mechanical and hydraulic power transmission. The teachers will investigate and prepare reports of recent developments in new types of internal and external combustion power units. The school shop organization, equipment and safety requirements unique to this area of instruction will be studied. A course of study including text materials, charts and film will be developed. Instructional materials will be designed illustrating scientific principle. Not offered 1964-65.

**598 Special Problems in Industrial Education**  
1-3 hrs. Summer, Fall, Spring  
Designed for qualified individual graduate students wishing to pursue special problems of individual need or interest under the direction of a
member of the graduate faculty. May be elected once in the industrial education department, and once in an associated department, with the approval of the Industrial Education Department Head and the faculty member under whom the student desires to work. Applications must be submitted and approved prior to the election of the course.

Open to Graduates Only

605 Problems in Woodworking 2 hrs. Fall
Advanced laboratory experiences in the areas of woodworking. Content selection, project building and new techniques will be covered. Written reports based on current literature will be required. The areas to be covered will be dependent on individual needs.

620 Advanced Drafting Practices 2 hrs. Fall
Advanced laboratory experiences in mechanical, architectural and machine drawing in conjunction with a study of current technical literature. Written reports are required. Advanced instruction in engineering drawing and descriptive geometry will be included.

621 Studies in Technical Representation 2 hrs. Spring
Study and analysis of current practices in technical representation. Course content is based on current industrial practices and techniques, plus the development of skill to teach this material at the high school and junior college level.

630 Research in Machine Shop Practices 2 hrs. Fall
For teachers who wish to carry out advanced techniques in the area of machine shop.

641 Trends in Industrial Education 2 hrs. Summer
A study of current literature in the field. Research studies will be reviewed. Commercial and industrial publications will be studied to determine their place in the school shop program.

643 Measurement in Industrial Education 2 hrs.
A study of the techniques involved in the preparation and use of teacher-constructed written and practical tests. Attention will be given the interpretation of test results and the evaluation of student achievement. Not offered 1964-65.

644 Project Planning and Designing 2 hrs.
A study of the principles of design and their application to shop projects. Special attention will be given to planning and designing new projects that will enrich the school shop program. Not offered 1964-65.

645 Shop Planning 2 hrs.
Planning of the shop and selecting the equipment and supplies for an industrial arts laboratory. A study of the basic principles of planning and equipment selection to harmonize with modern industrial education philosophy. Not offered 1964-65.
646 Teaching Problems in Industrial Education 2 hrs.

Special attention will be given to teaching methods and the techniques that are useful to experienced industrial education teachers. Emphasis will be placed on problem solving in industrial education, pupil planning and the demonstration technique. Each student will be required to work out a program of teaching methods useful in his particular school. Not offered 1964-65.


This in-service course for our industrial teachers will provide opportunities for them to learn the latest in technological practices in industry. Whenever possible, cooperation of an industrial group such as the American Foundrymen’s Society will be utilized in planning and organizing the course. This course will be offered for two semester hours per unit and may be elected for a total of four semester hours. Not offered 1964-65.


(Description same as Industrial Education 647.) Not offered 1964-65.

650 Advanced Problems in Graphic Arts 2 hrs.

Opportunity is provided for the individual student to undertake advanced study of the technical problems in the field of graphic arts. Advanced instruction in imposition, presswork and linotype composition will be available. Not offered 1964-65.

661 Electricity for Shop Teachers 2 hrs.

For students who wish to plan an electrical area in their general shop or plan to teach electricity on a unit shop basis. Special attention will be given to the development of suitable projects and technical information related to them. Prerequisite: Electricity, Adv. Electricity. Not offered 1964-65.

670 Problems in General Shop 2 hrs. Fall

Practical experiences in drawing and planning, woodworking, metalworking, electricity, and craftwork will be required. Course will include selection, development and preparation of materials and instructional media for instruction at the junior and senior high school levels. Not offered 1964-65.

671 Industrial Education Materials 2 hrs. Summer

A study of all the basic materials of industry with special emphasis on new materials. Written reports on the material will be based on a review of government studies, handbooks, industrial publications and scientific reports. Each material will be evaluated as to its working characteristics and its possible application in the school shop.
672 Studies in General Shop Content and Practice 2 hrs. Spring

Study of current general shop content with emphasis on new instructional areas, science application in industry, multiple-activity instructional practices, and the selection and purchasing of equipment, tools, and supplies. The adaptation of experiments and exercises to general shop instruction will be included.

OCCUPATIONAL THERAPY

Kiss, Head.

For Graduates and Upperclassmen

502 Advanced Weaving 2 hrs.

510 Instructional Aids 2 hrs.
Procurement, construction and use of equipment and devices needed as aids in the instruction of patients and occupational therapy students. In addition to an explanation of effective uses of such visual helps as models, labels and posters, bulletin boards and exhibits, and the evaluation of available audio-visual materials, there will be a study of the organization of tools, equipment and materials as it relates to the learning situation. Not offered 1964-65.

520 Kinesiology 3 hrs. Fall, Spring
A basic study of the muscles of the body, classified as to joint motion. Each muscle studied according to origin, insertion and action. This study accompanied by a review of the skeletal and nervous systems and basic terminology. Prerequisite: Mammalian Body 210, general Physiology 317.

523 Introduction to Orthopedics 2 hrs.

521 Orthopedics 3 hrs. Spring
A series of lectures on neurological and orthopedic conditions. Prerequisite: Mammalian Body 210, general Physiology 317, or with the consent of the instructor.

532 Training of Amputee Patients 2 hrs.
Provides instruction in the rehabilitation of both the child and adult amputee. Course will involve some field work at hospitals in Michigan specializing in this area. Not offered 1964-65.
550 Occupational Therapy Modalities 2 hrs.

A course designed for the therapist who needs additional skill and knowledge of technical application of certain occupational therapy activities. These modalities will include weaving, ceramics, splints and braces, and self-help devices. Not offered 1964-65.

For Graduates Only

630 Professional Literature 2 hrs. Spring

Study and discussion of the trends, philosophy and practices in Occupational Therapy. Consideration will be given the use, analysis and appraisal of current professional literature.

632 Supervision of Occupational Therapy 2 hrs. Fall

Place and function of supervision in Occupational Therapy. Practical problems in the supervision of staff therapists, students and volunteer groups. Techniques of effective leadership will be demonstrated and emphasis will be placed on the relationship of these techniques to the achievement of departmental, hospital and community goals.

633 Administration of Occupational Therapy 2 hrs. Spring

A study of problems confronting the administrator of occupational therapy such as functional organization, personnel policy, planning of physical facilities, finance, legal aspects and hospital-community relationship.

640 Advanced Clinical Training 2 hrs.

A specialized course of study in cerebral palsy, poliomyelitis or physical disabilities. This work must be taken on an advanced level at specified training centers. Not offered 1964-65.

650 Clinical Training and Scheduling 2 hrs. Fall

Objectives and management of clinical training from the viewpoint of the school and the affiliating center. Mechanics of the student-training schedule and the student-rating program.

PAPER TECHNOLOGY

Janes, Head; Professor Diehm; Instructor, Kline.

530 Polymer Chemistry 2 hrs. Fall

A study of the molecular and chemical structure of high molecular weight compounds as related to their rheological, mechanical, chemical, and optical behavior. Special emphasis is on both natural and synthetic polymers of significance to the paper industry. Methods for characterization of both the bulk and solution properties of polymers are covered in detail. Prerequisite: Organic Chemistry 360, 361; Physics 112 or 110.
540 Principles and Practice of Coated Paper Manufacture  
Lectures on the formulation, preparation and application of pigmented coatings to paper. Lectures on rheology, on control methods, on finishing methods and on printability. Laboratory experience in formulation, methods of application, testing and calendering. Experimental runs on pilot coater. Visits to nearby mills engaged in coating paper and paperboard.

550 Microbiology of Pulp and Paper  
A lecture course on the morphology and biochemistry of microorganisms, metabolism, reproduction, destruction of life and antibiotics. The following topics related to the paper industry are presented: Decomposition of wood, pulp, paper and felts by microorganisms, slime and its control, stream pollution, water treatments, alcohol and yeast protein from sulphite pulping liquor, and microbiology of food packaging. Pre-requisites: 340, 341.

VOCATIONAL DIVISION

Kohrman, Dean.

For Graduates and Upperclassmen

520 Principles of Practical Arts and Vocational Education  
2 hrs. Summer, Fall, Spring  
The place and function of the practical arts and vocational education in the modern school; fundamental principles upon which this work is based. For teachers of agriculture, business, home economics, industrial subjects and administrators.

522 Occupational Laboratory Experience  
2 hrs. Summer, Spring  
A supervised business and industrial experience program involving full-time employment for at least six weeks or equivalent. Students will study and participate in experiences in a specific occupational area. Prerequisite: consent of instructor.

For Graduates Only

625 Administration and Supervision of Practical Arts and Vocational Education  
2 hrs. Spring  
The functions of administration and supervision; problems involved in the organization and operation of practical arts and vocational education programs. For administrators, supervisors of vocational education and those wishing to prepare for such positions.

626 Trends in Technology and Employment  
2 hrs.  
Major occupational shifts resulting from recent advances in science and technology. The changing nature of the labor force, economic and
sociological implications of automation and atomic power. Attention will be given to educational programs needed to meet technical and skilled manpower requirements. Not offered 1964-65.

628 Seminar in Vocational Education 2 hrs. Spring

An intensive study of problems related to vocational education. For teachers, coordinators and administrators who have completed at least fifteen hours of graduate credit. Not offered 1964-65.
School of Business

ARNOLD E. SCHNEIDER,  
Dean

Graduate Offerings:  
Accounting  
Business Education  
General Business  
Management  
Marketing
SCHOOL OF BUSINESS

The School of Business includes the departments of Accounting, Business Education, General Business, Management and Marketing. The function of the School of Business is to prepare students for positions in business and industry. The program leading to the degree, Master of Business Administration, is designed to prepare graduate students to function effectively in administrative positions in these fields.

The student is challenged to develop the judgment, discriminating capacity, knowledge and understanding which will permit him to work efficiently in administrative and other leadership roles. Under the guidance of the graduate staff of the School of Business, personal programming for the participant is provided as an alternative to a set schedule of required courses.

The School of Business cooperates with the School of Education in offering the curriculum. The Teaching of Business Education (See Education, Section II of this bulletin for a description of this program).

ACCOUNTING

Burke, Head; Professor Wetnight; Associate Professor Everett; Assistant Professors Stevenson and Morris.

For Graduates and Upperclassmen

510 Advanced Financial Accounting 3 hrs.
An intensive study of asset valuation, liabilities, corporate capital, and their relationship to income. Prerequisite: Accounting 211 or 519.

511 Advanced Accounting 3 hrs. Fall, Spring
Accounting for problems in special sales, consolidations and equities. Prerequisite: 311.

512 Cost Accounting 3 hrs. Fall, Spring
The relation of cost accounting to management for control; general principles involved in constructing a cost system; distribution of cost materials, labor and burden; cost records; operating reports; standard costs and budgetary control. Prerequisite: Accounting 211 or 519.

513 Accounting Systems 3 hrs. Spring
The principles of accounting system development. Will include the systems of various types of businesses. Prerequisite: 211 or 519.

511 Income Tax Accounting 3 hrs. Fall, Spring
Federal income tax laws for individuals, partnerships and corporations. Prerequisite: Accounting 310, or consent of instructor.
516 Auditing 3 hrs. Fall, Spring

The theory and practice of making audits of business enterprises. Prerequisite: Accounting major.

518 Accounting Theory and Problems 3 hrs. Spring

Theoretical consideration of accounting problems. Nature and analysis of the type of problems that are to be found in C. P. A. examinations. Prerequisite: Accounting major.

519 Administrative Accounting 3 hrs. Fall

Basic topics are the accumulation of financial data and the preparation of financial statements. Included are accounting topics related to business assets and entities and an introduction to the analysis and interpretation of financial statements. Designed especially for graduate students entering the MBA program who have not previously completed the equivalent at the undergraduate level. Prerequisite: Graduate standing. Not open to students with credit in accounting.

598 Readings in Accounting 1-1 hrs. Summer, Fall, Spring

Directed individual study of bodies of knowledge not otherwise treated in departmental courses.

For Graduates Only

610 Advanced Accounting Theory—Income Determination 3 hrs. Fall

A study of the underlying concepts and principles of the determination of income. Includes the study of the development of these concepts and principles and their future outlook. A study is made of assets evaluations as they relate to income determination.

611 Advanced Accounting Theory—Equities 3 hrs. Fall

A study of the underlying concepts and principles of corporate equities. Includes a study of capital stock, retained earnings, the entity theory and related materials.

612 Advanced Cost Accounting 3 hrs. Spring

A study of the more mature methods of cost measurement and control. Includes standard cost, budgetary control, profit-volume analysis, direct cost and return on employed capital.

616 Controllership 3 hrs.

The function of the controller in the organization. The controller's relationship to the construction, control, and interpretation of accounts for the internal and external administration of the organization is emphasized. The role of the controller in the organizational structure and relationship to other departments is also considered. Prerequisite: Accounting 512 or equivalent.
BUSINESS EDUCATION

Marietta, Head.

For Graduates Only

680 Principles of Business Education 2 hrs. Summer

682 Curriculum in Business Education 2 hrs. Summer
Principles, practices and problems involved in the evaluation and construction of business curricula.

684 Improvement of Instruction in Shorthand and Secretarial Subjects 2 hrs. Summer
A study of the latest research findings, materials, teaching procedures, tests and measurements, and possible future development in shorthand.

686 Improvement of Instruction in Typewriting 2 hrs. Summer
A study of the latest research findings, materials, teaching procedures, tests and measurements, and possible future development in typewriting.

688 Improvement of Instruction in Bookkeeping in General Business Subjects 2 hrs. Fall
A study of the latest research findings, materials, teaching procedures, tests and measurements, and possible future developments in the business subject-matter of this field.

689 Organization and Teaching of Office Practice 2 hrs. Spring
A consideration of aims and content of office-practice course in the secondary school, with plans and techniques for organizing and teaching the subject-matter of the course and its laboratory material.

GENERAL BUSINESS

Schneider, Head; Professors Burdick and Grossnickle; Associate Professors Healey, Morrison and Niemi; Assistant Professor Jen.

For Graduates and Upperclassmen

520 Security Analysis 3 hrs. Spring
Analysis of securities, market values and investment programs. Interpretation of financial reports, factors and conditions. Prerequisite: 326 Investments, or consent of instructor.
524 Financial Management 3 hrs. Fall, Spring

Study of the principles and problems underlying the management of capital employed in the business. Prerequisites: Core subjects for the B.B.A., or consent of instructor.

526 Advanced Life and Health Insurances 3 hrs. Spring

The topics covered include Business Life and Health Insurance; insured pension plans, the use of life insurance in estate and tax planning; the relationship of social security programs to life insurance; professional ethics in life insurance; and new developments in the life and health insurance fields. Prerequisite: 422 Life Insurance, or consent of instructor.

528 Problems in Multiple-Line Insurance 3 hrs. Spring

This course uses the case analysis method in dealing extensively with both personal and commercial risk surveys and analyses. Special problems in rating, loss adjustment, marketing, underwriting, and finance in the property and casualty fields are also solved. Prerequisite: 424 Property Insurance or 426 Casualty Insurance and Bonding.

542 Law of Real Property 3 hrs. Spring

The study of the law of Real Property including Property Rights, Mortgages, Leases and Land Contracts.

544 Law of Business Organizations 3 hrs. Fall

The study of the law of Business Organizations including Partnership, Corporations and Trust Organizations.

598 Readings in Business 1-4 hrs. Fall, Spring

Directed individual study of bodies of knowledge in business administration which will enhance the student's areas of interest and competence.

For Graduates Only

600 Seminar in Business 3 hrs. Summer, Fall, Spring

Intensive problem solving in the primary business fields. Consent of instructor required. May be re-elected.

620 The Capital Market 3 hrs. Fall

Study of the courses and flow of demand and supply of credit. The business application of monetary theory to financial institutions and their operational problems. Prerequisite: 520 Security Analysis or permission of the instructor.

622 Corporate Financial Problems 3 hrs.

A study of the financial problems, policies, and procedures employed in diversification, expansion, merger and other forms of corporate change.
624 Financial Statement Analysis 3 hrs. Spring

Intensive financial analysis to establish trends and fiscal controls in business operations. Structural investigation of financial statement relationships utilizing ratios, capitalization of earnings, and other analysis media fundamental of management decision and action.

626 Insurance and Government 3 hrs. Fall

This course covers the historical development, legal background, and methods of governmental supervision of the insurance industry. Principal emphasis will be placed upon state supervision of insurance, but the role of the federal government in present and future regulation is also considered. Detailed consideration is given to insurance department administration and staff, licensing and examination of companies, rate and policy filings, and control of insurance agents and adjusters. Prerequisite: consent of instructor.

640 Legal Controls of the Business Enterprise 3 hrs. Fall

An analysis of the current legal problems as they apply to the control and regulation of various types of business enterprises.

642 Statistical Interpretation 3 hrs. Spring

A survey of the advanced statistical techniques as applied to business problems. Includes probability theory; estimation of proportion, means and variances; test of hypothesis, simple and multiple regressions. Also include topics selected from the following fields: sequential analysis; nonparametric methods; elements of experimental design; analysis of variance and introduction to statistical decision theory. Prerequisite: A course in statistics or consent of instructor.

MANAGEMENT

Hartenstein, Head; Associate Professors Booker and Niemi; Assistant Professors Keenan and Leader.

For Graduates and Upperclassmen

550 Management Problems 3 hrs. Summer, Fall, Spring

An opportunity to approach business from the case-study method by working solutions to actual management problems.

551 Administrative Behavior 3 hrs. Summer, Fall, Spring

Designed to integrate the contributions and implications of the behavioral sciences to modern business practice to promote and maintain effective human relations for the individual and the group. Extensive use of cases and conference methods is made.

552 Management Report Writing 3 hrs. Fall, Spring

A study of the techniques in and applications of management reports and management-report writing. Actual management reports in
the various fields will be studied. The development and practice of technical report writing will be stressed.

553 Planning and Analysis for Production 3 hrs. Fall

An examination of modern methods of analysis, their relation to the production process and their utilization in management planning. Cases and problems will be utilized. Prerequisites: Principles of Economics, Statistics 244.

554 Introduction to Management Science 3 hrs. Spring

Modern scientific techniques used in business and industry for controlling operations, maximizing profits and minimizing costs. Allocation of men, money, and machines among alternative uses. Other strategies and control methods applicable to management, marketing, the finance. Prerequisite: Statistics 244.

555 Electronic Data-Processing 3 hrs. Fall, Spring

Examination of current literature in electronic data processing with special emphasis on systems analysis, applications of computers to business problems and feasibility studies.

556 Office Management 3 hrs. Spring

Areas of office services from the managerial viewpoint. A brief overview of the problems of organizing, constructing, installing and maintaining office systems.

562 Administrative Dynamics 3 hrs. Fall

The development of a model to integrate management principles, administrative behavior, small group research and individual psychological theory. Both static and dynamic models are analyzed.

564 Industrial Dynamics 4 hrs. Fall

Development of a model for the integration of the functional areas of business to create more successful management policies and organizational structures. Prerequisite: Statistics 244 or equivalent.

598 Readings in Management 1-4 hrs. Summer, Fall, Spring

Directed individual study of bodies of knowledge not otherwise treated in departmental courses. May be repeated for credit by permission of Department Head.

Open to Graduates Only

600 Seminar in Management 3 hrs. Summer, Fall, Spring

Intensive problem solving in advanced management topics under simulated conditions of a business conference, including the preparation of a major staff report. Consent of instructor required. May be repeated for credit by permission of Department Head.
650 Managerial Aspects of Labor Law 3 hrs. Spring

Background and consequences for business policy of law governing collective relationships between employers, employees, and their representatives with special emphasis on interpretation and evaluation of current legislation.

652 Business Policy 3 hrs. Spring

Integration of background acquired by the student from such varied fields of instruction as accounting, finance, industrial management, law, personnel administration and marketing. Top management problems emphasized. Discussion of actual business cases.

654 Problems of Personnel and Industrial Relations 3 hrs. Fall

A critical examination of current practices and trends in personnel administration and industrial relations in the light of recent research and findings in the field of human relations in industry. A review of personnel and labor relation functions in the enterprise, with attention to the application of theory and principles, the conduct of personnel research activity, and the relation of the industrial relations function to the goals of the enterprise as a whole.

655 Organization Theory 3 hrs. Fall

An interdisciplinary approach towards the analysis of the variables affecting the modern business organization with emphasis on the relationship of the role of the social sciences to the behavior of the segments of the firm. Prerequisite: Management Principles or consent of instructor.

658 Advanced Management Practices 3 hrs. Fall, Spring

Current trends and advanced problems in the organization and management of business enterprises. Prerequisite: Consent of instructor. May be repeated for credit by permission of Department Head.

MARKETING

Trader, Head; Associate Professor Hardin; Assistant Professor Hill.

Open to Graduates and Upperclassmen

558 Purchasing Problems 3 hrs. Spring

Value analysis and the evaluation of purchasing department performance. Problems involve organization, materials management, operation, vendors relations, and make or buy decisions. Prerequisite: Purchasing 358 or permission.

570 Advanced Salesmanship 3 hrs. Fall

Background of basic principles and analysis of selling techniques applied principally to specialty fields. Prerequisite: Approval of instructor.
572 Advertising Copy, Layout and Typography 3 hrs. Spring
Study of the theory and practice in the writing, preparation and
typographical composition of advertising including the writing of radio
and television commercials. Prerequisite: Adv. 374.

573 Retail Buying Techniques 3 hrs. Spring
Deals with the work of the store buyer; where, when, and how to
buy. Terms, prices, invoices, legal aspects, and other arrangements with
vendors are studied.

574 Problems in Marketing 3 hrs. Fall, Spring
A study of current marketing problems utilizing the case method of
study. The analysis of current periodicals dealing with marketing prob-
lems will also be covered in detail. Will provide the student with a
practical approach to our dynamic marketing structure and the problems
faced in this area. Prerequisite: Marketing 240.

576 Marketing Research 3 hrs. Fall, Spring
Designed to include an introduction to Market Research, the pro-
cedures and applications of research, and the accomplishment of a
research project. Term project includes selection of problem, preparation
of questionnaire, data collection, analysis of data, final report. Prerequi-
site: Marketing 240, Sr. status, or approval of instructor.

579 International Marketing 3 hrs.
An examination of the theories and principles of international mar-
ketin$. Attention directed to related commercial policies, trade practices
and procedures, and marketing research tools and techniques needed to

598 Readings in Marketing 1-4 hrs. To be arranged
Directed individual study of bodies of knowledge not otherwise
treated in departmental courses.

For Graduates Only

600 Seminar in Marketing 3 hrs. Spring
Intensive problem solving in the primary business fields. Consent
of instructor required.

672 Marketing Management 3 hrs. Spring
Analysis of marketing activities from the management point of
view. Includes study and decision making relative to competition, de-
mand analysis, cost analysis, product design, promotion, pricing and
channels of distribution.

674 Market Programming 3 hrs. Fall
Designed for special emphasis toward developing a total marketing
strategy within an organization. Practical application of the marketing
tools and techniques to a current problem originating in a business
organization.
School of Education

JAMES H. GRIGGS,
Dean

Roland S. Strolle,
Assistant Dean

Graduate Offerings:

Education

Physical Education for Men

Physical Education for Women
SCHOOL OF EDUCATION

The School of Education includes the following departments and units: Education, Physical Education for Men, Physical Education for Women, Directed Teaching, Campus School, and the Educational Resources Center.

Its purpose is to prepare carefully selected students through well defined teacher education curricula for administrative, supervisory and instructional positions in the public schools.

The curricula offered in Education are described in Section II of this bulletin.

EDUCATION

Griggs, Dean; Strolle, Assistant Dean; Professors Boles, Bryan, Buelke, Carter, Chiara, Frederick, Govatos, Mallinson, Manske, McCuskey, Sebaly, Swickard, and Viall; Associate Professors Davis, Eisenbach, Juul, Kanzler, Moore, Overton, Robinson, Schroeder, Snow, and Weaver; Assistant Professors Betz, Blasch, Davenport, Engle, Farrow, Heger, Heinig, Kaarlela, Lamper, Myer, Sinclair, and Turansky; Instructors Blaha, Crawford, and Suterko.

Core Courses

Open to Graduates Only

601 Introduction to Research 2 hrs. Summer, Fall, Spring

An introduction to the nature and methods of research, with special emphasis upon the practical application of research findings to problems in each student's area of major interest.

602 The School Curriculum 2 hrs. Summer, Fall, Spring

Educational programs for children and youth, with emphasis on principles and problems of curriculum development common to all levels of instruction.

603 Foundations of American Education 2 hrs. Summer, Fall, Spring

A study of American education as affected by the great traditions and movements of Western culture. Consideration is given to historical, socio-economic and philosophical factors in the interpretation of modern educational issues and the solution of present-day educational problems.
604 Educational Psychology 2 hrs. Summer, Fall, Spring
*Post-Session Workshop, Walden Woods, near Hartland, Michigan

A study of the forces which motivate behavior and affect the learning process, with particular reference to problems of growth, development of meanings and individual differences. Provisions are made to meet the needs of students with varying backgrounds in psychology.

Administration

For Graduates and Upperclassmen

504 Workshop in Human Relations 2 hrs.

Opportunity is provided for teachers, administrators and other school personnel to work together in the study and solution of problems in human relations, particularly in the fields of intercultural relations, group process, communication and home-school-community relations. Resource persons in sociology, psychology, speech, business and education will participate in the workshop. Not offered 1964-65.

Open to Graduates Only

613 Elementary School Supervision 2 hrs. Summer, Spring

Emphasis is placed on practical problems of educational leadership and supervision in the elementary school. The roles of supervisors, principals, superintendents and teachers are studied.

614 Elementary School Administration 2 hrs. Summer

Deals with problems confronting the elementary school principal, such as organization of the school program, parent and community relationships, personnel problems, discipline, evaluation and the like.

624 Secondary School Administration and Supervision 2 hrs. Summer, Spring

Designed for superintendents, principals and experienced teachers interested in administrative matters. Makes detailed study of the general problems of organization, supervision and management of the high school.

*The Inter-Institutional Seminar in Child Development, of which Western Michigan University is a member, is sponsoring a seminar for graduate students in the study of child development and related areas. The teaching staff consists of distinguished child development specialists and educators from foreign and American universities. The seminar is accredited on the graduate level by all the participating universities. A limited amount of scholarship support is available.

For further information, please contact Dr. Louis A. Govatos, 102 Education Building, Western Michigan University.
653 Principles of Community School Organization  2 hrs.

The history and philosophy of the community school as a special instrument, its program, and organizational problems related to the staff, plant, and community. (This course will be staffed by the faculty of the Graduate Training Program at Flint, and will be offered through the Division of Field Services.)

657 Community School Administration

Principles of administration relating directly to the community school program. Emphasis on the task, the personnel, and the dynamic community setting. (This course will be staffed by the faculty of the Graduate Training Program at Flint, and will be offered through the Division of Field Services.)

660 Principles of Educational Administration  2 hrs. Summer, Fall

The philosophy and principles underlying school administration including governmental control, school plant, finance, personnel and the internal organizations. Presupposes a rudimentary knowledge of administration and some practical field experience.

661 Social Interpretation  2 hrs. Summer

Deals with community education with respect to the educational program. Considers the principles of educational interpretative service and their application in every phase of the system.

662 Educational Leadership  2 hrs.

Designed for present and prospective administrators, supervisors and college instructors interested in improving educational programs through constructive methods of leadership. Special emphasis is placed on the importance of human relations in curricular change. Not offered 1964-65.

663 Workshop in Educational Administration  2 hrs.

Open to experienced administrators and others interested in working through administrative problems in school systems. Areas to be studied include: school buildings, finance, public relations, internal administrative problems, personnel policies and educational leadership. Not offered 1964-65.

664 School Plant Planning  2 hrs. Summer

Designed for present and prospective administrators and supervisors interested in the process of planning school plants. It includes such aspects as building surveys, the determination of needs, and legal and financial considerations. Emphasis is on planning for the building. Some field visits will be expected.

665 Financial Aspects of School Administration  2 hrs. Spring

Considers school expenditures, sources of revenue, techniques of borrowing, bonding, tax allocations, state aid formulas, accounting procedures and similar financial problems facing school administrators.
666 School Business Management 2 hrs. Spring

Designed for present and prospective school administrators and school business officials. Treats such items as principles of business management, budgetary practices, financial accounting, purchasing and supplies, payroll management, school activity fund accounting, financial reporting and auditing, and business management of auxiliary services.

667 Administration of School Personnel 2 hrs. Fall

Problems related to teaching and non-teaching personnel in the public schools. Consideration given to policies and procedures relating to selection, assignment and promotion of personnel; orientation of new staff; salary schedules; retirement; tenure; in-service education; teacher evaluation; teacher organizations; and professional ethics.

668 School Law 2 hrs. Summer

Focuses attention on basic legal principles, on the interpretation of school legislation, and on the legal responsibilities facing the administrator, the teacher, the school board, and the parent.

Blind Rehabilitation

For Graduates and Upperclassmen

590 Physiology and Function of the Eye 2 hrs. Summer, Fall, Spring

The anatomy, structure and function of the eye. Various eye diseases and malfunctions will be stressed. The student will be given an opportunity to observe all types of eye conditions, eye prosthesis and low visual aids.

591 Braille and Other Communication Methods 2 hrs. Summer, Fall, Spring

Acquaints the student with the basic rudiments of Braille reading and writing. Familiarization with other means of communication used by the blind.

592 Education of the Blind and Partially Sighted 2 hrs. Summer, Spring

An overview of the education of visually handicapped child. An introduction to the literature, history, principles, practices and problems in the field, including curricular and methodological adaptations of various educational programs.

593 Methods and Techniques of Teaching Braille and Other Areas of Communications 2 hrs. Spring

Provides students with the ability to teach areas of communication essential to the blind adult, such as: social communication, use of Braille, typing, script writing, electronic devices and other media. Opportunity for supervised practical application of methods will be afforded to the student.
Open to Graduates Only

692 The Dynamics of Blindness and Rehabilitation 2 hrs. Spring
The development of the status of the blind and their integration into a sighted society. The relationship of the emotional and social correlates of blindness to the development of the blind individual as a contributing member of society.

693 Counseling of the Blind 2 hrs. Summer, Fall, Spring
(Hines V. A. Hospital)
Acquaints the intern with techniques and procedures used in testing and counseling blind individuals.

694 Orientation and Mobility 2 hrs. Summer, Fall, Spring
Techniques will be acquired under conditions simulating blindness. Emphasis will be placed on the use of the remaining senses, common objects, the muscles and the skeleton in activities of daily living.

695 Advanced Orientation and Mobility 4 hrs. Summer, Fall, Spring
Orientation and mobility techniques and the proper methods of incorporating them into a person's method of travel. Guided observation and practice with blinded individuals ranging in age from the pre-kindergarten through the aged in various environments, such as the: school, residence, community, and work situations.

696 Internship in Orientation and Mobility
(Hines V. A. Hospital) 8 hrs. Summer, Fall, Spring
The intern, under close supervision of a Master Therapist, will instruct blinded children and adults in all phases of orientation and mobility. The intern will be afforded the opportunity to work with all levels of students in various environments. He will aid the Master Orientator in working with blinded individuals who have additional severe disabilities.

Curriculum

For Graduates and Upperclassmen

502 Curriculum Workshop 2 hrs.
Opportunity is provided for teachers, supervisors and administrators in selected school systems to develop programs of curriculum improvement. A wide variety of resources is used for instructional purposes, including several specialists, library and laboratory facilities, field trips, audio-visual materials and the like. Not offered 1964-65.

510 The Elementary Curriculum 2 hrs. Summer
A consideration of content and procedures to adapt experiences of pupils in elementary schools to modern conditions and to child needs and interests. Individual or committee reports concerning the improvement of various aspects of the elementary school curriculum will be prepared.
511 The Elementary Curriculum 2 hrs.

A continuation of 510. Emphasis will be placed on developing and organizing resource materials for actual use in school systems represented by those taking the course. Not offered 1964-65.

Open to Graduates Only

605 The Process of Curriculum Development 2 hrs. Summer

This course, designed for instructional leaders, will deal with forces causing and inhibiting curricular change, techniques of organizing and supporting curriculum improvement, perceptions of individuals and groups in relation to change, and communication with professional and lay groups involved. Prerequisite: Education 602 or consent of instructor.

621 The Secondary School Curriculum 2 hrs. Summer

Covers modern practices and recent emphases and trends in subject areas of the secondary school curriculum. Prerequisite: 502 The School Curriculum or equivalent.

Elementary Education

For Graduates and Upperclassmen

587 Educational Therapy in Reading 2 hrs. Summer, Fall

The psychological, sociological and physiological factors affecting children's reading ability, together with laboratory application of such knowledge in the prevention, diagnosis and treatment of reading problems. Open only to experienced teachers by permission of the instructor.

Open to Graduates Only

610 Guiding Child Development in the Elementary School 2 hrs. Fall

Designed to help nursery, kindergarten and elementary school teachers gain an understanding of the manner in which skills, information, attitudes and behavior patterns are acquired and modified. The contributions of each curricular area, such as: language, arts, arithmetic, science, social studies, health, etc., are stressed with emphasis on suitability of experience for different stages of growth, instructional practices and appropriate procedures of evaluation.

615 Seminar in the Teaching of Reading 2 hrs. Summer, Spring

Designed to acquaint teachers, reading specialists and administrators with the current literature, research, methods and materials used in teaching children how to read. Special emphasis is placed on reading in relation to other aspects of language and on reading in the content fields.
Guidance and Personnel

For Graduates and Upperclassmen

Education 580 Principles and Philosophy of Guidance 2 hrs.
(Service course for non-counseling majors)
An introductory course for elementary and secondary teachers. A thorough investigation of the democratic philosophical concepts underlying guidance service programs; a survey of the history and principles of guidance; an overview of guidance services.

Education 581 Interpretation and Use of Tests in Guidance 2 hrs.
(Service course for non-counseling majors)
Designed to familiarize students with various psychological tests and scales that may be used in school guidance programs. Tests are taken and scored by students, and the results are interpreted and evaluated.

Education 582 Occupational and Educational Information 2 hrs.
(For counseling and non-counseling majors)
Discussion of theories of occupational and educational choice stressing knowledge of sources, use, evaluation and techniques of imparting occupational and educational information including college choice, loans, fellowships, scholarships and grants in education.

Education 583 Guidance Workshop 2 hrs.
(Service course for non-counseling majors)
Designed for teachers, counselors, supervisors and administrators in selected school systems to study particular guidance problems and procedures in relation to their local guidance program. A wide variety of workshop methods and resources is used.

Education 584 Elementary School Guidance 2 hrs.
(Required for elementary school counselors, and a service course for non-counseling majors)
Designed to give teachers, administrators and guidance workers an understanding of principles and techniques of guidance programs in elementary schools.

Open to Graduates Only

Education 680 The Personnel Worker and His Role 4 hrs.
A basic introductory unit encompassing a thorough investigation of democratic philosophic concepts undergirding Guidance and Personnel programs, and a survey of the history and principles of Guidance and Personnel Services. In addition, the student will be involved in group counseling which may afford an opportunity for him to progress in self-understanding and self-evaluation. Prerequisites: 1. Acceptance by the Graduate School, 2. Acceptance by the Guidance and Personnel Services curriculum area, 3. Acceptance by the Education Department.
Education 681 Organization and Administration of Student Personnel Services 4 hrs.

A unit emphasizing the organization and administration of Student Personnel Services at the local, state and national level. Competencies will be developed in the use of questionnaires, school records, evaluations, autobiographies, anecdotal records, sociometrics, rating scales, case studies and conferences, and parent-teacher conferences. Students will study various psychological tests and scales used in Guidance and Personnel Services programs, and will administer, score and interpret these devices. Prerequisite: Education 680.

Education 682 Research in Guidance and Personnel Services 4 hrs.

This unit may be substituted for Education 681 if the student is not planning to become an elementary or secondary school counselor. The unit is designed to encourage independent study and research in the area of Guidance and Personnel Services. The student will formulate, design and submit a research project to the Guidance and Personnel Services staff member who is responsible for guiding the total experience. Prerequisites: Education 680, Education 601 and consent of adviser.

Education 683 Theory and Laboratory Practice in Counseling 4 hrs.

An advanced unit designed to synthesize counseling theory and counseling laboratory experiences. Learning activities, such as tape recordings, video tapes, role playing and actual counseling sessions, will be provided to help make theoretical constructs concrete and practical. The laboratory experience will involve counseling contacts which expose the candidate to various aspects of the counseling relationship. Prerequisites: Education 680, and 681 or 682.

Education 684 Supervised Practicum and Professional Experience 4 hrs.

A unit designed to continue and enlarge upon the laboratory experiences initiated in Education 683. In addition, there will be a supervised professional experience which can be effected at Western Michigan University Counseling Bureau, a public school setting, or governmental and social agency settings (e.g. Juvenile Court) which will be designed to provide the student with supervised practical experience in his major vocational area of interest. Prerequisites: Education 680, 681 or 682, and 683.

Philosophy and Foundations

For Graduates and Upperclassmen

551 Philosophy of Education 2 hrs.

For graduate students and teachers of experience. Analyzes and interprets changes in education taking place in this and other countries. Not offered 1964-65.
Open to Graduates Only

652 Comparative Education 2 hrs.

Provides an analysis of selected educational systems throughout the world. The goals, organizational structure, curricula, and methods of education are examined in relation to the salient features of each culture, and in comparison with the American educational system. Not offered 1964-65.

658 The Challenge of Soviet Education 2 hrs.

A study of education in a large totalitarian state. The subject of education will be examined against the background of Russian history, Marxism, Leninism, the Soviet social system, and the world situation. The question of meeting the challenge will then be considered. Not offered 1964-65.

690 The Community College 2 hrs. Summer

Studies the historical development of the junior and community college movement; the function of the community college in the total educational program; the divergent aims and curricular requirements of pre-professional, academic and pre-vocational courses; the problem of guidance and counseling as an integral part of the program; and methods and materials of instruction at the college level.

Secondary Education

For Graduates and Upperclassmen

520 The Junior High School 2 hrs. Spring

A detailed consideration of the basic concepts underlying an effective junior high school program. Study of the development and purposes of the junior high school; curricular organization and problems; co-curricular activities; instructional materials.

Open to Graduates Only

620 Improvement of Teaching in Secondary Schools 2 hrs. Fall

For teachers of experience, high-school principals, and superintendents who desire to consider the larger problems of classroom instruction. Open also to graduate students without teaching experience.

622 Common Learnings Program 2 hrs. Fall

Designed for teachers and administrators engaged in or preparing for unified programs in junior and senior high schools. Deals with newer practices regarding integration of knowledge from several fields around the needs of secondary youth.

623 The Role of the Secondary School in American Society 2 hrs. Spring

Considers the place of the high school in the American social scene. Preparation for vocation, citizenship, marriage and family life and other
problems of high school youth are discussed in relationship to major social trends and forces.

687 Improvement of Reading in Secondary Schools. 2 hrs. Fall

Designed to aid teachers in developing the reading abilities and skills of their students at the secondary level. Emphasis is on aims, materials and procedures.

Service

For Graduates and Upperclassmen

506 Adult Education 2 hrs.

Includes such topics as organizing and financing formal public school adult education programs, promoting informal adult education activities, leadership training, program planning and adult education group techniques. Students will be permitted to select special areas of interests for research and study. Not offered 1964-65.

508 Parent Education 2 hrs. Summer

Places major emphasis on home problems which have educational implications for the child. Parent-teacher relationships, council programs and cooperative efforts for improvement of education in home and in school are studied.

546 Driver and Safety Education Post-Session Workshop 2 hrs. Summer, Fall, Spring

Deals with several aspects of safety education in the home, school and community, with special emphasis on preparing secondary school teachers of driver training and safety education. Materials and methods, psycho-physical testing, sound driving practices, pedestrian protection, "Behind-the-Wheel" training in dual-control cars and accident prevention procedures are an integral part of the course.

548 Audio-Visual Education 2 hrs. Summer, Fall, Spring

Acquaints teachers and administrators with the principles and practical uses of multi-sensory aids to education, including field trips, machines and creative materials.

549 Production of Instructional Materials Post-Session Workshop 2 hrs. Summer, Fall, Spring

Provides many laboratory experiences in making such instructional materials as: bulletin board displays, charts, wet and dry mounting of pictures, film strips and 2" x 2" slides, silk screen process, magnetic boards, handmade slides, mimeograph techniques, etc. Opportunity will be given for students to work on those materials which interest them.

555 Alcohol Education 2 hrs.

Deals with problems of alcohol education in the school and community, with special emphasis on teaching methods and procedures, rela-
tionships with governmental and social agencies, and administration of program.

Open to Graduates Only

646 Advanced Driver and Safety Education 2 hrs. Summer Post-Session Workshop

Advanced professional preparation to meet the traffic and safety needs of schools, home and community. Special emphasis on traffic safety engineering and research, psychology of the motorist, and techniques of driving instruction. Laboratory experiences including driving range. Prerequisite: Education 546 or the equivalent.

650 Growth and Development in Later Adolescence 2 hrs.

Designed to develop an understanding of the behavior patterns, problems and adjustments of college-age youth. Special emphasis is placed on the role of the junior college teacher in guiding the social and emotional as well as the intellectual development of the students. Not offered 1964-65.

669 Supervision of Student Teaching 2 hrs. Summer, Fall, Spring

Deals with the significance of student teaching in the pre-service education of teachers, the role of the supervising teacher, and the problems associated with providing high quality student teaching experiences. Many types of student teaching programs and their components of planning, evaluation, supervisory conferences and follow-up are analyzed.

670 Directed Teaching 2-6 hrs. Summer, Fall, Spring

Open to graduate students who have completed the major portion of professional courses required for certification.

688 Evaluation in Education 2 hrs. Summer

Designed to develop skills, techniques, attitudes and understandings involved in the measurement and evaluation of individual learning and development as well as in the appraisal of the total school program. Emphasis is placed on the construction, use and interpretation of formal and informal evaluative devices, and upon the development of a philosophy of evaluation as an integral part of learning.

Special Education

For Graduates and Upperclassmen

512 Workshop in Special Education 2-4 hrs.

Designed for teachers, counselors, psychologists, social workers and others interested in studying selected aspects of special education at appropriate locations, such as state hospitals and special schools. A variety of instructional experiences are provided, including conferences.
with specialists, special library facilities, audio-visual materials, and library activities with handicapped children. Not offered 1964-65.

521 Practicum in Special Education 2 hrs. Fall
This course consists of supervised tutoring of exceptional children with learning problems, such as the mentally retarded, perceptually handicapped and emotionally disturbed. Educational evaluation, teaching materials and techniques, and management of emotional and social aspects of the learning process are included in the course content. Regular clinical case conferences directed by the instructor and members of the institutional staff will be held.

530 Education of Exceptional Children 2 hrs. Summer, Fall, Spring
Deals with the problems and methods involved in the adjustment and training of exceptional children in the schools—the mentally retarded, the gifted, the crippled, the deaf, the blind, the emotionally unstable and the delinquent.

531 Methods and Materials for the Deaf 2 hrs.
Deals with curricula, curricular materials and special methods to be employed in teaching deaf and hard-of-hearing children. Not offered 1964-65.

532 Mental Deficiency 2 hrs. Summer, Fall, Spring
The psychology and pathology of mental deficiency including causation, diagnosis, classification, prognosis and therapy at all levels.

533 Education and Control of the Mentally Handicapped 2 hrs. Summer, Spring
Deals with roles of courts, institutions, schools and other agencies in control, education and custody of the mentally handicapped.

534 Methods and Materials for Mentally Handicapped Children 2 hrs. Summer, Fall, Spring
Principles of learning and instructional practices applicable to mentally handicapped children. Special attention is given to problems of the mentally retarded child with elementary curricular materials.

536 Speech for the Deaf 2 hrs.

537 Language for the Deaf 2 hrs.
The development and application of the principles of the English language and presentation to the deaf children. Attention will be given to the Language Principle Method, the Barry Five Slate System, Straight Language for the Deaf and Wing Symbols. Not offered 1964-65.
510 Organization and Administration of Special Classes for the Mentally Handicapped 2 hrs. Summer, Fall

Principles and practices of organization and administration at state, county and district levels. Legal aspects including state aid will be given consideration.

512 Therapeutic Care of Crippled Children 2 hrs. Fall

A study of therapies, services and orthopedic appliances necessary for the care, education and rehabilitation of crippled children. Identification of crippling conditions and their management in home, school and community. Lectures, demonstrations, clinics by physicians, physical and occupational therapists.

513 Education of Crippled Children 2 hrs. Summer, Spring

Study of educational and psychological needs of crippled children. Characteristics, types and special class placement of crippled children. Methods and materials with special emphasis on individual differences in learning ability. Special educational problems involved in teaching the brain-injured child.

585 Mental Hygiene of Childhood and Adolescence 2 hrs. Summer, Fall, Spring

Deals with the problems of emotional adjustment and maladjustment in childhood and adolescence.

588 Psychopathology of Childhood 2 hrs. Summer, Fall

A comprehensive study of the causes, manifestations, treatment and prognoses of psychiatric conditions in children suffering from neuroses, psychoses, schizophrenia, behavior disturbances, psychopathic personality disorders, organic malfunctioning, sexual deviations, etc. The learning difficulties and educational problems presented by emotionally disturbed children. Terminology and concepts needed for an understanding of mental illness and for effective communication with members of related psychiatric professions.

589 Education of Emotionally Disturbed Children 4 hrs. Spring

Taken concurrently with directed teaching in this field, this course provides group and individual guidance regarding problems encountered in teaching the emotionally disturbed. Methods of teaching, evaluation, cooperation with other agencies and professions, staff diagnostic conferences, and inter-disciplinary teamwork are among the areas covered. Resource persons include psychiatrists, psychologists, social workers, etc.

Open to Graduates Only

630 Clinical Study of Exceptional Children 2 hrs. Summer

Post-Session Workshop (Coldwater)

This course is intended to illustrate methods of diagnosing and treating problems of exceptional children. Students make observations
and interpretations of the children and carry on remedial work with them. The contributions of other professions will be incorporated.

632 Problems in Education of the Mentally Handicapped 2 hrs. Fall
Problems in education of mentally handicapped children including educability; philosophy of education of the mentally handicapped; organization of programs; and functions of institutions.

633 Education of Gifted and Talented Children and Youth 2 hrs. Spring
This course is designed to develop a student's understandings of and appreciation for the abilities, interests, talents, and problems of gifted children and youth. Attention will be given to methods and criteria used in identifying gifted, talented and creative individuals. Through the use of available research data students will be required to complete a critical evaluation of educational provisions including segregation, acceleration, and enrichment. Personal, social, and cultural factors which directly or indirectly influence the growth and development of these individuals will be considered.

634 Theory and Practice in the Education of Perceptually Handicapped Children 4 hrs. Spring
This course explores the biological, psychological, and educational problems of children who exhibit specific characteristics associated with brain injury and perceptual disturbances. The underlying theoretical principles of perceptual and conceptual learning are presented. Educational procedures are discussed and various methodologies are examined. Children with perceptual handicaps are studied, and the students learn to prepare appropriate teaching devices.

635 Counseling Parents of Exceptional Children 3 hrs.
This course explores the dynamics of parental reactions to their handicapped children. Techniques of dealing with stress situations in the home, in the school, and in the community are developed. The students are given opportunities of working with parents of exceptional children and helping them in coping with the problems they face. Not offered 1964-65.

636 Seminar in Special Education 2 hrs. Fall
This course is designed for experienced teachers to examine in depth the social, emotional, and educational problems of the children with whom they work and the multiple approaches utilized in meeting their needs.

637 Current Research in Special Education 2 hrs. Spring
This course explores recent researches in various areas of special education. The studies are examined with regard to their validity, significance, and their implications for the education of exceptional children.

640 Organization and Administration of Special Classes and Services for Exceptional Children 2 hrs. Summer, Fall
Principles and practices of organization and administration of special programs at state, county, and local levels will be considered, including legal aspects of state aid.

76
Directed Teaching, Special Education 3-6 hrs. Summer

This course is a requisite for students who are preparing to teach in special education. The course is preferably taken after directed teaching has been completed in a regular classroom.

PHYSICAL EDUCATION FOR MEN

Gary, Head; Associate Director of Athletics Gill; Professor Maher; Associate Professors Boven, Dales and Doolittle.

For Graduates and Upperclassmen

561 Problems in Interscholastic and Intercollegiate Athletics 2 hrs. Summer

Relationship of athletics to education is considered. Problems in the organization of an athletic program including eligibility, finance, liability, transportation, safety, facilities and equipment will be discussed.

For Graduates Only

630 Advanced Techniques in the Coaching of Football 1 hr. Summer

Considers problems in the coaching of fundamentals, the organization of practice periods and offensive and defensive strategy. Prerequisite: Either coaching experience or completion of an undergraduate course in the sport concerned.

631 Advanced Techniques in the Coaching of Basketball 1 hr. Summer

The same as 630.

632 Advanced Techniques in the Coaching of Baseball 1 hr. Summer

The same as 630.

633 Advanced Techniques in the Coaching of Track 1 hr. Summer

The same as 630.

634 Advanced Techniques in the Coaching of Minor Sports 2 hrs. Summer

Problems and coaching techniques in minor sports such as wrestling, tennis and golf. Rules and regulations governing meets and play are discussed. Actual participation in the activities is required. Either coaching experience or completion of an undergraduate major or minor in the field of Physical Education is a prerequisite.

642 Physical Fitness Workshop 2 hrs. Summer

An intensive study of problems related to the development and maintenance of physical fitness, including the areas of administration, curriculum, prescription of activities, and evaluation. Course will provide opportunity for cooperative exploration of significant factors
contributing to physical fitness and recommendations for their implementa-
tion at the elementary and secondary school levels.

650 Tests and Measurements in Physical Education
2 hrs. Summer, Spring

Acquaints students with the theory, selection, construction, admin-
istration and interpretation of appropriate tests in the field. Class activity will include study and discussion of selected tests, application, scoring, interpretation and construction of tests.

660 Current Studies in the Administration of Physical Education
2 hrs. Summer

For administrative officers as well as for teachers and directors of physical education. Includes a study of representative programs of physical education and a discussion of standards for evaluating such programs.

662 Curriculum Building in Physical Education
2 hrs. Summer, Spring

A course in the development of a practical progressive physical education program for the elementary schools and for secondary school boys. A review of children's characteristics, particularly those concerned with physical education, will be used as a basis for thorough analysis of the development of the fundamental and basic skills at the various age levels.

670 Community Recreation
2 hrs. Spring

Problems in community recreation. The essential elements pertaining to leadership, areas, facilities, programs, activities and methods of organization and administration are considered. A study is made of outstanding programs in operation. Recreation material is surveyed.

671 Camp Administration
2 hrs.

The organization and administration of camps and their program requirements and standards. Consideration is given to philosophy and objectives, personal skills in camp activities and methods of teaching them. Visits to camps are made and out-of-door activities are experienced. Not offered 1964-65.

672 Methods and Materials in Recreation
2 hrs. Fall

Best methods and materials for the teaching and organization of recreation activities. Activities used in recreation will be presented. Opportunities for organization and actual participation and leadership will be given. This course is open to all graduate students.
For Graduates and Upperclassmen

514 Materials and Methods for School Health Education 2 hrs.
Lectures and discussion emphasizing health supervision of school children, health teaching in various grades, and the interrelation of this teaching with that of other subjects. Attention is given to school and community cooperation in the school health program. Prerequisite: Consent of instructor. Not to be given until summer 1965.

544 Methods in Physical Education 2 hrs. Spring
Fundamental principles underlying the selection of subject matter and the technique of teaching gymnastics, games and rhythmic work for elementary and high-school pupils. Opportunity for observation and making of lesson plans.

561 Administration and Organization of Physical Education 2 hrs. Fall
Topics considered are administration of activities, physical examinations, excuses, special cases, records, schedules and relations with other services in the school.

For Graduates Only

640 Rhythms in Elementary Education 2 hrs. Fall
A study of the rhythmic movement needs of the elementary school child—(a) suggested methods of teaching through which children are stimulated to create their own ways of doing—(b) folk and social dancing as outgrowths of movement fundamentals—(c) teaching examples, sample lesson plans and up-to-date reference sources. The course will consist of lecture and activity classes.

641 Physical Education for the Elementary Classroom Teacher 2 hrs. Summer
A study of the developmental needs of the child in terms of physical activity; the role of physical education in childhood education; the responsibility of the classroom teacher in this area; demonstrations and practice in teaching activities.

661 Problems and Trends in Physical Education 2 hrs. Summer
Deals with modern trends and with instructional and supervisory problems involved in conducting an effective program of physical education. Critical appraisal of present practices.
662 Curriculum Building in Physical Education 2 hrs. Summer

A course in the development of a practical progressive physical education program for the elementary and secondary schools. A review of children's characteristics, particularly those concerned with physical education, will be used as a basis for thorough analysis of the development of the fundamental and basic skills at the various age levels.
School of
Graduate Studies

GEORGE G. MALLINSON,
Dean

Departments:
Librarianship
Thesis, Independent Research
Professional Field Experience
GRADUATE STUDIES

For Graduates Only

700 Thesis 6 hrs. Summer, Fall, Spring

Candidates for the Master of Arts degree may elect to write a thesis in their field of specialization under the supervision of one or more faculty advisers.

A student may elect this course in units of from two to six hours. The election should not be made in more than two units and must be made within a calendar year. Application forms must be submitted at the time of election of the thesis.

710 Independent Research 2 hrs. Summer, Fall, Spring

Designed for highly qualified advanced graduate students, or small groups, who wish to pursue individual studies or projects under the direction of a member of the graduate faculty. It may be elected in any department or division with permission of the Dean of the School of Graduate Studies, the student's graduate adviser and the faculty member under whom the student desires to work. Applications must be submitted prior to the election of the course.

711 Independent Research 2 hrs. Summer, Fall, Spring

A continuation of Graduate Studies 710. May be elected in any department or division with permission of the student's graduate adviser, Dean of the School of Graduate Studies, and the faculty member under whom the student desires to work. Prerequisite: Acceptance for Candidacy for the Master's Degree, and completion of Graduate Studies 710 with superior accomplishment. Application forms may be obtained at the Graduate Office and must be submitted prior to the election of the course.

712 Professional Field Experience 2-6 hrs. Summer, Fall, Spring

Designed for superior graduate students who wish to pursue internships or apprenticeships in off-campus activities in industries or institutions. May be elected in any department or division with permission of the student's graduate adviser, a faculty sponsor and the Coordinator of Professional Field Experiences. Prerequisite: An outline of the purposes of the student's internship or apprenticeship. Application forms and information about established programs may be obtained at the Graduate Office and must be submitted prior to the election of the course.
LIBRARIANSHIP

Lowrie, Head.

510 Selection of Books and Related Materials  3 hrs.  Summer, Fall, Spring

512 Reference Service  3 hrs.  Summer, Fall, Spring
Study and evaluation of basic reference and bibliographic sources. Critical examination of the publications of governmental agencies, societies and institutions especially as reference sources. Attention given to organization and methods of reference services in the library.

516 Elementary School Library Materials  2 hrs.  Spring
Problems in the selection and evaluation of books, periodicals, films, recordings and other materials for children with special emphasis on the content areas in the elementary school curriculum. Methods of stimulating interest in reading with attention to the retarded as well as to the gifted child. For teachers, parents, librarians and others who work with children. Prerequisite: 282 Children's Literature or the equivalent.

520 Field Assignment and Seminar  2 hrs.  Summer, Fall, Spring
An assignment in selected cooperating libraries for the purpose of giving the student experience in the organizational and administrative activities in specific types of libraries as basis for understanding their function and the principles underlying policy. The assignment may precede the opening of college or may be carried on during the term. Laboratory period for discussion of problems is held throughout the term. Term project also required of graduate students enrolled.

530 Introduction to Classification and Cataloging  4 hrs.  Fall
Introduction to the principles of cataloging and classifying the book collection. Includes study and practice in making the dictionary catalog and in classifying according to the Dewey Decimal Classification scheme. Students are taught to use the unit card system and are given practice in adapting Library of Congress and Wilson printed catalog cards, in assigning subject headings and in cataloging non-book materials.

531 Technical Processes: Instructional Materials Centers  4 hrs.  Summer, Fall
An introductory course in classification and cataloging in which emphasis is placed on processing materials for the instructional mate-

*Starred courses are open to students from other departments.
rials center. Includes processing of books and other printed matter and audio-visual materials. Includes also principles of application of the Dewey Decimal Classification system, the assignment of subject headings, adaptation of printed catalog cards and introduces various methods of processing audio-visual materials both for individual schools and centralized processing for systems. Includes laboratory experiences.

*542 Reading Interests of Young Adults 2 hrs. Summer, Spring

Study of the fields of literature suited to the interests of young people. Students are given opportunity through wide reading to develop principles and standards for the selection of the book collection. Includes an introduction of methods of stimulating broader reading interests and of conducting group book discussions with young people. Open to students in the Education Department and to others who expect to work with youth.

*546 Storytelling 2 hrs. Fall

Underlying principles of the art of storytelling; techniques, content and sources of materials. Practice in telling stories before groups of children is provided. Planning the story hour program for various ages as a means of developing appreciation of literature and stimulating an interest in reading.

Open to Graduates Only

600 Foundations of Librarianship 2 hrs. Summer, Fall

Gives the student professional background through study of the historical development of the library, European and American; the function of the modern library and its contribution to society; current trends in librarianship and current library literature.

*602 History of Books and Printing 2 hrs. Summer, Spring

Study of the development of the book from the earliest period to modern times. Considers the appraisal of the physical book as well as its relationship to social and cultural developments. Includes history of the alphabet, early writing materials, manuscripts, invention and spread of printing and evolution of book production.

612 Subject Bibliography: The Humanities and Social Sciences 3 hrs. Fall

A study and evaluation of the bibliographical sources in the social sciences and the humanities. Each student will be expected to compile a bibliography on a topic of his choice. Prerequisite: an introductory course in Reference. 612 need not precede 613.

*613 Subject Bibliography: The Sciences 3 hrs. Summer, Spring

A study and evaluation of the bibliographical sources in the sciences including the technical fields. Each student will be expected to compile

*Starred courses are open to students from other departments.
a bibliography on a topic of his choice. Prerequisite: an introductory course in Reference. 612 need not precede 613.

**614 Government Publications** 3 hrs. Spring

Study of city, state and federal documents and those of selected international agencies such as the United Nations. Problems of acquisition, organization and use of such collections in various types of libraries. Prerequisite: 512 Reference Service or equivalent.

**616 Curriculum Enrichment Materials** 2 hrs. Summer, Fall

Study of the sources for selection of teaching materials with emphasis on the content areas in the secondary school curriculum. Includes evaluation of books, pamphlets, periodicals, map and other audiovisual materials. Methods of instruction in the use of such materials are also studied and students are expected to complete a term project. Open to teachers and librarians.

**617 Reading Guidance for Children** 2 hrs. Summer, Fall

A study of the development of children's literature from approximately the 8th century in England and the Colonial period in the United States to the present time. Includes principles and techniques in guidance of children's reading interests; establishment of policies for selection of books especially in building the collections of public library children's departments.

**618 Libraries and Multi-Sensory Communication Media** 3 hrs. Fall

A study of modern multi-sensory aids employed in communicating ideas and considered in relation to their effect on libraries. Emphasis will be placed on program development through effective use of multi-media materials. Mass communications media and new instructional methods for fulfilling the objectives of public, school and college libraries will be examined.

**620 Public Library Service** 2 hrs. Spring

Origin and development, purposes and functions of the tax-supported public library (county and regional) in a democracy. Relation to other educational units in the community; distinctive problems and practices in public library organization and administration. Prerequisite: Library Organization and Administration or equivalent.

**622 Library Organization and Administration** 2 hrs. Summer, Fall

Organizational and administrative factors requisite for effective library service. Consideration given to governmental and community relations, to personnel, finance, buildings and equipment. Individual projects, lectures and class discussion supplemented by observation trips.

*Starred courses are open to students from other departments.
623 College and University Library Service 3 hrs. Spring
College and university library organization and administration, and the place of the library in academic institutions; effectiveness of library procedures; problems of acquisition, finance, buildings, equipment and the handling of special materials. Prerequisite: 622 Library Organization and Administration.

624 Children's Library Services 2 hrs. Spring
Organization and administration of public library service to children; emphasis on coordination with elementary school library service.

625 School Library Administration 2 hrs. Summer, Fall
The function of the library as a department in elementary and secondary schools. Includes study of special problems in personnel, in planning for space and equipment, in budgets and in the administration of centralized school library services in a school system. Standards for evaluation of school libraries are also studied. Open to graduate students in school administration as well as to librarianship students.

626 Library Service to Youth 2 hrs.
The function and administration of youth service in public libraries; study of methods in use in various library systems and the coordination with secondary school libraries. Not offered 1964-65.

627 Administration of the Instructional Materials Center 3 hrs. Spring
Presentation of the single agency concept of multi-media instructional materials (school library plus audio-visual center) and the educational role of mass communications (language laboratory, educational television, etc.). Techniques for organization and administration, distribution and accessibility within the individual school or within a school system. Use and care of printed materials, non-book materials and equipment. Laboratory work and field trips.

629 Library Research 3 hrs. Spring
Evaluation of library studies and their influence on library organization, administration and services. Opportunity for investigation and research in current problems in public, college or school libraries. Prerequisite: 622 Library Organization and Administration or equivalent.

630 Advanced Classification and Cataloging 3 hrs. Summer, Spring
A continuation of Introduction to Classification and Cataloging. Attention is given to comparison of classification systems; to cataloging of special types of materials including audio-visual materials and to methods of organizing centralized cataloging units.

644 Adult Reading Interests 2 hrs. Summer, Spring
Evaluation of the findings of reading interest studies and their implications in library service. Survey of the field of popular reading
in various subject areas. Development of an understanding of the reading habits, abilities, and needs of adults.

648 Adult Education Methods in Libraries 2 hrs. Fall

Function of the library in the continuing education of adults; relationship to other adult education agencies. Introductory leadership training and development of techniques in group work, book discussions, and film forums.
School of Liberal Arts and Sciences

GERALD OSBORN,
Dean

Graduate Offerings:

Art
Biology
Chemistry
Economics
English
Geography and Geology
History
Languages
Mathematics
Music
Philosophy
Physics
Political Science
Psychology
Science Division
Social Science Division
Sociology and Anthropology
Speech
The School of Liberal Arts and Sciences includes the departments of Art, Basic Studies, Biology, Chemistry, Economics, English, Geography and Geology, History, Languages, Mathematics, Music, Philosophy and Religion, Physics, Political Science, Psychology, Sociology and Anthropology, and Speech.

The School of Liberal Arts and Sciences offers a variety of subjects that familiarize the graduate student with the world of ideas, and deepen his understanding of the cultural heritage. The programs are designed to train the student to think objectively, critically, and creatively.

Graduate programs are offered in Biology, Chemistry, Economics, English, Geography and Geology, History, Mathematics, Medieval Studies, Philosophy, Physics, Political Science, Psychology, and Sociology and Anthropology.

The School of Liberal Arts and Sciences cooperates with the School of Education in offering the following teacher education programs: Teaching of Art, Teaching of Literature and Language, Teaching of Music, Teaching of Science and Mathematics, Teaching of Social Science, Teaching of Speech Correction and Teaching of General Speech.

ART

Hefner, Head.

For Graduates and Upperclassmen

515 Advanced Commercial Art 3 hrs. Fall

Emphasizes typographic layout, booklet design, letterheads, mailing pieces, packaging and display design and construction. Covers technical methods essential to commercial art. Prerequisite: Commercial Art, or equivalent.

541 Art Supervision 3 hrs. Fall, Spring

A study of the curriculum and its needs in art activities. A course of study will be outlined and administration problems discussed. Prerequisite: Art Structure, Elementary Design, Art Composition, History of Art, Commercial Art, or equivalents.

550 Painting 2 hrs. Summer

Painting of still life and landscape, in the studio and outdoors. Water colors are used. The course involves the study of composition, color value and technique. Prerequisite: Art Structure, Elementary Design, or consent of instructor.
For Graduates Only

610 Workshop in Art for Elementary Teachers  2 hrs. Summer, Fall, Spring

Provides the foundations of art for elementary teachers who have little or no work in the area. Emphasizes handwork and use of scrap material.

642 Studio Course in Art  4 hrs. Summer, Fall, Spring

Advanced art problems or projects creatively conceived and executed to fulfill student or college needs; such as sculpture and murals.

643 Studio Course in Art  2 hrs. Summer, Fall, Spring

A continuation of 642.

645 Creative Crafts for Secondary Teachers  2 hrs.

Designed for the teacher who is not an art specialist. Survey of art materials, methods and techniques related to the instructional and learning processes for secondary students with emphasis on the junior high school level. Not offered 1964-65.

BIOLOGY

Professors Bartoo, Hinds, Steen, Vander Beek, Van Deventer, and Wiseman; Associate Professor Schultz; Assistant Professors Brewer, Holt, Lawrence, Pippin, and Wood.

For Graduates and Upperclassmen

500 Selected Experiences in Biology  2 hrs. Spring

Designed for pre-service or in-service elementary and secondary teachers who need to develop their background in biology. Problems to be studied will be selected under the guidance of the instructor. Laboratory work will consist of independent studies of living plants and animals. These will be done outside of class time, utilizing procedures outlined by the instructor. Prerequisite: consent of instructor.

508 Modern Biology  2 hrs. Fall

Presents the results of recent research findings in biology and recommendations of professional organizations interested in biology education. Prerequisite: at least a minor in biology.

509 Modern Biology  2 hrs.

A continuation of 508. May be taken without the fall semester. Prerequisite: at least a minor in biology. Not offered 1964-65.

512 Health Problems  2 hrs. Fall

An intensive study of those diseases and practices which constitute major social problems. Frequent reports are made and an investigative
project is required for graduate credit. Prerequisite: at least a minor in biology and/or chemistry, or consent of the instructor.

511 Methods and Materials for School Health Education 2 hrs. Fall

Emphasis is placed on the effective health supervision of school children, the principles and practices of health teaching in the various grades, and the interrelation of this teaching to other subjects in the curriculum. Prerequisite: consent of instructor.

515 Alcohol Problems 2 hrs. Fall

An objective study of a major social problem, examined critically with regard to its physiological, psychological, legal, cultural and sociological aspects. Frequent reports are made and an extensive project is required of graduate students. Prerequisite: at least a minor in biology or sociology or consent of the instructor.

516 Neurology 3 hrs.

Lecture and laboratory work on the structure, development, and functioning of the nervous system in mammals, with particular reference to humans. Both normal and pathological aspects are considered. Prerequisite: at least a minor in biology, including a semester each of anatomy and physiology. Not offered 1964-65.

517 Cellular Physiology 2 hrs. Fall

Concerned with details of the structure and functioning of cells. Both plant and animal cells are considered. The current status of major problems in the field is studied. Laboratory work consists of individual projects dealing with various aspects of cellular physiology. Prerequisite: at least a minor in biology. A working knowledge of chemistry is strongly recommended.

518 Endocrinology 2 hrs. Fall

The glands of internal secretion, the active principles produced by each, and their effects on bodily metabolism. Prerequisite: at least a minor in biology.

522 Phytogeography 2 hrs. Fall

Deals with present geographical distribution of plants over the earth, emphasizing rainfall, soils, geological and ecological factors which contribute to this distribution. Family, genera and species names will be used in the study. Prerequisite: at least a minor in biology.

523 Paleobotany 3 hrs. Spring

Designed to give the student a knowledge and appreciation of plant life of the past. Plant fossils most commonly found in and around Michigan are the subjects of discussion from the standpoint of identification and classification, as well as from that of their structure. At least two extended field trips are arranged during the semester. Prerequisite: at least a minor in biology.
524 Economic Botany  
Plants useful to man for food, flavoring, drugs, clothing and building purposes. Field trips are planned to places where plant products are grown, manufactured, exhibited or sold. Emphasis is placed on a knowledge of plant life of value to teachers at elementary and secondary levels. Desirable also for students in business, economics and industrial education. Prerequisite: eight hours biology or consent of instructor.

525 Biological Constituents  
The elements present in plants and animals, as well as the synthesis, characterization and degradation products of the more important compounds. Prerequisite: at least a minor in biology.

530 Conservation Education  
Survey of the total field of conservation through lecture, laboratory, library and field experiences. Consideration will be given to ways of including conservation in the elementary and secondary curricula. Students will have contact with personnel of local, state and federal conservation agencies. Prerequisite: consent of the instructor.

542 Entomology  
A general study of insects, their structure, classification, life histories, ecological relationships, economic importance, and methods of control. Prerequisite: eight hours of college biology.

543 Protozoology  
The anatomy, physiology and ecology of the free-living protozoa, with considerations of their evolutionary relationships. Prerequisite: at least a minor in biology.

545 Ichthyology  
The anatomy, physiology, taxonomy and ecology of the fresh-water fishes, with particular emphasis on those occurring in Michigan. Prerequisite: at least a minor in biology. Not offered 1964-65.

547 Advanced Ornithology  
A study of details of song, habits and identification of shore and marsh birds in their native habitats. Skins of birds of Michigan, both resident and migrant, are provided for identification. Prerequisite: eight hours of biology. Early morning field trips.

551 Parasites and Parasitism  
A study of parasitism and its effects on parasite and host. Typical representatives of the principal groups of animal and plant parasites will be studied in detail. Special attention will be given to the parasites of humans. Prerequisite: at least a minor in biology. Not offered 1964-65.
553 Limnology 2 hrs. Fall
The biological, chemical and physical aspects of lakes and streams. Emphasis is placed on the ecological relationships of invertebrate animals and lower plants. The course consists of lectures, field studies and independent investigations under supervision of the instructor. Prerequisite: at least a minor in biology.

554 Field Studies in Ecology 2 hrs. Spring
Designed for students who have had sufficient experience in field biology to enable them to carry on studies of specific ecological problems in the field. Prerequisite: at least a minor in biology.

557 Natural History of Invertebrates 3 hrs.
Acquaints students and teachers with the ecology, distribution and taxonomy of the invertebrates of the region with special reference to life histories and economic importance. Students will prepare their own teaching collections. Prerequisite: eight hours of college biology. Not offered 1964-65.

For Graduates Only

600 Recent Developments in Biological Science 2 hrs. Spring
Students will be expected to survey extensively current literature in biology at the popular and semi-technical levels, and to carry on an intensive investigation on a specific topic. Prerequisite: eight hours of college biology.

602 Human Ecology 2 hrs. Summer, Fall
A study of the man-dominated biotic community of civilization and its interrelationships. Lectures and field work. Prerequisite: at least a minor in biology.

605 Advanced Studies in Genetics 2 hrs. Spring
Special problems in genetics, including a study of the genetic systems of populations and the formation of species. Lectures include material on the nature and function of the gene, and its relation to evolution. Prerequisite: at least a minor in biology, including a course involving an understanding of basic genetics.

609 Historical Studies in Biology 2 hrs.
A study in the history and literature of biology, stressing its development as a scientific discipline, and the growth of the fields of specialization and areas of research which it includes. Prerequisite: at least a minor in biology. Not offered 1964-65.

621 Plant Taxonomy 2 hrs. Summer
Identification, classification and ecological distribution of the higher plants. Students should have some knowledge of plant families and clas-
sification. They should be able to use plant keys and be familiar with the organization of an herbarium. A special project is required. Prerequisite: at least a minor in biology.

627 **Advanced Studies in Plant Physiology** 2 hrs. **Spring**

Covers such topics as photosynthesis, respiration, tropisms, plant-growth regulators and enzymes. Especially adapted for those who wish to teach biology, but whose training has been largely in the area of animal or general biology. Students are required to carry out individual investigations. Prerequisite: at least a minor in biology.

628 **Advanced Studies in Animal Physiology** 4 hrs.

Special studies dealing with recent advances in physiological activities such as conduction, contractility, respiration, metabolism, reproduction, integration, fluid, electrolyte, and acid-base balance.

631 **Advanced Conservation** 2 hrs.

Special studies in selected areas of conservation of natural resources. Prerequisite: at least a minor in biology and/or geography. Not offered 1964-65.

648 **Herpetology** 2 hrs. **Summer**

An investigation of the life history, ecology and taxonomy of the members of the classes Amphibia and Reptilia, through field work, lectures and examination of pertinent literature. Prerequisite: at least a minor in biology.

649 **Mammalogy** 2 hrs. **Spring**

An investigation of the life history, ecology and taxonomy of members of the Class Mammalia, through field work, lectures and examination of pertinent literature. Prerequisite: at least a minor in biology.

652 **Plant Ecology** 2 hrs. **Fall**

A study of plant communities and their relationship to the physical and biotic environment, with particular reference to their development through succession. Prerequisite: at least a minor in biology.

653 **Aquatic Environments** 2 hrs. **Spring**

Designed to acquaint advanced students with environmental characteristics and relationships in a variety of aquatic habitats, through lectures, field trips and a series of directed research projects. Prerequisite: at least a minor in biology.

655 **Terrestrial Micro-Environments** 2 hrs.

Intended to acquaint advanced students with the methods and problems of instrumentation and analysis in micro-meteorology as they relate to ecology, and to familiarize students with the literature in the field. Each student will conduct an individual research project. Prerequisite: at least a minor in biology. Not offered 1964-65.
CHEMISTRY

Meyer, Head; Professors Iffland, Knowlton and Osborn; Associate Professors Anderson, Holkeboer and Nagler; Assistant Professors Berndt, Brown, Frey, Harmon and Stenesh.

For Graduates and Upperclassmen

505 Chemical Literature 2 hrs. Spring
An introduction to the use of the various types of chemical literature such as journals, handbooks, abstracts, monographs, government and institutional publications and patents. Problems in the course require a search of the literature in fields of analytical, inorganic, bio, organic and physical chemistry. Prerequisite: 24 hours of Chemistry.

520 Advanced Analytical Chemistry 3 hrs. Summer
The theory and technique involved in the more complex separations and determinations in quantitative analysis. In addition to gravimetric and titrimetric methods, such as physiochemical methods spectrophotometry, colorimetry, chromatography, and potentiometry are discussed. The laboratory work is an application of the above techniques. Prerequisites: 531 and 222.

530 Physical Chemistry 4 hrs. Fall
Includes studies of gases, liquids, solids, solutions, thermodynamics, molecular structure, thermo-chemistry, colloids, etc. Prerequisite: Physics 113, and Calculus 223.

531 Physical Chemistry 4 hrs. Spring
A continuation of course 530. The course includes study of surface chemistry, macromolecules, electro chemistry, homogeneous equilibria, heterogeneous equilibria, quantum theory, etc. Prerequisite: Physical Chemistry 530.

540 Food Chemistry 2 hrs. Fall
This is a discussion and laboratory course on the chemistry of foods for such important components as carbohydrates, proteins, fats, minerals, vitamins, and food pigments. Prerequisite: 222, 361 or 363.

551 Biochemistry 2 hrs. Summer, Spring
Elementary study of the chemistry of the body, digestion, metabolism, excretion. Prerequisite: 361, 363, or 265.

553 Biochemistry 4 hrs. Spring
An elementary study of modern biochemistry consisting of lectures and laboratory.

560 Qualitative Organic Analysis 3 hrs. Fall
A course in the methods of identification of organic compounds in the pure state and in mixtures which has as secondary goals the famil-
iarization with many organic reactions and the development of deductive reasoning in the field of organic chemistry. Prerequisite: 361 or 363, and 24 hours of chemistry.

561 Organic Preparations 2 hrs.
A course in the application of principles and techniques of handling aliphatic and aromatic compounds on a preparative scale. Typical standard procedures are assigned. Emphasis is placed on good yields as well as quality of product. Eight hours of laboratory each week. Consult instructor before enrolling. Prerequisite: 361, and consent of Head of Department. Not offered 1964-65.

580 History of Chemical Theory 2 hrs. Summer, Spring
The history of chemical theory in which the evidence for the theories is critically presented. Prerequisite: 24 hours of college chemistry, or consent of Head of Department.

590 Special Problems in Chemistry 2 hrs. Summer, Fall
Advanced students who have completed certain basic work in chemistry may select a special problem in the fields of analytical, organic, bio or physical chemistry. Prerequisite: 24 hours of chemistry and consent of Head of Department. Given on request.

591 Special Problems in Chemistry 2 hrs. Spring
A continuation of special problem work started under 590. Given on request.

For Graduates Only

601 Graduate Seminar 1 hr. Fall, Spring
Graduate seminar in Chemistry. Required of all candidates for the master's degree in Chemistry. (Two semesters, 1 hr. credit)

605 Advanced Chemistry Laboratory 2 hrs. Spring
Methods of working under controlled atmospheres and conditions, manipulations of low boiling point substances, and unstable or reactive substances, and other procedures not generally covered in the elementary laboratory courses. These will be applied to problems in preparation and separation of compounds, determination of equilibria, rates of reactions, and measurements of physical properties.

610 Advanced Inorganic Chemistry 3 hrs. Fall
Covers the principles of inorganic chemistry and the chemical elements. Such topics as extranuclear structure of the atoms, periodic classification of the elements, valency and the chemical bond, complexes and coordination compounds, acids and basis, and nonaqueous solvents are included in the study of chemical principles. The remainder of the course concerns the chemical elements and their compounds. Prerequisite: 24 hours of chemistry.
613 Current Developments in Chemistry 2 hrs.

Five or six new developments selected from significant advances in chemistry will be considered. Course content will vary from year to year with growth of the science. Prerequisite: 16 hours in chemistry. Not offered 1964-65.

630 Advanced Physical Chemistry 3 hrs. Spring

Includes a more intensive study, than was possible in Introductory Physical Chemistry, of the following fields: kinetic molecular theory, statistical mechanics, thermodynamics and quantum theory. Applications will be made to equations of state, molecular diameters, reaction kinetics, dipole moments, heat capacities, spectra, and their relation to molecular structure. Prerequisite: 531.

631 Colloids 2 hrs.

The fundamentals of colloid chemistry including the nature of the colloid state, adsorption, types of colloids, methods of colloid formation, properties of colloids, plastics and polymers. Prerequisite: 531. Not offered 1964-65.

632 Electrochemistry 2 hrs.

Includes chemical thermodynamics, conductivity of solutions, transport number, electrode potentials, electrolysis and over voltage. Prerequisites: Physics 113, Calculus 531, and 222. Not offered 1964-65.

650 Advanced Biochemistry 3 hrs. Fall

Several advanced topics will be included such as macromolecules, methods of enzyme chemistry, mode of action, role in metabolism, the chemistry of hormones and their functions. Prerequisite: 551.

660 Advanced Organic Chemistry 3 hrs. Summer

The following topics are considered: relation between structure and reactivity of organic compounds, stereochemistry, chemistry of the hydrocarbons (particularly the alkenes) and chemistry of carbonyl compounds. Prerequisite: 361 or 363.

ECONOMICS

Bower, Head; Professor Carlson; Associate Professors Reinhauer, Copps, Ross and Wend; Assistant Professor Junker; Instructor Sichel.

For Graduates and Upperclassmen

500 Managerial Economics 3 hrs. Fall

Describes and illustrates the ways in which the tools of the economist can be useful to industrial management in its analysis of the past and present experience of the firm and, in particular, in its efforts to
arrive at intelligent decisions with respect to the future. The course deals with the basic types of decisions management faces including the analysis of demand, costs, and capital requirements. Prerequisites: 200 and 201.

502 Modern Economics 3 hrs. Summer, Fall, Spring

Designed for students who do not intend to major or minor in economics and hence do not take Principles of Economics. The basic economic principles necessary for a better understanding of present-day economic problems are illustrated by current developments. This course should be of value to prospective teachers, graduate students and others who have the opportunity for only one beginning course in economics. Credit in Principles of Economics will preclude credit in 502.

503 Price Theory 3 hrs. Summer, Fall

A basic course in economic theory with emphasis on production and income distribution theory. Prerequisite: Principles of Economics.

504 Industrial Structures and Competition 3 hrs. Spring

A logical continuation of Price Theory 503. An appraisal of those parts of extant price theory which are most directly applicable to the industrial sector of the economy. The interest of this course will center on the areas where markets are characteristically monopolistically, competitive or oligopolistic. Prerequisite: Price Theory 503 or the consent of the instructor.

507 Monetary Theory and Practice 3 hrs. Spring

This course would concentrate on the main elements of monetary theory and policy, having to do with such problems as promoting economic growth, maintaining full employment and price stability, influencing the flow of capital into the various economic sectors with different possible social goals in mind, and stabilizing international trade and financial relationships. This course would stress American experience, but would also give considerable attention to the monetary problems and policies of other important nations. Prerequisite: 320.

508 Institutional Economics 3 hrs. Spring

An intensive examination of heterodox economic theory, conceived in terms of the basic social concepts of institutions and technology, and utilizing developments in modern social science for the resolution of persistent economic problems. Prerequisite: Principles of Economics.

510 Labor Problems 3 hrs. Fall, Spring

An analysis of the nature and underlying causes of the problems facing the worker in modern society. Includes an examination of unions, collective bargaining, labor legislation, wages, unemployment and economic security. Prerequisite: Principles of Economics.
512 Collective Bargaining 3 hrs. Spring
An analysis of the major problems in present-day collective bargain-
ing including the negotiation of collective agreements, the practical
aspects and the economic implications. Prerequisites: Labor Problems
510 and 511 or consent of instructor.

513 Economic Security 3 hrs. Fall
An analysis of the problems of the individual worker and the efforts
of the government to aid in the solution of these problems. It deals with
unemployment, old age, benefits and medical care.

514 Labor and Government 3 hrs. Spring
Deals with the government's role in the problem arising from labor-
management relations and from labor's search for security. It covers
the court's attitude toward labor organization from the rule of conspiracy
through Taft-Hartley. It also includes protective legislation and the
development of security legislation.

536 Advanced Consumer Economics 3 hrs. Spring
A study of the place of the consumer in the economic system. The
relationships of personal income to price levels, and of consumer liquid
assets and availability of consumer credit to total consumer demand
will be analyzed. Special consideration will be given to the role of the
consumer in determining the amount of national income and the stability
of the economic system. Prerequisite: Principles of Economics or Eco-
nomics of Consumption.

512 Business and Government 3 hrs. Fall
A study of the regulatory policies of government and their impact
on private enterprise. The course seeks to explain the need for regula-
tion, and to provide an analysis and evaluation of the various laws from
the viewpoint of encouragement, subsidization and control. Special at-
tention will be directed to certain aspects of concentration of economic
power, public ownership and nationalization programs. Prerequisite:
Principles of Economics. Work in political science may be substituted
in special cases by permission of the instructor.

516 Public Utilities 3 hrs. Fall
The nature and problems of public utility industries and the reason
for and methods of government regulation. Prerequisites: Economics
200, 201.

584 Comparative Economic Systems 3 hrs. Fall
The economic institutions and conditions of capitalism, socialism,
communism, fascism and the cooperative movement are critically examined
as to ideology and actual operation. Prerequisite: Principles of Eco-
nomics.
586 The Economics of the Soviet Union and Eastern Europe
3 hrs. Spring
A study of Soviet and East European planning practices including an examination of the development in commerce, agriculture and industry in these areas. Also trade among the several East bloc nations will be covered. Prerequisites: Economics 200, 201.

587 Studies in Asian Economics 3 hrs. Spring
The course concentrates on the study of the Japanese, Chinese and Indian economic systems. These models are then applied as basis of comparison to the other Asian economies.

588 Economic Development 3 hrs. Spring
An analysis of the economic factors such as population, resources, innovation and capital formation which affect economic growth. Selected underdeveloped areas will be studied to understand the cultural pattern and economic reasons for lack of development and the steps necessary to promote economic progress. Special attention will be paid to evaluating the effectiveness of the United States foreign-aid program and examining the issues arising as a result of the conflict with the U.S.S.R. Prerequisite: Principles of Economics.

590 Contemporary Communism—A Survey 2 hrs. Post-session workshop
This workshop on Communism is designed to give the student an insight for the range of problems that resulted from the spread of Communism in the wake of World War II. The philosophy, economic doctrines, and government of Communism will be covered. The Workshop will be of particular value in acquainting teachers with the available materials on Communism.

Open to Graduates Only

604 Economic Problems 2 hrs. Summer, Fall
Some contemporary economic problems in such areas as economic security, labor relations, finance matters related to public expenditures and taxation, governmental controls and the balance between freedom and order are analyzed and studied. Some previous work in economics is desirable but not mandatory.

606 History of Early Economic Thought 2 hrs. Fall
Gives students the historical background for economic thinking. The main currents of such thinking are brought from the leaders of ancient economic thought through feudalism, mercantilism, the physiocrats and Adam Smith and his contemporaries. Prerequisite: at least 9 hours of Economics.

607 History of Classical Economic Thought 2 hrs. Spring
A continuation of Economics 606 from Adam Smith to the present. Major emphasis is upon the economic theories and writers of the 19th century. Prerequisite: 606.
609 Seminar in Economics 2 hrs. Spring

Offers the graduate an opportunity to investigate contemporary problems in economic theory and analysis. Prerequisite: 4 hours of advanced economic theory or consent of staff.

612 Labor Union Structure and Practice 2 hrs. Summer, Spring

An analysis of the government and operation of American labor unions with particular reference to the problems of union leadership, disciplinary procedures, membership control and the economic and social consequences of these practices.

628 Applied Economics for Teachers 2 hrs. Summer

Designed as a modern aid to in-service teachers and others who desire practical help in managing some of their economic affairs which are more personal than professional. Among items stressed are credit buying, savings, insurance programs, home ownership vs. renting, personal investments, taxes, wills and trust plans.

662 National Income Analysis 3 hrs. Spring

A basic course in economic theory with emphasis on modern theories of output of the economy as a whole and on the uses of these theories as guides to policy.

ENGLISH

Rogers, Head; Professors Callan, Denenfeld, Limpus and Miller; Associate Professors Freund, Galligan, Holaday, Lo, Macrorie, Malmstrom, McNally, Nelson, Sadler and Woods; Assistant Professors Bahlke, Combs, Goldfarb, Phillips and Shafer.

Open to Graduates and Upperclassmen

519 Chinese Literature in Translation 3 hrs. Spring

A study of significant forms in Chinese literature and their reflections of values and patterns of Asian society.

522 American Realism 3 hrs. Summer, Spring

The rise of realism in American literature in the late nineteenth and early twentieth centuries.

530 Medieval Literature 3 hrs. Summer

A study of medieval narrative, lyric poetry, and drama.

531 Age of Chaucer 3 hrs. Fall, Spring

A study of Chaucer's major poems in their historical and literary context.
534  Neo-Classical Literature  
3 hrs.  

535  Eighteenth-Century Literature  
3 hrs.  

536  Romantic Literature  
3 hrs. Fall  
Readings in poetry and criticism, with emphasis on Blake, Burns, Wordsworth, Coleridge, Scott, Byron, Shelley, Keats.

537  Victorian Literature  
3 hrs. Summer, Spring  
Readings emphasizing Carlyle, Mill, Dickens, Thackeray, Tennyson, Browning, and Arnold.

548  Studies in Satire  
3 hrs.  

566  Creative Writing Roundtable  
3 hrs. Fall  
Writing of poetry and fiction; designed for teachers and advanced students.

567  Creative Writing Roundtable  
3 hrs. Spring  
Offered alternate semesters with 566. A student may elect either or both courses.

568  Literary Criticism  
3 hrs. Summer, Spring  
A study of ancient and modern critics, with writing of practical criticism. Prerequisite: two courses in English beyond the required freshman English course.

574  Structure of Modern English  
3 hrs. Fall  
A study of the evolution of modern syntax.

582  Source Material for Literature in the Elementary Grades  
2 hrs.  
Books and materials about children's literature—indexes, lists, studies both critical and historical. Prerequisite: Children's Literature. Not offered 1964-65.

598  Readings in English  
1-3 hrs.  
Advanced students with good scholastic records may elect to pursue independently the study of some topic having special interest for them. Topics are chosen and arrangements are made to suit the needs of each student. Approval of graduate English adviser required. May be elected more than once.

Open to Graduates Only

622  American Literary Themes  
2 hrs. Summer  
A study of the "search for a subject" evident in the works of selected 19th century American authors.
640 Poetics 3 hrs. Spring
Systematic analysis of a number of poems with regard to tone, statement, imagery, prosody, and other formal elements.

641 Studies in Modern Poetry 3 hrs.

642 Studies in European Drama 3 hrs. Fall
Selected areas of European drama in translation from classical times to the present.

643 Studies in British Drama 3 hrs.
Selected areas, other than the Shakespearean, of British and Irish drama from medieval times to the present. Not offered 1964-65.

644 The Novel: Form and Technique 3 hrs.
An examination of the significant forms and techniques employed in the novel from its prototypes through its more recent development. Not offered 1964-65.

645 Studies in the Modern Novel 3 hrs. Fall
An intensive study of the works of some important novelists of the twentieth century.

652 Studies in Shakespeare: Tragedy 2 hrs. Summer, Fall
Selected tragedies of Shakespeare.

653 Studies in Shakespeare: Comedy 2 hrs.

660 Methods of Research in English 3 hrs. Fall
Practice in the efficient use of library resources for studies in literature and language. Prerequisite: permission of graduate English adviser.

661 Seminar in English 3 hrs. Summer, Spring
Study of a problem involving an author, a period, or a genre. Prerequisite: 660 Methods of Research in English.

680 Teaching of High School English 2 hrs. Spring
A study of recent theories and methods of teaching literature and language in the high school.

681 Teaching of Freshman English 2 hrs.
A consideration of the philosophies underlying various courses in freshman English and of methods suited to teaching the communication skills. Not offered 1964-65.
GEOGRAPHY AND GEOLOGY

Brueckheimer, Head; Professor Stout; Associate Professors Horst, Jackman, Kirchherr, Moore and Schmaltz; Assistant Professors Heller, McGehee and Raup.

For Graduates and Upperclassmen

510 Geography of Michigan  2 hrs.  Summer, Fall, Spring
   A study of Michigan in which the major economic, social and recreational activities are covered. The geographical implications of the location of the activities are explained.

512 Problems of Regional Development in South America  2 hrs.
   Intensive study is directed toward problems of regional development in Latin America. These are considered in light of varied resource bases and involve a consideration of socio-economic, political and geographic conditions. Prerequisite: 105, 212 or consent of instructor. Not offered 1964-65.

513 Seminar in Geography of Middle America  2 hrs.  Fall
   The seminar will involve an investigation and analysis of the interplay of physical and cultural factors as they pertain to human occupancy in the circum-Caribbean region of Latin America. This topic will be approached by the case-study method in which subject matter will be treated either regionally or topically. Prerequisite: 105, 213 or consent of instructor.

514 Union of Soviet Socialist Republics  3 hrs.  Spring
   Analysis of the geography of the whole of the Soviet realm. Prerequisite: 105.

515 The Far East  2 hrs.  Fall
   Intensive study of the environmental and cultural assets and liabilities of Japan, China, Formosa, and Korea. Particular attention is given to the population and food problems of the Far East. Prerequisite: 105.

516 Southeast Asia  2 hrs.  Spring
   Intensive study of the environmental and cultural assets and liabilities of India, Pakistan and Southeast Asia. Particular stress is given to the population-resource problems of the monsoon countries. Prerequisite: 105.

517 The Middle East  2 hrs.
   Diversity and homogeneity in the Middle East, with emphasis on regional interrelations, developmental potentialities and the economic-geography problems of Israel, Egypt and the Moslem world. Prerequisite: 105. Not offered 1964-65.
518 Geography of Western Europe 2 hrs. Fall

Intensive study of the European nations west of the Iron Curtain. The physical elements (climate, landforms, soils, resources, etc.) are examined and the related cultural elements are explored. Special consideration will be given to NATO and the Common Market. Prerequisite: 105, 214 or consent of instructor.

519 The Geography of Eastern Europe 2 hrs. Spring

The intensive study of the nations situated between the U.S.S.R. and Western Europe. The physical elements (landforms, climate, soils, resources, etc.) are examined and upon this stage the cultural elements are developed. Prerequisite: 105.

532 Geomorphology 3 hrs. Spring

A study of the development of landforms and the effects produced upon the more common geologic materials and structures by the agents of erosion. Prerequisite: 230 or 130.

533 Invertebrate Paleontology 3 hrs. Fall

The study of fossils including the identification, classification, and historical significance of the major fossil groups. Prerequisite: 231 or consent of instructor.

538 Oceanography 3 hrs. Fall

Physical oceanography and submarine geology. A study of the physical properties of sea water, boundary processes, ocean currents, water masses and circulation in the ocean. Consideration will be given to sedimentary processes, marine sediments and their history, continental shelves, the development of coral reefs, and topography of the ocean floor. Prerequisite: Geology 130 or 230 or consent of instructor.

539 Field Geology 4 hrs. Summer

A study of geologic materials and features in the Upper Great Lakes Region. Prerequisite: 130 or 230.

540 Political Geography 2 hrs. Fall

A study of the resources, peoples and geographic-political problems of the various nations and empires of the world from the point of view of the reciprocal relations involved. Prerequisite: 105.

541 Geographic Foundations of National Power 3 hrs. Spring

World power relationships in terms of such geopolitical factors as the size, shape and location of nations; mineral wealth as related to industrial and military strength; and weather, climate and landforms as related to problems of transportation and economic development. The concept of "autarchy" and the field of "geopolitics" are considered in detail. Prerequisite: 105.

541 Agricultural Geography 3 hrs. Spring

A course designed to acquaint the student with world patterns of farming activity, world food problems, and an understanding of various.
agricultural systems through the detailed analysis of farming patterns within selected areas. The first part of the course is concerned with the description and analysis of: (a) the distribution of major world crops and domestic animals, and (b) the most common combinations of crops and livestock on farm units. The second part of the course deals with the spatial organization of agriculture in certain selected areas. Prerequisite: 244 or consent of instructor.

556 Land-Use Planning
2 hrs.

The study of the environment in relation to the various uses of the land such as agriculture, grazing, forestry and recreation. The application of geographic concepts to land-use planning and regional planning. Prerequisite: Conservation of Natural Resources 350. Not offered 1964-65.

566 Advanced Field Techniques
3-6 hrs. Summer

A field course in Geography and Geology offered at the Upper Peninsula Field Camp of WMU. Involves training in the theory and application of geographical field techniques in the analysis of areas. Instruction in the use of plane table, alidade, topographic maps, aerial photographs and interview techniques in the field mapping of land-use, vegetation, soils, terrain and cultural features. Prerequisite: 366 or consent of instructor.

570 Urban Geography
2 hrs. Fall

The study of the spatial distribution of urban centers, their internal structure and external relationships with contiguous and non-contiguous areas. Special emphasis will be given to Kalamazoo's position in southwestern Michigan.

574 Methods in Urban Research
3 hrs. Spring

A course designed to acquaint the student with source materials and field techniques utilized in the investigation of urban problems. Ample opportunity will be provided for research in the Kalamazoo area. Prerequisite: Urban Geography 570.

580 Advanced Cartography
3 hrs. Spring

The study of the more complex map projections, the compilation of data and the design of maps and graphs for research papers, and the application of statistical techniques in mapping geographic phenomena. Students are assigned special problems to develop their proficiency in the use of cartography as a tool of research. One hour lecture. Two 2-hour labs. Prerequisite: 380 or its equivalent.

Open to Graduate Students Only

600 Advanced Studies in Earth Science
2 hrs.

Designed to cover modern developments in physical geography, weather and climate. The bulletins of the IGY and other contemporary materials will be utilized. Not offered 1964-65.
610 Problems in Geography 2 hrs. Summer, Fall, Spring

Intensive research on a topic in regional or systematic geography under the direction of a member of the graduate faculty. Prerequisite: Undergraduate major in Geography. May be offered on an individual basis.

620 Advanced Physical Geography 2 hrs.

An intensive study of the basic earth sciences. The study of the processes and forms which develop in the atmosphere, hydrosphere and on the earth’s land surfaces. Prerequisite: 105. Not offered 1964-65.

631 Geology for Teachers 4 hrs.

A study of the more common rocks, minerals and fossils and a consideration of rock structures and the development of landforms with special emphasis upon Michigan and the Great Lakes Basin. This course will be scheduled for three hours of lecture and two hours of laboratory. Not offered 1964-65.

642 Historical Geography of North America 2 hrs. Spring

Migrations and routes of travel of the various European colonizers. Pattern and progress of settlement together with the geographical conditions encountered in developing each part of the continent for human use. Prerequisite: 105.

652 World Resources 2 hrs. Summer, Spring

Intensive study of resources in relation to the increasing demands of the world’s growing population for food, fibers and industrial raw materials. Special emphasis will be given to political, economic and conservation implications of world resource use. Prerequisite: 105.

661 Techniques of Geographic Research 2 hrs. Fall

Course designed to acquaint students with the techniques of geographic research and to familiarize the student with professional literature and documentary materials. Prerequisite: Undergraduate major in Geography. May be offered on an individual basis.

661 The Development of Geographic Thought 2 hrs. Fall

The history and development of geographic thought from the Greeks to the present time with special emphasis on the development of American geographic thought and the contributions of American geographers. Prerequisite: An undergraduate major or minor in geography and consent of instructor. May be offered on an individual or seminar basis.

695 Background of Contemporary Problems in Michigan 3 hrs.

An intensive interdepartmental course designed to explore in depth the historical and geographical backgrounds of several outstanding present-day problems in Michigan in the areas of resource-use, conservation, agriculture, industry, and urban-rural conflicts. Resource people from other disciplines, governmental agencies and business will provide for a well-rounded treatment of the major problems of Michigan. Prerequisite: Geography 510 or History 310. Not offered 1964-65.
HISTORY

Dunbar, Head; Professors Macmillan, Mange, Mowen and Starring; Associate Professors Breisach, Brown, Callan, Elsasser and Hamner; Assistant Professors Beech, Brunhumer, Castel, Hahn, Hawks, Nahm and Sommerfeldt.

Open to Graduates and Upperclassmen

506 Intellectual History of Western Man to 1550 2 hrs. Summer
A study of the leading ideas and intellectual movements in Western culture from the earliest times to 1500.

507 Intellectual History of Western Man, 1550 to the Present 2 hrs. Spring
Modes of thought and expression characteristic of the Renaissance and Reformation; the scientific revolution of the 17th century; classicism and the baroque in literature and the arts; the 18th century enlightenment and the reign of natural law; the romantic revolution; the forces of liberalism and nationalism in the 19th century; materialism and socialism; the leading features of the contemporary world view.

508 Modern Nationalism 2 hrs.
Factors promoting the rapid growth of nationalism in early modern times; its part in eighteenth and nineteenth-century revolutions; changes in twentieth-century nationalism; and recent effects of nationalism on international relations. Not offered 1964-65.

516 Constitutional History of the United States to 1877 3 hrs. Fall
The development of constitutional theory and practice in the United States, with emphasis on the origin and establishment of the governmental system and Federal-State relations. Prerequisite: course 210 or consent of the instructor.

517 Constitutional History of the United States since 1877 3 hrs. Spring
Continuation of course 516 down to the present, with emphasis on the problem of Federal regulation of the economy and civil rights. Prerequisite: course 211 or consent of instructor.

518 History of United States Foreign Policy 3 hrs. Fall
A study of the formation and evolution of foreign policy by the United States from the time of independence to the present.

520 The Colonial Period in American History 2 hrs. Spring
The English colonies in America both continental and island, 1607-1763, with emphasis upon the development of institutions and upon imperial policy and administration.
521 The Era of the American Revolution, 1763-1787 2 hrs. Summer, Fall

The causes, character and consequences of the American Revolution. An intensive study of selected topics. The principal aims are to acquaint students with all kinds of historical materials and to introduce them to methods of advanced historical study.

522 United States, 1787-1815 2 hrs. Spring

The making of the Constitution and establishment of the early republic. The course is conducted in the same manner as 521.

523 United States, 1815-1848 2 hrs. Fall

An intensive study of selected topics. Principal objects are to acquaint students with the various classes of historical materials and to introduce them to methods of advanced historical study.

524 Civil War and Reconstruction 2 hrs. Summer, Spring

This course deals principally with the great sectional struggle over slavery. It is conducted in the same manner as 523.

532 The United States, 1877-1929 3 hrs. Fall

An intensive study of industrialism and urbanization, overseas expansion, populism, progressivism, World War I, the League of Nations, the character of the 1920’s, and the causes of the Great Depression. Prerequisite: course 211 or consent of instructor.

533 The United States, 1929 to the Present 3 hrs. Spring

A continuation of course 532; the New Deal, the coming of World War II, the war and its impact, America’s role in the post-war world. Prerequisite: course 211 or consent of instructor.

541 The U.S.S.R. in World Affairs 3 hrs. Summer

A study of ideological, psychological, political, and economic factors governing the policy of the U.S.S.R. and the evolution of Soviet foreign policy with respect to individual countries, international problems, and activities in outer space.

542 Social and Cultural History of the U.S.S.R. 3 hrs. Spring

A history of the principal ethnic groups comprising the U.S.S.R., including their social and cultural contributions, Soviet policy toward these groups, and the extent of their assimilation into Soviet society.

544 Medieval England 3 hrs. Summer

A study of English history during the Middle Ages with concentration on the period after the Norman conquest. Emphasis will be placed on the development of the economic, social, religious, and governmental institutions characteristic of Medieval England.
545 Victorian England 2 hrs.
A study of political, social, economic, intellectual, and imperial problems and developments during the Victorian period. Not offered 1964-65.

552 The Medieval Church 3 hrs. Fall
A study of the impact upon Christianity of classical culture and the barbarian invasions, the Church and feudalism, Church-state controversies, the rise and fall of the papal theocracy, scholasticism and mysticism.

554 The Renaissance 2 hrs. Summer, Spring
The life, thought and art of the Renaissance, 1350-1550; Humanism; social and economic conditions in Renaissance Europe.

555 The Reformation 2 hrs. Fall
A history of the religious reformation in Europe at the beginning of modern times.

557 Europe in the 17th Century 3 hrs. Fall
The Thirty Years War and the shifting power relationships in Europe. Colonial enterprise, mercantilism, and absolutism. The rise of science and the baroque spirit.

558 The Old Regime 2 hrs.
A study of the development of absolute monarchy; of the institutions, life and thought of the eighteenth century, with special emphasis upon France; the causes of the French Revolution and belated efforts at reform. Prerequisite: An introductory course in European history. Not offered 1964-65.

559 The French Revolution and the Napoleonic Era, 1789-1815 2 hrs. Spring
The overthrow of the French monarchy and the establishment of the First French Republic; the rise and fall of the Napoleonic Empire; and the spread of revolutionary principles throughout Europe. Prerequisite: An introductory course in European history.

560 Continental Europe, 1815-1870 3 hrs. Fall
The principal topics are the reaction following the Napoleonic Wars, the revolutions in behalf of liberty and democracy, the emergence of new states and the unification of Germany and Italy.

561 Continental Europe, 1870-1914 3 hrs. Spring
The principal topics are the liberal and socialist movements of the time and the growth of nationalism and its consequences.

562 Europe, 1914 to 1945 3 hrs. Fall
A study of the origins and character of World Wars I and II. Special attention is given to the Great Depression, Fascism and Communism.
563 Europe, 1945 to the Present 3 hrs. Spring
This course is concerned principally with the economic recovery of Europe after World War II, efforts of the Western powers to prevent the spread of Communism and the aggrandizement of the U.S.S.R., the movement for Western European political unity, and efforts to insure world peace and security.

567 Twentieth-Century Britain 2 hrs. Spring
A study of British political, social and economic developments since 1900 and of the changing character of the Empire and Commonwealth.

571 History of Mexico 3 hrs. Summer, Spring
A study of the political, social and economic evolution of Mexico from the Wars of Independence to the present day with attention given to the concurrent development of Mexico-United States relations.

580 China Since 1912 3 hrs. Fall
Intensive studies in the impact of the West on China before and after the Kuomintang Revolution in 1912, the period of transition from Nationalist to Communist China, and the origins of growth of Communist China, its impact upon world peace, and its aims and aspirations.

581 Modern Japan 3 hrs. Spring
Political, intellectual, economic and social history since the opening of Japan to the West. Special attention will be given the rise of Japanese militarism and its Continental policy. The Allied occupation period and post-war domestic and foreign affairs will be examined. Modern Korea during the period of Japanese rule (1910-1945) will also be included.

588 African History in the Twentieth Century 3 hrs. Spring
A study of political, social, and economic developments in Africa south of the Sahara, 1885-1960; from the period of dominance by European powers to the emergence of independent states.

592 The Literature of History 2 hrs. Spring, Summer
The two-fold purpose in reading selected writings of great historians is to develop (1) standards for evaluating approaches, the use of sources and the handling of controversial matters and (2) appreciation of good history.

593 Philosophy of History 3 hrs. Fall
An inquiry into the conscious and unconscious attitudes toward history which, when systematized, are philosophies of history. Consideration is given to their effect on the writing and the interpretation of history. The range of thought includes the positions of St. Augustine, Ibn Khaldun, Marx, Dilthey, Spengler, Bultmann, Toynbee, and Jaspers.

594 War in the Modern World: 1600 to the Present 3 hrs. Fall
The course analyzes the evolution of military theory and doctrine, the role of ideas in military affairs. Attention is given to the part war
has played in the development of the nation-state and centralized government. The inter-relationships between war and economic facets of society are investigated. The revolutionary upheavals in Algeria, Cuba, Indochina, and Malaya and strategic problems in the era of the ballistic missile and the conquest of outer space are other topics considered.

598 Independent Reading in History 2 or 3 hrs. Summer, Fall, Spring

A student desiring to acquaint himself, through reading, with some field of history not covered in regular courses may register for this course by presenting a statement of approval signed by the Chairman of the Department's Honors Committee and the staff member under whose supervision he wishes to read.

Open to Graduates Only

610 Studies in Michigan History, 1815-1856 2 hrs. Spring

Studies in the history of Michigan Territory and State. Attention is given to the critical use of historical materials and the preparation of bibliographies.

626 Seminar in American History to 1865 2 hrs. Fall

Intensive exploration of selected topics in this field, culminating in the preparation of a bibliography and a paper.

628 Studies in the History and Culture of the Old Northwest 2 hrs.

Reading, discussion and research on various aspects of the development of government, education, social institutions and economic life in the Old Northwest, 1776-1840. Not offered 1964-65.

629 The West in American History 2 hrs. Fall

Deals with the movement of the American people westward, beginning in the colonial period and continuing to the last frontier in the late 19th century. Among the topics considered are the influence of the frontier on American character, the process of obtaining the land from the Indians, federal land grants for railroads and education, frontier culture, the evolution of the western states, the influence of geography on settlement, the urban frontier, and the effects of the ending of the era of free land. Primarily for students not majoring in History.

636 Seminar in American History Since 1865 2 hrs.

Intensive exploration of selected topics in this field, culminating in the preparation of a bibliography and a paper. Not offered 1964-65.

646 Seminar in Ancient and Medieval History 2 hrs.

Intensive exploration of selected topics in one of these fields, culminating in the preparation of a bibliography and a paper. Not offered 1964-65.

652 Studies in Medieval History 2 hrs. Summer

An intensive series of studies in medieval institutions and ideas.
656 Seminar in Early European History 2 hrs. Summer
Intensive exploration of selected topics in this field, culminating in the preparation of a bibliography and a paper.

658 Eighteenth-Century Enlightenment 2 hrs.
Lectures and reading on the character of the eighteenth-century enlightenment, with special attention to France; and the critical use of historical materials in the preparation of papers on significant philosophies. Not offered 1964-65.

662 Studies in Russian History 2 hrs.
Lectures and reading on those phases of Russian history necessary for an understanding of the present. The critical use of historical materials in the preparation of papers on topics of current significance along two general lines: (a) problems connected with Russia's borderlands (b) the evolution of Soviet institutions. Not offered 1964-65.

664 French History and Culture Since Napoleon 3 hrs. Spring
The continuing search for stability; social conflicts and their political consequences; the decline of France as a great power; persisting cultural and intellectual activity; French education.

666 Seminar in Later European History 2 hrs.
Intensive exploration of selected topics in this field, culminating in the preparation of a bibliography and a paper. Not offered 1964-65.

676 Seminar in Russian and Far Eastern History 2 hrs. Spring
Intensive exploration of selected topics in one of these fields, culminating in the preparation of a bibliography and a paper.

686 The Far East Since 1945 2 hrs. Summer, Fall
An intensive study and analysis of the nature and problems involved in the transition of former colonies to independent nation states in the Far East, together with an analysis of marked changes in the character of Chinese and Japanese political, economic, and social systems. The impact of the cold war on the Far East also will be considered.

690 Historical Method 2 hrs. Summer, Spring
Designed to introduce students to and familiarize them with the tools, techniques and principles of historical research and writing. The principle reliance is upon exercises in the application of historical method to specific problems of interest.

695 Background of Contemporary Problems in Michigan 3 hrs. Fall
An intensive interdepartmental course designed to explore in depth the historical and geographical backgrounds of several outstanding present-day problems in Michigan in the areas of resource-use, conservation, agriculture, industry, and urban-rural conflicts. Resource people from other disciplines, governmental agencies and business will provide for a well-rounded treatment of the major problems of Michigan. Prerequisite: Geography 510 or History 310.
Wonderley, Head; Professor Rothfuss; Associate Professors Jones, Noble and Salz; Assistant Professor Giedeman.

500 Studies in Contemporary France 2 hrs.

502 Masters of Contemporary French Thought 2 hrs.
Deals with writers whose ideas challenge the thinking of contemporary society, such as Mauriac, Malraux, Sartre and Camus. It may be elected by those who have no foundation in the French language. Not offered 1964-65.

503 Contemporary French Literature 2 hrs. Spring
A continuation of French 502. The aims of this course are to study the history and traditional purposes of the Comédie-Française and to make the student aware of the renovation of stagecraft in France under the impulse of great producers.

504 Summer Proseminar in France 4 hrs.
A summer study of French language, literature, and culture concentrated at Grenoble and Paris. Designed especially for teachers and advanced college students of French, the course consists of three weeks of formal classes at the University of Grenoble with regularly scheduled lectures and discussions in the French language on questions relating to French history, institutions, social problems, linguistics, and teaching methods. The session at Grenoble is supplemented by twelve days of organized inspection of cultural monuments in Paris with full explanations by an instructor for all points visited. Each student submits a term paper investigating one phase of his studies of particular interest to him. Graduate or undergraduate credit. Offered in summers of 1966 and 1969.

510 The Central European Area 2 hrs. Fall
Deals with the historical, geographical, social and religious problems necessary for an understanding of the Central European situation. Countries included will be Germany, Austria, Switzerland, and Czechoslovakia.

512 Development of German Thought 2 hrs.
A study of the development of Germany and the German national character. It includes a study of selected authors on history, philosophy and pedagogy as well as German literature in translation. No foreign language prerequisite. Not offered 1964-65.

514 Germany Through the Centuries 2 hrs.
A study of German cultural history designed to give the student an understanding of the German problem as it developed through the
centuries. Geographical, literary, philosophical, educational and art aspects will be investigated. No foreign language prerequisite. Not offered 1964-65.

520 Mediterranean 3 hrs.
A study of the period 500-1500 A.D. when Classical Latin was blended into the new vernaculars to form eventual romance languages. Prose and poetic subject matter include a variety of themes reflecting the intellectual, cultural, and religious thinking of the times. Not offered 1964-65.

630 Contemporary Spanish Theater 2 hrs. Spring
The Spanish theater and the dramatists of the 20th century are studied. Lectures and reading assignments in Spanish include representative works of the important writers for the theater.

533 Cervantes 2 hrs. Summer
The life and works of Miguel Cervantes with special emphasis on Don Quixote are studied. Lectures and readings in Spanish.

558 Mythology 3 hrs. Spring
Investigates the origins, elements and interpretation of the principal myths and legends of Greece and Rome; their preservation not only in literature but also in painting, music, and sculpture.

580 Modern Language Instruction 2 hrs. Summer, Spring
For prospective teachers of French, German, or Spanish in the high school and elementary school. Problems common to the three languages are considered. The bases for the course are the principles underlying language learning and current methodology and practice.

MATHEMATICS

Powell, Head; Professors Butler, Hannon, McCully and Seber; Associate Professors Alavi, Leja and Meagher; Assistant Professors Petro, Turner and Vollmer.

Open to Graduates and Upperclassmen

500 Advanced Differential Equations 3 hrs. Fall
Additional topics on ordinary differential equations and an introduction to partial differential equations; series solution; Bessel, Legendre and hypergeometric functions; Laplace's equation; Wave equation and related topics. Prerequisite: 306 and 570.

502 Complex Variables 3 hrs.
A study of complex numbers, elementary functions, contour integrations, conformal maps and potential fields together with applications. Prerequisite: 570. Not offered 1964-65.
506 Programming for Computers 3 hrs. Summer, Fall, Spring

Designed to give preparation in the organization and general use of high speed computing machines used in scientific and engineering computations. Programs will be prepared for problems such as quadratic equations, exponential, correlation, multiplication of matrices, inverse of a matrix, solution of polynomials, simultaneous equations, numerical integration, and solution of a differential equation. In addition to the three class meetings per week, one laboratory session will be held each week. Prerequisite: 223 or equivalent.

507 Numerical Analysis 3 hrs.
Numerical methods as applied to matrix inversion, sets of linear equations, linear programing problems, eigen-values and eigen vectors, finite differentiation and integration, polynomial interpolation with the use of a digital computer. Prerequisite: Mathematics 530 or equivalent. Not offered 1964-65.

530 Vectors and Matrices 3 hrs. Fall
Properties of n-dimensional vector spaces, linear transformations and matrix algebra are studied. Prerequisite: 380 or equivalent (330 recommended).

540 Introduction to Higher Geometries 3 hrs. Summer, Spring
Topics will be selected from projective geometry, affine geometry, non-euclidean geometry, and elementary topology. Mappings of a geometric nature and their properties will be considered in the development of each topic. Prerequisite: 380 or equivalent.

550 Teaching of Secondary Mathematics 3 hrs. Fall, Spring
In this course consideration is given both to curriculum problems and trends in secondary school mathematics and to specific problems of teaching mathematics effectively to secondary school students. Prerequisite: 223 or equivalent.

552 History of Mathematics 2 hrs.
A strongly historical treatment of some fundamental mathematical concepts. Topics considered will include sets, relations, functions and algebraic structures. Prerequisite: 223 or equivalent. Not offered 1964-65.

560 Mathematical Statistics 3 hrs. Fall
Probability spaces, mathematical expectation, moment generating functions, some special distributions of the discrete and continuous type, sampling theory, independence, statistical inference, transformations of variables. Prerequisite: 380 or equivalent.

561 Mathematical Statistics 3 hrs. Spring
A continuation of Math 560. Point estimation, maximum likelihood estimates, sufficiency and stochastic independence, limiting distributions, some distribution free problems, statistical hypotheses, quadratic forms and some multivariates distributions. Prerequisite: 560.
570 Advanced Calculus 3 hrs. Summer, Fall

A further study of limits and continuity, ordinary and partial derivatives, functions of several variables, the definite integral and improper integrals, beyond that covered in the first year's work in calculus. Prerequisite: 380 or equivalent.

571 Advanced Calculus 3 hrs. Spring

A continuation of Mathematics 570. It will include such topics as surface and line integrals; Green's theorem; infinite series; Fourier series; an introduction to complex variable. Prerequisite: 570.

580 Number Theory 3 hrs. Spring

Diophantine equations, congruences, quadratic residues, and properties of number theoretic functions. Prerequisite: Mathematics 380 or equivalent.

598 Independent Study in Mathematics 1-3 hrs. Summer, Fall, Spring

Advanced students with good scholastic records may elect to pursue independently the study of some topic having special interest for them. Topics are chosen and arrangements are made to suit the needs of each student. Approval of head of department required. May be elected more than once.

For Graduates Only

602 Fourier Series and Boundary Value Problems 3 hrs. Fall

Topics covered include Fourier Series and Fourier Integrals and a further study of boundary value problems and special functions beyond those covered in Math 500. Prerequisite: 500.

604 Operational Mathematics 3 hrs. Summer

Topics covered include the study of the theory and application of Laplace Transform and other linear integral transformations. Prerequisite: 570.

630 Abstract Algebra I 3 hrs. Summer, Fall

Algebraic system studied include groups and sub-groups, rings and ideals, and fields. Quotient structures and ring extensions are discussed in detail. Prerequisite: 330.

631 Abstract Algebra II 3 hrs. Spring

A continuation of 630. Topics include: modules, linear transformations, Galois Theory, Gaussian domains, and Noetherian rings. Prerequisite: 630.

610 Point Set Topology 3 hrs. Fall

Elementary properties of topological spaces, metric spaces, compact spaces, and continuous functions. Prerequisite: Mathematics 570.
670 Real Analysis I 3 hrs. Summer, Spring

Basic topological and metric properties of the real line, real-valued functions, convergence, continuity and bounded variation. Prerequisite: Mathematics 570.

671 Real Analysis II 3 hrs.


675 Complex Analysis 3 hrs. Spring

Cauchy Theory, series expansions, types of singularities, analytic continuation, and theory of residues. Prerequisite: Mathematics 570.

690 Seminar in Applied Mathematics 1-3 hrs. each

692 Seminar in Topology

693 Seminar in Algebra

694 Seminar in Geometry

696 Seminar in Probability and Statistics

697 Seminar in Analysis

The prerequisite for any seminar will be the approval of the Instructor in charge.

The following courses are primarily for teachers and in general will not apply towards the M.A. in Mathematics.

610 Concepts of Mathematics I 2 hrs. Summer, Fall

Introductory material on sets, relations, mappings and operations will be given prior to considering groups, rings, integral domains and fields. This material is to be motivated by and related to a discussion of the real number system. Prerequisite: Consent of instructor.

611 Concepts of Mathematics II 2 hrs. Summer, Spring

A continuation of 610. Prerequisite: 610.

612 Studies in Probability 2 hrs. Summer, Fall

Topics included are: sample point and sample space, event, random variable, conditional probability, independence, expectation, binomial distribution, and statistical inference. Prerequisite: Consent of instructor.

613 Studies in Number Theory 2 hrs. Summer, Spring

Topics included are: division algorithm, primes, fundamental theorem of arithmetic, congruences, diophantine equations, and historical background. Prerequisite: Consent of instructor.

614 Studies in Symbolic Logic 2 hrs. Summer

Topics included are: sentential connectives, theory of inference, symbolizing everyday language, quantifiers, and formal and informal proofs. Prerequisite: Consent of instructor.
615 Studies in Calculus 2 hrs. Summer

Topics included are: limits and continuity, differentiation, integration, and applications. It will stress concepts rather than techniques. Prerequisite: Consent of instructor.

616 Studies in Matrix Theory 2 hrs.

Topics included are: matrix algebra, linear dependence and independence, rank, linear equations, determinants, inverse matrices, equivalence, linear inequalities. Prerequisite: Consent of instructor. Not offered 1964-65.

617 Studies in Geometry 1 2 hrs. Summer

Elementary Vector Geometry—Vector algebra is developed as a tool to be used in the study of elementary geometry. Prerequisite: Consent of instructor.

618 Studies in Geometry II 2 hrs. Summer

Projective geometry is studied using an axiomatic approach. Prerequisite: Consent of instructor.

650 Mathematics for Elementary School Teachers 2 hrs. Summer, Spring

Emphasizes the concepts and foundations of the mathematics commonly taught in the elementary school, and of associated problems of learning and teaching. Each student will be expected to study and report on some special problem or aspect of the teaching of arithmetic.

652 Mathematics for Junior High School Teachers 2 hrs. Fall

A careful re-study of the concepts, principles and subject matter of the mathematics commonly taught in grades 7, 8 and 9 with major attention to associated problems of learning and teaching.

654 Curriculum Studies in Algebra 2 hrs. Summer, Fall

A comparative study of algebraic topics taught in secondary schools, methods of teaching these topics, their selection and placement, and of evaluation techniques. Prerequisite: Math 610-611 or equivalent.

655 Curriculum Studies in Geometry 2 hrs. Summer, Spring

A comparative study of geometric topics taught in secondary schools, methods of teaching these topics, their selection and placement, and of evaluation techniques. Prerequisite: Math 617-618 or equivalent.

656 Field Work in Mathematics 2 hrs.

A laboratory in the study and use of relatively simple instruments in mathematics and of mathematical principles involved in their design and use. Field work for collection of data, problems based on such data, and the adaptation of projects for practical use in enriching the work in mathematics classes will be stressed. The course will be of interest and value to mathematics teachers in junior and senior high schools and to those who are concerned with camping or scouting activities. Prerequisite: Trigonometry. Not offered 1964-65.
Carter, Head; Professors E. Adams, Matthews, Meretta and Stulberg; Associate Professor E. Beloof; Assistant Professors Faustman, Fink, Hardie, Osborne, Ryan, Work.

Open to Graduates and Upperclassmen

530 Advanced Choral Conducting 1 hr.
Supervised experience in conducting vocal groups. The student may be called upon to prepare an ensemble for public performance. Prerequisite: Choral Conducting. Not offered 1964-65.

531 Advanced Instrumental Conducting 1 hr.
Supervised experience in conducting instrumental groups. The student may be called upon to prepare an ensemble for public performance. Prerequisite: Instrumental Conducting. Not offered 1964-65.

540 Elementary School Music 2 hrs. Summer
Emphasizes the place of music in the curriculum and the use of music in the day to day activities of the classroom. The fundamental musical skills are developed in order to assist the teacher to achieve these objectives.

541 Music Supervision and Consultation 2 hrs.
A study of the structuring and implementation of a music education program in the schools, in terms of three organizational relationships: the music administrator or supervisor, the scheduled music teacher, and the unscheduled music consultant. Relation of music specialist to classroom teacher. Not offered 1964-65.

544 Analysis and Evaluation of Music Materials 2 hrs. Summer
A study of the theoretical bases for, and practice in analyzing and evaluating music for use in music education programs.

560 Counterpoint 2 hrs. Fall, Spring
Modal and harmonic counterpoint as exemplified by the composers of the fifteenth, sixteenth, seventeenth, and early eighteenth centuries. Modern counterpoint. Practical application through the writing of strict counterpoint in the five species, double counterpoint, obligatos, descants, canons and fugues. Prerequisite: 260 and 261.

561 Counterpoint 2 hrs. Fall, Spring
A continuation of 560.

562 Advanced Composition 2 hrs. Fall, Spring
Original work in composition dealing with the larger forms in both the vocal and instrumental fields. Prerequisite: Composition.
563 Advanced Composition 2 hrs. Fall, Spring
A continuation of 562.

564 Form in Music (on demand) 2 hrs. Summer, Fall, Spring
A survey of the musical forms, large and small, used from the Baroque period to the present day. Analysis of both structure and texture of representative works of the various periods and styles.

567 Orchestration 2 hrs. Summer, Fall, Spring
A study of the characteristics of the various instruments, application in arranging for various instrumental combinations including accompaniments for solos, vocal and instrumental. Covers arranging for both band and orchestra. Prerequisite: 260 and 261.

568 Orchestration 2 hrs. Summer, Fall, Spring
A continuation of 567.

572 Baroque Music (1600-1750) 2 hrs. Fall
A survey of the choral and instrumental music of the Baroque masters such as J. S. Bach and G. F. Handel. Special attention to the cantatas, oratorios, motets, passions, and masses.

573 Classical Music (1750-1800) 2 hrs. Spring
Examination of the chief works of the period by composers such as Stamitz, Mozart, and Haydn, with intensive study into the symphony and its derivation commencing with the Mannheim School; also chamber music, concertos, operas and sacred music.

574 Romantic Music (1800-1910) 2 hrs.
Music of the important composers of the period such as Beethoven, Brahms, and Wagner, along with historical, cultural and political backgrounds of the works. Special attention to growth of Nationalism in the music of various countries. Not offered 1964-65.

590 Operetta and Musical Production 2 hrs.
Designed to give the school music teacher the techniques for presenting musical productions. Such areas as selection of the production, casting, lighting, scenery, staging, publicity, costumes, make-up, etc., will be discussed. The course will culminate in a public performance. Graduate students will be required to assist with other parts of the production in addition to participating in the performance. Not offered 1964-65.

For Graduates Only

640 Band Techniques and Organization 2 hrs.
641 Choral Techniques and Organization 2 hrs.
The study of choral activities in relation to organization, repertoire, style, diction, singing technique, balance, blend, tone quality, phrasing, rehearsal technique and conducting. Not offered 1964-65.

642 Philosophy and History of Music Education 2 hrs. Spring
Designed to acquaint the student with the development of music education in the United States and how this development is the reflection of a growing philosophy of music education.

643 Psychology of Music Education 2 hrs. Fall
Personal and social needs, motives and goals in relation to music in education. The function of musical achievement and aptitude tests in music education. Psychological aspects of behavior pattern in musical organizations. Physical, social and psychological factors involved in a developmental music program.

650 Seminar in Music Education 2 hrs. Summer
Each participant will be expected to develop a project which is of interest to him, but each project will be subject to group discussion, review and analysis. The lectures and reading will deal with the whole field of Music Education.

658 Techniques of Research in Music Education 2 hrs.
Available research in music education will be analyzed as to method and technique. Outlines will be submitted for proposed studies involving the techniques thus discovered, and one will be developed. Not offered 1964-65.

659 The Teaching of Applied Music (on demand) 2 hrs. Summer, Fall, Spring
Survey of teaching problems involved in music of various periods and styles. Critical analysis of performances in student's major performance medium, as well as other media will be required. Pedagogical problems of teaching both secondary and university age level students will be considered.

660 The Teaching of Theory (on demand) 2 hrs. Summer, Fall, Spring
Analysis of various techniques, philosophies, and materials used in teaching theory. Analysis of relative strengths and weaknesses. Application of what we know about the learning processes to theory and the practical application of theory to all musical study.

665 Band Arranging 2 hrs. Summer
Instruction in scoring for small wind instrument ensembles, and the band. Opportunity will be provided to hear the results of each student's work. Offered even-numbered summers.
672 Medieval and Renaissance Music (X-1599) 2 hrs. Summer

673 Contemporary Music (1910 to present) 2 hrs.
A survey of trends in European music and music of the Americas from about 1910 to the present day. Particular attention and emphasis placed on the music since 1920. Works by Stravinsky, Bartok, Hindemith, Copland, Villa-Lobos and others will be studied. Not offered 1964-65.

690 Graduate Recital 2 hrs. Summer, Fall, Spring
Presentation of a full-length recital in the student’s area of concentration (applied music or composition). This course will also require an appropriate document relative to the repertoire performed. The course will be evaluated by the faculty teaching in that area. By consent of instructor.

Applied Music Summer, Fall, Spring
Qualified students may take graduate study in Applied Music for a total of four semester hours in the major performance area (two semester hours per semester) and for a total of two semester hours in a minor performance area (one semester hour per semester). Requires sixty minutes per week of instruction and the necessary practice.

H36-H37 Harp
H56-H57 Piano
H76-H77 Organ
H96-H97 Voice
Z36-Z37 Stringed Instruments
Z56-Z57 Brass Instruments
Z76-Z77 Woodwind Instruments
Z96-Z97 Percussion Instruments

PHILOSOPHY AND RELIGION

Loew, Head; Assistant Professors Emblom and Ellin.

560 Representative Western Philosophers 3 hrs. Spring
Concentrated study of not more than three philosophers. The topic is selected by the instructor and varies from semester to semester. The philosophers may constitute a group, such as the continental rationalists or the British empiricists, or they may be great individual thinkers from several periods of western philosophy. Prerequisite: Phil. 360-1-2-3, or consent of the instructor.
570 Epistemology 3 hrs.
Reading and discussion of works which present theories of consciousness, knowledge, and truth. Prerequisite: Philosophy 251 or any 300-level course in philosophy. Not offered 1964-65.

571 Metaphysics 3 hrs. Summer, Fall
An examination of theories of reality, existence, being, substance, and causality.

590 Studies in Reformation and Post-Reformation Theology 3 hrs. Summer
A study of Reformation and post-Reformation theology with major emphasis on those elements most important to an understanding of Protestant-Catholic differences.
(This course will be offered in the summer of 1964 only in the proposed Summer Medieval Institute and will be taught by John Hardon.)

PHYSICS

Rood, Head; Professors Bradley, Kruglak and Nichols; Associate Professors Derby and Miller; Assistant Professors Oppliger and Hoyer.

For Graduates and Upperclassmen

530 Theoretical Physics 3 hrs. Fall
Presents the fundamental structure of physics in precise mathematical terms. The topics will include mechanics from a vector point of view, flow of fluids, the elements of Lagrangian, and Hamiltonian formulations of mechanics. Prerequisites: Electricity and Light 113, Calculus 221.

552 Applied Spectroscopy 3 hrs. Spring
A combined class and laboratory course on methods of spectrographic analysis. The topics studied will include the history of spectroscopy, the origin of line spectra, spectrographic instruments and modern techniques of qualitative and quantitative analysis. Prerequisite: Light 350, or consent of instructor.

562 Electrical Measurements 3 hrs. Spring
Deals with the theory and use of instruments to measure electrical and magnetic quantities. Both AC and DC bridge methods are included. Prerequisites: Electricity and Light 113, Math III.

564 Advanced Electronics 3 hrs.
Applications of electronics in different types of radio frequency communicating systems, in control devices and in general instrumentation, are considered in this course. Some laboratory measurements at
both audio and radio frequencies are included. Prerequisites: Introduction to Electronics, Calculus. Not offered 1964-65.

570 Atomic Physics 3 hrs. Summer

A study is made of energy and momentum relations for particles in classical, relativistic, quantum, and quantum-relativistic physics. Photon-electron interactions such as the photoelectric effect, Compton effect, electron-positron production, Bremsstrahlung collisions, and pair annihilation are considered. Other topics include deBroglie particle waves, structure and spectrum of hydrogen and many-electron atoms, special relativity, X-ray spectra, and high-energy accelerating machines. Prerequisites: 112, 113, Math III.

572 Nuclear Physics 3 hrs. Spring

Covers natural and artificial radioactive transformations, the experimental methods of nuclear physics, properties of neutrons, binding energy, nuclear reactions, nuclear structure, fission and cosmic rays. Prerequisite: Atomic Physics 570.

For Graduates Only

612 Current Developments in Physics 2 hrs.

Consists of demonstration-lectures and discussions of some of the outstanding developments in physics in recent years, such as nuclear energy and its applications, artificial radioactivity, elementary particles, high energy accelerators, semi-conductors and transistors and ultrasonics. Special attention will be given to make the course of practical value to high school teachers of science. Prerequisite: one year of General College Physics. Not offered 1964-65.

622 Quantum Mechanics 3 hrs. Spring

Designed to provide a foundation of fundamental techniques of calculation for more advanced work in physics and chemistry of atoms, molecules, nuclei and solids. An attempt will be made to provide an understanding of the principles of the subject through both the Schroedinger-Heisenberg Equations as well as through the formal operator theory of Dirac. Discussing the simple and representative systems of the simple harmonic oscillator and the one electron atom, the course will confine itself almost solely to the non-relativistic approximation. Prerequisites for the course should include a mathematical preparation through advanced calculus and preparation in physics equivalent to undergraduate major.

624 Statistical Mechanics 3 hrs. Fall

Deals with concepts of probability and statistics as applied to physics with particular emphasis on the kinetic theory of gases. Topics covered will include Laplace's formula, Stirling's formula, Normal Distribution Law, Maxwell distribution of velocities, canonical ensemble, and Gibbssian ensemble. Prerequisite: Thermodynamics 340 or equivalent.
630 Analytical Mechanics 3 hrs. Fall

This course deals with the Hamiltonian method of mechanics and develops the variational principles and the equations of Lagrange. Examples of point mass and rigid body problems are examined by these methods. The principles of relativity are introduced by establishing the Lorentz invariance requirement for the Hamiltonian. Canonical transformations, angle and action variables, theory of small vibrations, are introduced in a way that makes the historical bridge between classical and quantum mechanics. Prerequisites: Advanced Calculus, Intermediate Mechanics.

662 Electricity and Magnetism 3 hrs. Spring

This course deals with the Hamiltonian method of mechanics and dependent electromagnetic fields and their interaction with matter are described. Radiation, wave motion, scattering, relativity, are several of the topics in the latter part of the course. Vector analytical notation is used exclusively. Prerequisites: Advanced Calculus, Intermediate Mechanics, undergraduate course in electricity and magnetism.

674 Nuclear Science for High School Teachers 2 hrs.

Provides the secondary school science teacher direct experience with simple nuclear phenomena. The greater portion of the time will be devoted to carrying out of several experiments of varying degrees of complexity, but most of which can form the bases for several high school projects of demonstrations. Although theory will not be emphasized, the basic nuclear phenomena will be discussed together with current applications of nuclear science. Students enrolling for the course should be prepared with the basic courses in the physical sciences, although advanced course are not prerequisites. Not offered 1964-65.

**POLITICAL SCIENCE**

Weber, Head; Professors Clark, Plano and Stine; Associate Professors Batson, Greenberg, Olton and Phillips; Assistant Professors Ebel, Kaufman, Kim, Klein, Ritchie, and Thompson.

Seminar topics will vary from year to year: Enrollment in successive years permitted. Schedule of classes will indicate credit to be given for courses designated as variable credit.

600 courses are open to graduates only.
MAJOR AREAS

AMERICAN GOVERNMENT

2 or 3 hrs.
An intensive survey of our national government and its problems. Designed for students who have not had previous work in Political Science or those who may need additional study on the national level. Not offered 1964-65.

502 State and Local Government
3 hrs. Fall
This course is designed to provide an intensive introduction for seniors and graduate students who have had no previous work in state and local government. The course will survey the state and local governments of the United States and constitutes a prerequisite to any seminar in state and local government for such students. Students who have had previous courses in state or local government may not receive credit for this course. Credit in Political Science 302 precludes credit in 502.

503 Municipal Administration
2 hrs.
Analyzes the function of top city management and describes techniques of administration. Considers legislative-executive relations, techniques of direction and programming of municipal services, research and planning, the staff services of personnel and finance, and the problems of public relations and reporting. Prerequisite: 304 or 330 or equivalent. Not offered 1964-65.

504 Governing Rural Areas
2 hrs.
Covering the government and politics of rural areas, this course deals specifically with townships, counties, municipalities and school districts in rural areas. Special attention is given to the distinction between rural and metropolitan areas and the place of the rural community and its government in a rapidly urbanizing nation. Prerequisite: 200 or 302 or equivalent. Not offered 1964-65.

600 Seminar: National Government
2 hrs.
Study and research concerned with national governmental activities and problems. Individual papers and reports will be presented to the seminar group. Not offered 1964-65.

602 Seminar: State or Local Government—Local, State
2 hrs. Summer, Spring
This course will involve supervised study-research on major questions of current significance in state or local government. Individual papers and reports will be presented to the seminar group. The content of the course will vary from semester to semester. The subject will be indicated in advance.
This course is designed to give the student an opportunity to study the relationships between local, state, and national governments. Functional as well as legal and constitutional relationships will be considered. Not offered 1964-65.

**POLITICS AND PUBLIC OPINION**

**510 Community Political Systems**  
2 or 3 hrs.

The behavior of groups, parties, office-holders, and voters on particular kinds of issues; and the differences in political power patterns from community to community according to varying community size, socio-economic structure, and values. Prerequisite: Political Science 310 or equivalent. Not offered 1964-65.

**512 The Political Process of Government**  
2 or 3 hrs.

An analysis of political behavior in the United States with particular reference to the growth and internal dynamics of interest groups; the characteristics of the party system; the role of both group and party in relation to public opinion and to the operation of the legislative, executive and judiciary. Not open to students who have taken Political Science 310 or 311. Not offered 1964-65.

**610 Seminar: U. S. Politics—Political Parties**  
2 or 3 hrs. Fall

Analysis of political instruments, leadership, and techniques as exemplified in the United States political system. Students will pursue research projects directed by the instructor and integrated into the course. The course will give emphasis to either public policy formation, or political parties and political behavior, or pressure groups and propaganda. The course may be repeated if the student desires to specialize in the areas.

**PUBLIC LAW**

**524 Constitutional Law**  
3 hrs. Fall

A study of the interpretation of the United States Constitution as embodied in the opinions of the United States Supreme Court. Cases are studied in the areas of jurisdiction, legislative and executive branches, and national-state relations. Prerequisite: 324 suggested.

**526 Constitution and Civil Liberties**  
2 or 3 hrs. Summer, Spring

A study of free speech, loyalty in a democratic state, citizenship, freedom of religion, rights of persons accused of crime, and government’s responsibility to protect persons from racial and religious discrimination, with special attention to the role of law and judges. Prerequisite: Junior standing.
503 Municipal Administration 2 hrs.
(See 503 under American Government).

534 Bureaucracy in the Public Service 2 hrs.

630 Advanced Public Administration 2 or 3 hrs. Fall
Supervised study and research on controversial areas of administrative theory and practice. Individual papers and reports will be presented by members of the seminar. Students will choose their problems from functional areas and from administrative levels in which each is particularly interested. Prerequisite: 330 or 503 or 534 or equivalent.

COMPARATIVE GOVERNMENT

542 The Politics of Developing Areas 2 or 3 hrs.
Consideration of the major political and governmental problems inherent in societies seeking to achieve economic and social modernization. Will investigate problems common to all underdeveloped areas such as authoritarianism, nationalism, political fragmentation, and government instability. Societies in Asia, Africa, Latin America and the Middle East will be treated comparatively. Prerequisite: A course in foreign government or equivalent courses in Social Science. Not offered 1964-65.

544 Governments and Problems of Central and South America 2 or 3 hrs. Fall
A survey of the governmental and political institutions of selected Latin American countries. Special attention is paid to the impact of social change and economic underdevelopment upon Latin American political behavior.

546 Governments of the Soviet Union and Eastern Europe 2 or 3 hrs. Spring
The governmental organization and political structure of the Soviet Union and the States of Eastern Europe. Special attention is directed to the Communist Party and its relationship to the organization of the state. The educational and economic bases of the current system are stressed.
Seminar: Comparative Government—Africa-Asia
2 or 3 hrs. Summer, Spring

A study of selected governmental problems in such areas as Western Europe, Eastern Europe, Africa, Asia, and Latin America. Seminar subjects will vary from semester to semester permitting students to repeat the course for credit as long as subject matter is different. Emphasis will be placed on extensive reading and preparation of research papers. Subject for any particular semester will be indicated in advance of offering.

INTERNATIONAL RELATIONS

552 Problems of International Relations 2 or 3 hrs. Fall, Summer

Designed to provide an intensive introduction for seniors and graduate students who have had no previous work in the international field. The course will survey the sub-fields of international politics, law, and organization and constitutes a prerequisite to any other 500 or 600 level international courses for such students. May not be taken by students who have had Political Science 250.

554 International Law 3 hrs. Spring

Examination of the legal relations of nations in war and peace. Subjects to be considered include the role of law, its theoretical framework, recognition, sovereignty, jurisdiction, neutrality and international legal institutions. Prerequisite: 250 or 350 or 552 or equivalent.

650 Seminar: American Foreign Policy—Comparative 2 or 3 hrs. Summer, Spring

Study and research on contemporary American foreign policy problems. Individual papers and reports will be presented. The content of the course will vary from semester to semester and the subject to be studied will be indicated in advance. American policy in specific geographic areas, comparative foreign policy, or specific American foreign policy problems may be considered.

652 Seminar: International Relations—United Nations 2 or 3 hrs.

Study and research on major topics of current international significance. Individual papers and reports will be presented. The content of the course will vary from semester to semester and the subject to be studied will be indicated in advance. Selected topics—Theory of International Relations, Emerging Nations, International Organization, and European, Asian, or African problems. Not offered 1964-65.

POLITICAL THEORY

560 Comparative Political Ideologies 3 hrs. Fall

An analysis of the philosophies which form the background of the several variants of modern communism and socialism. The course will
also examine fascism and the underlying assumptions of democratic institutions. It should be particularly useful to teachers who want to gain a broad insight into the state of contemporary communism.

564 Political Philosophy 2 hrs. Summer, Spring

An analysis of the problems and subject matter considered by political philosophers, such as the nature of man, value system, community, types of community, the purposes of government, and the extent of political authority.

566 American Political Thought 2 hrs. Spring

Exploration and analysis of the fundamental political convictions of Americans, their origins, diversity, and philosophic implications.

660 Seminar: Political Thought 2 hrs. Fall

Consideration of various issues or questions arising in political thought, of various men who have contributed to political thought, or certain periods in history or regions of the world as related to political thought. Subject matter will vary from semester to semester and will be indicated in advance.

READINGS IN POLITICAL SCIENCE

598 Readings in Political Science 1-3 hrs. Summer, Fall, Spring

Designed to give an opportunity to advanced students and graduate students with good scholastic records to pursue independently the study of some subject having especial interest for them. Subjects are chosen and arrangements are made to suit the needs of each particular student. Approval of head of department and instructor required.

PSYCHOLOGY

Kuffel, Head; Professors Fatzinger and Schmidt; Associate Professors Asher, Robertson and Von Holt; Assistant Professors Jochem, Koronakos and Lyon.

For Graduates and Upperclassmen

510 Learning and Memory 2 hrs. Summer, Fall

An introduction to the experimental analysis and theoretical integration of some phenomena of learning and memory.

512 Physiological Psychology 2 hrs. Summer, Fall, Spring

The study of relationships between bodily processes and behavior. Psychology is treated as a biological science in this course.
514 **Motivation-Emotion** 3 hrs. Spring

An introduction to the experimental analysis of psychological and physiological aspects of motives, incentives, and emotions. Should follow Learning and Memory 510.

516 **Advanced General Psychology** 2 hrs. Summer, Fall

An intensive study of basic principles of psychology with emphasis on the principles and theories of learning, motivation, emotion, perception, development and other areas of psychology. Recommended for all graduate students in psychology. Prerequisite: General Psychology or consent of instructor.

517 **Advanced General Psychology** 2 hrs. Spring

A continuation of 516. This course covers the topics not included in 516. Students are permitted to enroll first in either 516 or 517. Recommended for all graduate students in psychology.

530 **Statistics** 3 hrs. Summer, Fall

Application of Elementary Statistical concepts, such as central tendency, variability, correlation, reliability and validity, to problems of educational and psychological measurement. For students in Education and for those who need statistics as a prerequisite for graduate courses.

534 **Sensation and Perception** 3 hrs. Fall

An examination of the current facts and theories of sensation and perception. Emphasis on experimental methods. Prerequisite: Elementary Experimental Psychology.

542 **Occupational Analysis and Classification** 2 hrs. Fall, Spring

Sources of occupational information; procedures and techniques of job analysis and job classification; applications in employment procedures, placement and vocational counseling.

560 **Vocational Psychology** 2 hrs. Fall, Spring

Interviewing and counseling techniques; applications of testing and counseling in industry and education. Practice in administration and interpretation of tests. Prerequisite: 380.

561 **Counseling and Psychotherapy for the Mentally Handicapped** 2 hrs. Fall

Methods and techniques used in counseling retardates. Group, play, psychodrama, speech and industrial therapy. Counseling with parents.

595 **History of Psychology** 2 hrs. Fall

A study of the development of psychology from ancient Greek philosophies to the present-day. Emphasis will be placed on recent history particularly during the last two centuries. This course is concerned with the historical and philosophical development of psychology.
Special Problems in Psychology 2-4 hrs. Summer, Fall, Spring
This will be a readings course for the purpose of enabling graduate
students to develop a background, knowledge and competency in
specific areas.

For Graduates Only

Systematic Psychology 3 hrs. Spring
An examination of the various schools of psychology with emphasis
on the development of contemporary theoretical explanations of human
behavior.

Differential Psychology 2 hrs. Fall
A study of individual and group differences in behavior with particu-
lar emphasis on methodological and theoretical considerations.

Personality Theory 2 hrs. Summer, Fall, Spring
Consideration and evaluation of the major theories of personality
with emphasis on those theories having implications for counseling and
therapy. An examination of experimental evidence and illustrative case
studies.

Advanced Statistics 3 hrs. Fall
Testing statistical hypotheses and estimating population param-
eters; analysis of variance; regression and correlation analysis, multiple
regression, analysis of covariance; non-parametric tests.

Personnel Psychology 2 hrs. Spring
An introduction to the personnel selection and classification tech-
niques as applied to industry, business, and vocational guidance.

Psychology of Work Effectiveness 2 hrs. Summer, Fall
An analysis of the various factors which lead to satisfactory and
productive work. Worker motivation and adjustment, nature of super-
vision, physical qualities of the working environment, and social founda-
tion of the industrial world are included.

Psychology of Industrial Training 2 hrs. Spring
A survey of learning principles as applied to training in industry
with emphasis on practical techniques. The training of interns, appren-
tices, inspectors, new workers and supervisors is considered.

The Deviant Individual 2 hrs. Summer, Fall, Spring
Study of the gifted, mentally defective, neurotic, delinquent, criminal
and psychotic with particular attention to the dynamic and pathological
factors in development and to the distinctive manifestations of these
deviations from the normal.

Clinical Diagnosis 2 hrs. Summer, Fall
Introductory study of the nature and application of clinical tools
to the study of illustrative cases of problem behavior with considera-

d
of means and methods of clinical treatment. Prerequisite: Abnormal Psychology.

661 Psychological Counseling 2 hrs. Spring

A consideration of the counseling process, various theoretical approaches to counseling, tests and techniques used in counseling. Techniques used in counseling children are considered.

662 Counseling Practicum 2 hrs. Fall, Spring

Supervised practice of counseling in the clinical setting. Training in diagnosis, the use of counseling techniques, writing of case notes, etc. Prerequisite: Permission of instructor.

680 Measurements of Intelligence 2 hrs. Summer, Fall

A survey covering the present status of intelligence testing, with special emphasis on the theory, methods, construction, evaluation and psychological implications of group and individual intelligence tests.

681 Measurements of Interests, Aptitudes and Personality 2 hrs. Summer, Spring

A survey of measures used in other areas than intelligence, with emphasis on the theory, methods, construction, evaluation and psychological implications of their use.

682 Individual Testing 2 hrs. Fall, Spring

Supervised practice in administration, scoring and interpretation of individual tests of general intelligence: Wechsler-Bellevue, WISC. Prerequisite: Permission of instructor.

684 Survey in Projective Techniques 2 hrs. Fall

Theory and basic concepts underlying the use of projective techniques. The Rorschach, TAT, CAT and various other techniques will be considered.

685 Projective Testing 2 hrs. Spring

Supervised practice in the administration and interpretation of projective techniques appropriate to the student's professional interest area. Prerequisite: Permission of instructor.

SCIENCE DIVISION

Professors Mallinson, Osborn and Van Deventer; Associate Professor Nichols.

For Graduates Only

610 Science for Elementary Teachers 2 hrs. Summer, Fall, Spring

Indicates the part played by science experiences in the development of children, acquaints teachers with types of science content and teaching procedures suitable in elementary education.
620  The Teaching of Science  2 hrs.  Fall

Analyzes and evaluates the objectives of science as a high-school subject and considers modern practices with respect to such topics as classroom method, motivation, laboratory work, directed study and like problems.

SOCIAL SCIENCE DIVISION

Professors Kercher, Seibert and Stine; Assistant Professors Hawks, Johnson; Instructor Gillette.

For Graduates and Upperclassmen

500  Teaching of the Social Studies  3 hrs.  Summer, Fall, Spring

Objectives of teaching of the social studies in the junior and senior high school. Selection, organization and development of content materials. Study of the procedures and problems of effective teaching in the social studies.

504  Social Studies Seminar: England  6 hrs.

A foreign study seminar especially designed for teachers and advanced college students in the social studies. It consists of regularly scheduled lectures and discussions on British life, institutions, social problems and international relations. Following twelve days of travel in the British Isles, the seminar will be in formal session at Oxford University, England, for a period of about four weeks. After Oxford, the party will spend approximately a month touring several countries on the Continent. Graduate or undergraduate credit, up to a maximum of three semester hours in any one department may be distributed among economics, history, political science and sociology. Offered next, summer 1966.

506  Studies in the Non-Western World  2 hrs.

Gives teachers an awareness of social forces operating outside of Western Civilization. The workshop approach will be used to introduce students to such problems in Asia and Africa as industrialism, nationalism, self-government, social integration, population explosion, and the Western impact. The answers which two-thirds of the world are now giving to these problems cannot help but affect Western society. The ultimate objective is to provide teachers with selected resource materials and initial awareness of dynamic forces shaping over half the world. Not offered 1964-65.

For Graduates Only

600  Seminar in the Teaching of the Social Studies  2 hrs.

Assists teachers of social studies to evaluate their philosophy and teaching methods in the light of accepted principles and current prac-
ties in social studies instruction. Students will be encouraged to do individual studies which will enable them to remedy their own weaknesses. Prerequisite: Open only to graduate students who are teaching or have taught social studies in the public schools. Not offered 1964-65.

SOCIOLOGY AND ANTHROPOLOGY

Kercher, Head; Professors Bouma, Horton, Hunt, Manis; Associate Professors Maher, Reid, Schellenberg; Assistant Professor Garland.

For Graduates and Upperclassmen

500 History of Social Thought 2 hrs.
A critical survey of the social thinking of outstanding students of society from Plato to those of modern social science. Prerequisite: Sociology 200 or 600, or equivalent. Not offered 1964-65.

504 Sociological Theory 3 hrs. Fall, Spring
A study of the major theoretical approaches in contemporary sociology. Prerequisite: 9 hours of sociology.

514 Juvenile Delinquency and the Community 2 hrs. Summer, Spring
A study of juvenile delinquency as a social problem. Extent, causative factors, methods of treatment and programs of prevention and control are covered. When possible, extensive use of community resource people is made. Prerequisite: Sociology 200 or 600, or equivalent.

523 Contemporary Social Movements 3 hrs. Fall
A study of the growth and place in contemporary society of selected social movements, including communism, fascism, Ku Klux Klan, the Townsend movement and the like. Prerequisite: Sociology 200 or 600, or equivalent.

524 Advanced Social Psychology 3 hrs. Spring
A study of selected theoretical, methodological and substantive problems in Social Psychology. Prerequisite: Sociology 220 or equivalent.

532 Culture and Personality 2 hrs. Spring
An investigation of the interaction of culture and personality with particular attention to the role of culture as a force in the development of the individual. Prerequisite: Sociology 200, or 230 or 600, or the equivalent.

533 Changing Social Systems—Sub-Saharan Africa 2 hrs.
A study of the erosion of traditional tribal systems and the rise of secondary associations and social systems in sub-Saharan Africa resulting from the impact of European Culture and other contemporary world influences. Prerequisite: 200 or 230 or consent of instructor.
536 The Dynamics of Culture Change 2 hrs. Fall

An inquiry into the dynamics of culture through a study of the principal theories of culture change and their application to concrete situations such as the rise of complex civilizations and the reaction of non-western societies to contact with the West. Prerequisite: 200, or 230 or 600, or equivalent.

554 Sociological Analysis of Population 3 hrs. Fall

Applications of selected sociological theories to analyze and interpret population characteristics and processes such as size, growth, social structure, and social change. Prerequisite: 9 hours of sociology or permission of the instructor.

556 Social Stratification 3 hrs. Spring

An analysis of the structuring of societies along social class and caste lines. Emphasis is placed on the class structure of the United States and its implications for educational, occupational and political policies. Prerequisite: Sociology 200 or 600 or consent of instructor.

558 Social Forces in Underdeveloped Areas 2 hrs. Fall

An examination of the social factors which influence the growth of industrialization in underdeveloped areas. These factors include cultural tradition, social class stratification, and the problems involved in a shift from rural to urban residency. Case materials from private business enterprises, missionary and educational ventures, U. S. Foreign Aid projects included. Prerequisite: Sociology 200, 330 or 600.

560 Principles of Social Work 3 hrs. Spring

A course designed for students without social work experience. It constitutes a general introduction to the basic principles and processes of social case work and social group work. Prerequisite: minimum of 5 semester hours of sociology.

572 Community Agency Resources 2 hrs. Summer, Fall, Spring

A study of community agencies and resources for those concerned with family and personal problems. Emphasis is placed upon the availability of these resources and their effective use by business and industry, speech therapists, guidance counselors, teachers, etc.

573 The Sociology of Political Behavior 3 hrs. Spring

Systematic sociological theory and research applied to the study of American political behavior, including such topics as power, decision making, leadership, and communications. Prerequisite: 6 hours of sociology or consent of instructor.

574 Sociology of Religious Institutions 2 hrs. Spring

A study of the social role of religious institutions and beliefs with particular reference to the United States; the relation between religious and other aspects of society. The course considers social factors affecting the development of different types of religious institutions and the
influence of religion on American society. Prerequisite: Sociology 200 or 600.

575 Industrial Sociology 3 hrs. Fall, Spring
A study of human relations in business and industry; the functioning of informal groups and the varying roles of leadership; problems of depersonalization, of worker morale and output, and of labor-management articles.

576 Sociology of Education 2 hrs. Fall, Spring
The classroom as a social situation analyzed in terms of the interaction between teacher-student and student-student. The educative process as a function of the interpersonal relations among teachers and between teachers and administrators. The school as a social system as it affects and is affected by the community in which it is located and society at large. Prerequisite: Sociology 200 or 600, or equivalent.

577 Comparative Institutional Studies 2 hrs. Spring
A comparative study of the structure and the functioning of selected aspects of culture in selected counties or areas and America. The courts, the educational system, the welfare state, class stratification, correctional institutions, political organization and the basic structure of government are considered. Prerequisite: Sociology 200 or 600, or equivalent.

578 Social Structure of the Soviet Union 3 hrs.
A sociological analysis of contemporary Soviet society focusing on the patterns and functions of its basic institutions—the family, government, education, and industry. Consideration will also be given to the existing stratification system in terms of class formation and distribution of power. Prerequisite: 200, 330 or 600, or consent of instructor.

579 Social Structure and Social Change in Japan 2 hrs. Summer, Spring
Introduction to Japanese society, focusing upon the contemporary processes of industrialization and urbanization and their impact upon Japanese family life, village organization, urban community, class structure and personality.

580 Introduction to Social Statistics 3 hrs. Fall
An introduction to statistical reasoning with particular reference to social science research. Views statistics as an aspect of scientific inquiry and considers problems of analysis and interpretation of typical social science data. No prerequisite required but some background in algebra is recommended.

592 Family Life Education and Counseling 2 hrs. Summer, Spring
Provides the student with a working knowledge of the methods and materials appropriate in the school, the church and other social situations, for working with individuals and small groups who desire preparation for marriage and parenthood. Some attention will be given to the
techniques for handling counseling opportunities arising out of these teaching situations. Prerequisite: 200 or 600, or consent of instructor.

598 Readings in Sociology 1-3 hrs. Fall, Spring
Offers graduate students with good scholastic records an independent program of study, arranged in consultation with the instructor. Prerequisite: Honors Program, or consent of the Head of the Department.

For Graduates Only

600 Social Dynamics of Human Behavior 2 hrs. Summer, Fall, Spring
The concepts of sociology, cultural anthropology and social psychology essential to understanding human development and social behavior are systematically explored and integrated. The student is taught how to assess the concrete social situations in which he finds himself, and in which he observes other people from day to day. This course is not open to those who have had a foundation course in sociology.

604 Seminar in Sociological Theory 2 hrs. Spring
An advanced, intensive study of certain selected theoretical topics of contemporary significance. Prerequisite: One course in social theory.

610 Social Pathology and Personal Deviation 2 hrs.
A study of the social aspects of personal deviation. Subject-matter would include consideration of the alcoholic, the drug addict, the marginal man and the sexually maladjusted. Course considers deviate behavior in light of social background, causative factors and possible therapy. Prerequisite: Sociology 200 or 600, or equivalent.

615 Techniques of Intercultural Adjustment 2 hrs. Spring
A study of intercultural processes of adjustment involving different racial, national and religious groups. The factors giving rise to present-day conflict situations are examined and special emphasis is given to techniques of adjustment through individual and community action. Prerequisite: Sociology 200 or 600, or equivalent.

616 Seminar in Social Problems 2 hrs.
A detailed study of a social problems area through student reports and seminar discussion. Instructor will select specific topic. Course is intended to provide intensive joint exploration of significant sociological issues. Not offered 1964-65.

621 Primary Group Dynamics 2 hrs. Fall
A study of the forces that influence the outcomes of primary group activity. The effects of diverse personalities, of varying leadership roles, of person-to-person interaction and of the responses of the group as a whole are considered. Principles of effective group dynamics are practiced, as well as observed and studied, in the educational setting. Prerequisite: Sociology 200 or 600, or equivalent.
663 Integration of Education and Social Work Techniques 3 hrs.

This course is a specialized social work course restricted to students in preparation for teaching the adult blind. It is designed to afford an opportunity for a discussion of behavior and the effect of behavior on learning and of counseling and guidance as aspects of a sound teaching relationship. Field observations and some limited work with blind clients will give the student a chance to present realistic situations in group discussion as problems in learning. Prerequisite: consent of instructor.

676 The School and the Community 2 hrs. Fall, Spring

The school as a social institution in the American community. Interaction between the school and the other basic social institutions and their values. The sociological significance of community structures, processes and problems for school-community relationships.

680 Seminar in Research Methodology 2 hrs. Fall

Examine the assumptions, logic and techniques of sociological research, with examples from current research reports and student projects. Prerequisite: One course in research methods.

683 Supervised Research 2-4 hrs.

All entering graduate students must register for this course. Purpose is to assist student in selecting, formulating, designing, conducting and reporting the thesis or essay. Includes continuing reports by students of their research progress. Those who plan to do a thesis may, with permission of the instructor and the graduate adviser, continue with Graduate Studies 700 Thesis in Sociology.

685 Advanced Social Statistics 3 hrs. Spring

A study of advanced statistical techniques of special importance to sociology. The emphasis is on procedures designed for analyzing problems involving a large number of variables. Included among the topics studied are multiple and partial correlatives and regression, analysis of variance, factor, analysis and scaling. Prerequisite: 580 or equivalent.

692 Family Development 2 hrs. Fall, Spring

The family is analyzed over its entire cycle from marriage to the death of the spouses with special attention devoted to the developmental tasks each family member and the family as a unit must accomplish for family adjustment. The course is designed to provide students who may work with families in one capacity or another with a theoretical framework for diagnosing sources of maladjustment. Prerequisites: Sociology 200 or 600 or consent of instructor.

SPEECH

York, Head; Professors Becker, Brown, and Van Riper; Associate Professors Erickson and Kuykendall; Assistant Professors Denison, Helgesen and Smith; Instructor Bowen.
For Graduates and Upperclassmen

500 Speech for the Classroom Teacher  2 hrs.  Summer
   Designed to help the teacher become more effective in speaking and reading. The course content will be adjusted to meet the specific needs of the individual members of the class.

516 Oral Interpretation of the Drama  2 hrs.
   Platform reading of the one-act and the three-act play. Through class analysis and criticism, a basis for judging the drama is established. Not offered 1964-65.

520 Children's Theatre  2 hrs.  Spring
   Deals with the production of formal plays with and for children. Consideration is given to the dramatic literature of the field, the selection, staging and direction of children's plays, as well as the psychology of child audiences.

522 Acting  2 hrs.
   A continuation of the work done in Acting 221, with more intensive work in the techniques and styles of acting. Prerequisite: Consent of instructor. Not offered 1964-65.

524 Problems of Play Direction  2 hrs.
   Deals with special problems facing the teacher who has had little or no formal training in theatre. The area of study is limited to selecting and casting the play, to the approach and preparation of the role and to the direction of the play. Laboratory provided in dramatic productions. Not offered 1964-65.

526 Technical Problems of Play Production  2 hrs.  Spring
   A companion course to 525 with the emphasis placed on technical problems in planning and executing scenery, lighting, costuming and makeup. Laboratory provided in dramatic productions.

530 Public Speaking II  2 hrs.  Fall
   Advanced study of speech composition and audience psychology, analysis of model speeches and frequent practice in constructing speeches for special occasions. Students interested in coaching or participating in oratorical contests will find this course useful.

532 Persuasion  2 hrs.  Spring
   Speech skills are developed by the presentation of studies in persuasion, by participation in discussion and by criticism of both. Content deals with psychological theories and experimentation in motives and theories in persuasion ethics.

540 Broadcasting Regulations  2 hrs.
542 Educational Broadcasting 2 hrs.

545 Workshop in Educational Television Post Summer 2 hrs.
This course is designed as a workshop in the instructional uses of television. The purpose of the course is to aid schools and teachers in their use of lessons and courses presented in educational television programs.

560 Teaching Speech in the Elementary School 2 hrs. Spring
Gives the teacher in the elementary school an understanding of the role of general speech training in the elementary school curriculum, the relationships between speaking and reading and writing, methods of teaching individual and group speaking activities, types of speech improvement programs and methods of improving listening skills.

562 Teaching Speech in the Secondary School 3 hrs. Fall, Spring
Emphasizes problems of teaching speech in high schools. Considers aims, principles, materials and techniques related to speech teaching.

564 Creative Dramatics for Children 2 hrs. Summer, Fall, Spring
Designed primarily for teachers in the elementary grades. Deals with the principles, materials and techniques of creative dramatics. The course is planned to prepare the elementary school teacher in the use of these activities to enrich the classroom program and to develop creativity in the individual child.

566 Direction of Forensic Activities 2 hrs.
For students who expect to direct forensic activities. Includes the principles of teaching debate and other forms of public speaking. Opportunities will be given for directing local speaking activities. Prerequisite: a major or minor in speech or consent of instructor. Not offered 1964-65.

For Graduates Only

600 Problems in Listening 2 hrs. Summer
The principles and problems of listening. Studies and experiments in the field will be the main emphasis. In addition, applications to classroom situations will be made. Each member of the class will take tests and experiment with various listening techniques in order to gain insight to the relationship of language, attitudes and learning as seen from the perspective of listening behavior.

630 Group Problem Solving 2 hrs. Spring
Presents principles and practices in group problem solving in a democracy. Techniques employed in committee hearing, symposium, panel, forum and board meeting will be considered.
632 Speech and Social Control 2 hrs. Fall

Inquiries into the factors and forms of speech and the areas of social experience which are involved in the use of speech for social control. The use of speech is observed in politics, social movements, business and industrial relations, advertising and selling, promotional drives and the like. The aim of the course is to develop in the individual the ability to evaluate critically the many verbal efforts to influence human belief and behavior which are thrust upon us daily.

634 Public Address in American Society 2 hrs.

Deals with the study of the history and criticism of public address in America. Will include a study of the important speakers in American history, an analysis of their speeches, their impact upon American society and their relationship to political and social movements in the United States. Not offered 1964-65.

660 School Assemblies and Community Programs 2 hrs.

Aids teachers and administrators in planning and executing school assemblies, educational conferences and special programs for various community groups. It will deal with sources of materials, problems in planning, techniques and skills involved in readying such programs for their presentation. Not offered 1964-65.

**SPEECH PATHOLOGY AND AUDIOLOGY**

For Graduates and Upperclassmen

550 Basic Voice and Speech Science 3 hrs. Fall, Spring

For students majoring in speech or speech-correction. Topics include anatomy and physiology of hearing; speech and hearing; anatomy and physiology of articulation and phonation; the neurological organization of the speech function; the physics and physiology of quality, pitch and intensity; and the psychology of speech.

552 Stuttering and Allied Disorders 3 hrs. Fall, Spring

Acquaints the student with the nature, causes, development and treatment of the more serious speech disorders. The literature of stuttering, cleft palate, deaf and aphasic individuals will be surveyed as well as the various methods for treating these disorders. Prerequisite: Principles of Speech Correction.

554 Clinical Audiometry and Audiology 2 hrs. Spring

Deals with the physics of sound, with ear as a sound receiver and with clinical methods of measuring hearing. The interpretation of test results for the purposes of re-education and the necessary follow-up measures in an educational hearing program are studied. Students will be given actual practice in group and individual audiometric testing.
555 Hearing Rehabilitation 2 hrs.

556 Introduction to Lip Reading 2 hrs. Fall, Spring
Acquaints the student with the various methods of lip reading and the problems encountered in the teaching of this skill. The student is given opportunity to acquire elementary lip reading skill as well as practice in the techniques of teaching.

558 Organic Speech Disorders 3 hrs. Summer, Fall, Spring
The diagnosis and treatment of the speech disorders of organic origin; cleft palate, cerebral palsy, aphasia, aphonias and dysarthria.

559 Anatomy and Pathology of the Aural Mechanism 2 hrs. Fall
A survey of anatomical and physiological subject matter bearing on the speech field of hearing; functional tests of hearing; and discussion of the pathological conditions of the ear and labyrinth.

For Graduates Only

650 Teaching of Speech Correction 2 hrs.

651 Seminar in Voice Disorders 2 hrs. Fall
The causes and treatment of the following voice disorders will serve as the basic content of this course: the laryngectomized; spastic dysphonia; vocal nodules; aphonias; functional voice disorders.

652 Public School Speech Correction 2 hrs.
Deals with the organization and administration of speech therapy in the public schools. Problems of examination, certification, scheduling, inter-departmental relationships, parent and teacher education, techniques on group therapy, individual therapy and speech improvement methods for the elementary grades are covered. Not offered 1964-65.

653 Diagnosis and Appraisal 3 hrs. Summer, Spring
This course is intended to provide the basic information needed in the examination of persons with speech and hearing disorders. Interviewing techniques, examination procedures in assessing disabilities, etiology and prognosis for voice, articulation, rhythm, language and hearing disorders will be the basic content of the course. Experience in the outpatient clinic will be provided.

654 Clinical Methods in Speech Correction 2 hrs. Fall
Designed for advanced students and practicing speech therapists, this course provides supervised therapy experiences with a variety of speech disorders. Emphasis will be placed upon the intensive study, application and evaluation of diagnostic and therapeutic procedures.
656  Speech Therapy  
Including a historical survey of the speech therapy field; the philosophy of speech correction; professional problems; the administration of private, hospital, public school speech clinics and the basic principles of psychotherapy as applied to speech disorders.

658  Speech Pathology  
In this course the basic pathology of the disorders of communication is examined in terms of servo-system theory, learning theory, and psychopathology.

659  Organization and Administration of Clinical Program  
This course is intended to acquaint the student with the specific problems involved in the organization and administration of speech and hearing services in various clinical settings; hospital clinics, college speech and hearing clinics, special education programs and rehabilitation Centers.