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Bulletin



Western Michigan University



SCHOOL OF GRADUATE STUDIES

1960 Summer School
1960-1961 College Year





Bulletin

WESTERN MICHIGAN UNIVERSITY
KALAMAZOO, MICHIGAN

SCHOOL OF GRADUATE STUDIES

SUMMER SESSION 1960
COLLEGE YEAR 1960-61

Vol. 55, No. 3

March 1960

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CALENDAR OF GRADUATE EVENTS

June 1960 — June 1961

Summer Session, 1960

June 20, MondayRegistration
June 21, TuesdayFirst day of classes
June 24, FridayLast day for change of enrollment
June 27, MondayDiploma applications due
July 8, FridayLast day for dropping courses
July 18, MondayTheses due from summer graduates
July 28, ThursdayCommencement exercises
July 29, FridaySession closes
August 1, MondayBeginning of post-session workshops
August 12, FridayClose of post-session workshops

Fall Semester, 1960-61

September 10, SaturdayRegistration
September 12, Monday.....Classes begin in courses
open to graduate students only (600 courses)
September 14, Wednesday.....Classes begin in courses
open to graduates and undergraduates (500 courses)
September 16, FridayLast enrollment day without late fee
September 17, SaturdayFirst meeting of Saturday classes
and last day of enrollment
September 24, SaturdayLast day for change of enrollment
October 1, 8, 15, 22, 29Saturday classes meet
October 7, FridayDiploma applications due
October 28, FridayLast day for dropping courses
November 5, 12, 19Saturday classes meet
November 26, SaturdayThanksgiving recess
December 3, 10, 17Saturday classes meet
December 24 and 31Christmas vacation
January 9, MondayTheses due from fall graduates
January 7, 14Saturday classes meet
January 21, SaturdayFinal examinations for Saturday classes
January 21, Saturday (2:30)Mid-year commencement exercises

Spring Semester, 1961

February 4, Saturday	Registration
February 6, Monday	Classes begin in courses open to graduate students only (600 courses)
February 8, Wednesday	Classes begin in courses open to graduates and undergraduates (500 courses)
February 10, Friday	Last enrollment day without late fee
February 11, Saturday	First meeting of Saturday classes and last day of enrollment
February 18, Saturday	Last day for change of enrollment
February 18 and 25	Saturday classes meet
February 24, Friday	Diploma applications due
March 4, 11, 18, 25	Saturday classes meet
March 17, Friday	Last day for dropping courses
April 1 and 8	Easter vacation
April 15, 22, 29	Saturday classes meet
May 6, 13, 20, 27	Saturday classes meet
June 3, Saturday	Final examinations for Saturday classes
June 10, Saturday	Commencement exercises

Note: Classes open only to graduate students meet during the week previous to the meeting of Saturday classes. They do not meet during the preceding week if Saturday classes are not scheduled. Courses open to graduates and upperclassmen follow the undergraduate schedule for the time of meeting. Classes numbered 600 and above have the first meetings of the first semester during the week beginning September 12, 1960, and the first meetings of the second semester during the week beginning February 6, 1961.

Administration

State Board of Education

Hon. Stephen S. Nisbet, Fremont	Term expires June 30, 1961
Hon. Chris H. Magnusson, Detroit	Term expires June 30, 1963
Hon. Cornelia Robinson, Kalamazoo	Term expires June 30, 1965
Hon. Lynn M. Bartlett, Lansing	Term expires June 30, 1961

State Superintendent of Public Instruction

Lynn M. Bartlett

Executive Council of Presidents

Paul V. Sangren, Ph.D.	Western Michigan University
Judson W. Foust, Ph.D.	Central Michigan University
Eugene B. Elliott, Ph.D.	Eastern Michigan University
Edgar L. Harden, Ed.D.	Northern Michigan College

Officers of Administration

Paul V. Sangren, President
Russell H. Seibert, Vice President, Academic Affairs
L. Dale Faunce, Vice President, Student Services and Public Relations
Cornelius B. MacDonald, Comptroller
John A. Goldsworth, Director of Physical Plant
Paul L. Griffeth, Dean of Students and Director of Counseling
James H. Griggs, Dean, School of Education
George E. Kohrman, Dean, School of Applied Arts and Sciences
Elizabeth E. Lichty, Dean of Women
Vern E. Mabie, Director of Placement
George G. Mallinson, Dean, School of Graduate Studies
Clayton J. Maus, Registrar and Director of Admissions
Budd J. Norris, Director of Alumni Relations
Gerald Osborn, Dean, School of Liberal Arts and Sciences
Arnold E. Schneider, Dean, School of Business
J. Towner Smith, Dean of Men
Otto Yntema, Director of Field Services

Administration of the Graduate School

The School of Graduate Studies is administered by a Dean and a Graduate Council of eleven members consisting of the Vice President for Academic Affairs, the deans of the other four schools of the university, and six members of the graduate faculty elected for terms of three years each. The Dean of the School of Graduate Studies acts as chairman. The President of the University is a member *ex-officio*.

Graduate Council, 1959-60

George G. Mallinson, Ph. D., Dean, School of Graduate Studies
George E. Bradley, Ph. D., Department of Physics
Frank A. Fatzinger, Ph. D., Department of Psychology
James H. Griggs, Ed. D., Dean, School of Education
Harry S. Hefner, M. A., Department of Art
George E. Kohrman, Ed. D., Dean, School of Applied Arts and Sciences
Lillian H. Meyer, Ph. D., Department of Chemistry
Gerald Osborn, Ph. D., Dean, School of Liberal Arts and Sciences
Jack C. Plano, Ph. D., Department of Political Science
Frederick J. Rogers, Ph. D., Department of English
Arnold E. Schneider, Ph. D., Dean, School of Business
Russell H. Seibert, Ph. D., Vice President, Academic Affairs
Paul V. Sangren, Ph. D., President—*Ex-officio*

Graduate Staff

George G. Mallinson, Ph. D., Dean, School of Graduate Studies
Margaret T. Mabie, M. A., Assistant to the Dean
L. Jill Brewer, Secretary
Patricia A. Gorski, Secretary
Julia M. Van Stone, Secretary

Rules and Regulations

Graduate Instruction

An independent graduate program leading to the degree of Master of Arts was first offered at Western Michigan University in the fall semester of 1952-53. Until 1958 degrees were granted only in the various fields of Education. Since then programs have been developed that lead to the degree of Master of Arts in Biology, Chemistry, Economics, English, History, Librarianship, Occupational Therapy, Political Science, Psychology, and Sociology. A graduate program leading to the degree of Master of Business Administration has recently been approved. A six-year program, leading to the title, Specialist in Education, is to be offered for the first time in 1960-61.

Permission to Enroll

Permission to enroll in graduate courses is granted at an admissions conference. Prior to this conference, a student must complete an Application for Permission to Enroll and submit an undergraduate transcript that gives evidence of satisfactory completion of the bachelor's degree or its equivalent. The following types of admission are granted:

- 1. Unqualified Admission.** Unqualified admission is awarded to a student about whom no reservations are held. A student who receives unqualified admission to the School of Graduate Studies will then seek admission to the unit offering the degree program in which he is interested. The adviser of the degree program to which he is admitted will help him in the planning of his graduate program.
- 2. Tentative Admission Pending Receipt of the Bachelor's Degree.** A student may receive tentative admission in the final semester of his undergraduate work. Such admission becomes final when a transcript is submitted giving evidence of satisfactory completion of the bachelor's degree. Senior students at Western Michigan University who are **within six hours of graduation** are granted admission on this basis and may elect graduate courses, in addition to the undergraduate courses needed to complete the bachelor's degree, to encompass a full academic program.
- 3. Admission with Reservations.** If a student's record evidences low scholarship in certain academic areas, he will be expected to complete extra requirements to remedy such deficiencies. Any extra requirements imposed at the time of admission must be completed before the student is admitted to candidacy for the master's degree.
- 4. 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 of the requirements for admission, may be permitted to elect six hours of graduate work with the understanding that his admission will be reviewed at the completion of the six hours.

5. Admission for Extension Courses. All students enrolled in graduate extension courses must be admitted to the Graduate School before the completion of the course or credit will not be granted. No admissions conference is required for such admission. However, the student must submit his application and an undergraduate transcript showing his 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.

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 at 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 of the Graduate School if later application is desired. The deadline for such application will be published in the **Graduate Student** each semester or in **The Summer Session Events** during the summer session. (See p. 14) The responsibility of the student for applying for candidacy is as follows:

1. The student must complete and file with the Graduate Office an Application for Admission to Candidacy.
2. The student must present evidence that any requirements placed on his admission, by the School of Graduate Studies or the unit in which he seeks to obtain the degree, have been satisfied.
3. The student must submit a program of study approved and signed by his curriculum adviser.

The applications for candidacy are presented to the Candidacy Boards established by the units offering the master's degree. These boards recommend to the Graduate Council the action to be taken on each application. The following criteria are used for evaluating these applications:

1. A B average or better in all graduate courses completed.
2. The completion of all reservations imposed at the time of admission.
3. Evidence of the ability to use the English language effectively as attested by the student's instructors.
4. The possession of those qualities essential for success in the unit in which he is seeking the master's degree. Such evidence must be submitted by the student and may include letters of recommendation if these are required by the unit.

5. A certificate attesting to the applicant's physical and mental health if requested by the unit or the School of Graduate Studies.

Requirements for the Degree

The total requirements for the master's degree include the following:

1. **Graduate Program.** All students must meet the requirements for one of the graduate programs described on pages 15 to 28 of this bulletin and be admitted to candidacy. (See requirements listed on page 9.

2. **Total Hours.** A minimum of thirty hours of graduate work. At least fifteen hours of the program must be earned in courses restricted to graduate students (600 or above).

3. **B. Average.** An academic average of B or better in residence credit, as well as an over-all average of B. The student must earn a point-hour ratio of at least 2.0 under the following grading system:

A=3	C=1
B=2	E=0

Note: All grades of Incomplete (I) will automatically become E unless removed within one calendar year. This ruling does not apply to the thesis course, 700 Thesis.

4. **Residence Credit.** Of the total thirty semester hours, a minimum of eighteen hours must be elected in residence credit from the School of Graduate Studies. It is possible for a student to satisfy part of the residence requirement by taking courses through a regularly established residence center of Western Michigan University. However, if the residence requirement is satisfied in this way, a total of twenty hours of residence credit is required, ten hours of which must be elected on the campus. The on-campus credit must include one semester or summer session on a full-time basis. In addition to residence credit, the following may be submitted toward graduation:

A. **Extension Credit.** A maximum of twelve hours of graduate work may be elected through the Extension Division of Western Michigan University. These may be counted toward the requirements for the master's degree provided they are approved by the student's curriculum adviser as part of his program of studies.

B. **Transfer Credit.** A maximum of six hours of graduate work may be transferred from other accredited graduate schools toward the master's degree. These courses will be accepted for transfer only with the approval of the student's curriculum adviser as part of his program of studies. Such transfer credit must have been taken no earlier than six years before the date on which the student is to receive the master's degree, and the

grade received for each course must be B or better. Transfer credit is placed on the student's record at the time of candidacy or at graduation. A transcript of this credit may be sent, however, to the Graduate Office at any time for inclusion in the student's folder.

5. **Time Limit.** All requirements for the degree program must be completed within six years.

6. **Diploma Application.** The student must file a diploma application with the Graduate Office at the beginning of the semester or summer session in which he is reasonably certain of completing the degree. The final date on which diploma applications will be accepted each semester is found on page 3 in the Calendar of Graduate Events. **Attendance at Commencement exercises is considered to be a requirement of the degree.** These exercises are held at the end of each semester and summer session. No fee is charged for the diploma nor for the loan of the academic regalia.

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 Graduate Registration. No registration is permitted after 12:00 on the second Saturday of each semester, nor after the second day of the summer session. 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 second 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 student 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 enrolled in the regular summer session may elect graduate work not in excess of six hours. A student may elect a maximum of two hours of graduate credit in a Post-Session Workshop.

Tuition and Fees: The following fees will be charged for graduate study:

SEMESTER AND SUMMER SESSION FEES

Sem. Hrs.	Resident Students			Non-Resident Students		
	Tuition	Local	Total	Tuition	Local	Total
1 - 2	\$12.00	\$23.00	\$35.00	\$24.00	\$23.00	\$47.00
3 - 4	24.00	29.00	53.00	48.00	29.00	77.00
5 - 6	36.00	35.00	71.00	72.00	35.00	107.00

GRADUATE STUDENTS ARE LIMITED TO SIX SEMESTER HOURS IN SUMMER SESSION

7 - 8	48.00	41.00	89.00	96.00	41.00	137.00
9 or more	66.50	47.50	114.00	133.00	47.50	180.50

POST-SUMMER WORKSHOPS

1	\$ 6.00	\$14.00	\$20.00	\$12.00	\$14.00	\$ 26.00
2	12.00	14.00	26.00	24.00	14.00	38.00

Late Enrollment Fee. By action of the State Board of Education, all students who enroll after the established registration days of a session will be charged an additional fee of \$5.00. Checks refused by the bank constitute late enrollment and are subject to the Late Enrollment Fee. Graduate students will be required to pay late registration fees if they enroll the morning of the second Saturday of each semester or the second day of the summer session. **No registration is permitted after these days.**

Fee for Double Registration. Graduate students registering for both graduate and undergraduate courses will pay fees for the total enrollment in the school in which the greater number of hours are elected. If an equal number of hours are carried in each school, students will pay the higher fee.

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 change in credit 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 paying fees or after the last official registration day, whichever is earlier—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. No refund will be granted if the student withdraws after the thirty-fifth calendar day after the last official registration day.
5. 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.
6. 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.
7. Refunds are not automatic but must be applied for at the Business Office within seven days after withdrawal.
8. The above refund policy does not apply to late enrollment fees.

Fees 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 \$60 per semester or \$20 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 \$1,500 each 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 the degree of Master of Arts. 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. They must pay tuition, but will be exempted from paying local fees. Applications for graduate fellowships may be secured from the Graduate Office. Applications must be filed 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 2.9 for the total graduate program including transferred credit.
2. A high degree of integrity as revealed in the student's relationships with the 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.

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 watch this bulletin for announcements pertaining to 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 at the master's degree level. Any graduate student who desires to be eligible for consideration when these positions 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 cordially invited to do so. Those graduate students formerly enrolled with the Placement Office may reactivate their credentials files by furnishing the office with current information regarding their employment and advanced study.

Complete information and registration materials may be secured in the Placement Office, Room 231, Administration Building.

PROGRAMS LEADING TO THE MASTER'S DEGREE

General Requirements

Each degree candidate must choose a graduate program, from among those listed on the following pages, which is consistent with his professional objective. Although these graduate programs have been developed to provide the students with the basic experiences that are desirable, they are flexible enough to allow for the differing needs of individual students.

It is obvious that growth in personality and the development of professional abilities are closely related and are highly important in graduate education. Hence, through the counseling process, graduate advisers will help the students in choosing 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 skills, increased ability to analyze and interpret life situations, and greater insight into problems involved in professional leadership.

The student should remember that many of the courses listed will not be offered every semester or summer session. By studying the section of this bulletin, "Description of Courses," the student will find the session or sessions when the desired courses will be available. Occasionally a student will find that some of the suggested courses are repetitions of what he has already taken at the undergraduate level. In such cases, with the approval of the adviser, substitutions may be made provided the general requirements for the degree are satisfied.

EDUCATION

All of the curricula leading to the Master of Arts degree in educational fields, with the exception of the curricula, **Teaching in the Junior College** and **School Psychologist**, follow the same general pattern. These two exceptions to the general pattern differ in several respects and are described on pages 19 and 20 respectively.

The graduate courses for the majority of the curricula in education fall into the three following groups:

Group I. Courses in Education.....10 sem. hrs.

Students must elect a minimum of ten semester hours from the courses offered by the Department of Education. These elections will be as follows:

Core Courses: (Elect three) 6 sem. hrs.

- | | |
|-----------|-----------------------------------|
| Educ. 601 | Introduction to Research |
| 602 | The School Curriculum |
| 603 | Foundations of American Education |
| 604 | Educational Psychology |

Electives in Education: (Elect two)..... 4 sem. hrs.

The electives in this group will of course vary. Students interested in elementary education will, in all likelihood, elect four semester hours of graduate courses dealing with the elementary field; those interested in secondary education, with the secondary field. If a student is interested in administration, supervision, curriculum development, or teaching, it would be assumed that the elections would be oriented toward the area of interest.

A complete list of suitable offerings may be found under the listings for the Department of Education on pages 48 to 57. As stated earlier, the choice of these courses will be made with the help of the student's adviser.

Group II. Course in Departments Other Than Education..10 sem. hrs.

The graduate curricula in education differ from one another largely in the courses that are elected in Groups II and III. Under Group II, the student must elect ten semester hours of graduate credit in departments other than education. In the teaching curricula, such as **Teaching of Science and Mathematics** or **Teaching of Music**, the student will concentrate his elections in the respective academic departments or divisions. In the administrative and supervisory curricula, the student is likely to diversify his elections in the areas that are related to his administrative or supervisory objectives, particularly in those in which he has an inadequate background. In the elementary curricula, these elections are likely to be made in academic courses designed especially to broaden the backgrounds of elementary teachers.

Group III. Courses From Any Department.....10 sem. hrs.

Under Group III, the student may elect ten semester hours of graduate courses that will extend his knowledge in areas already elected under Groups I and II. Or, he may decide to elect courses in other departments or divisions in which his background is inadequate. In general, if the student decides to elect the thesis option, the six hours of credit for the thesis will fall in this group.

The student should plan carefully with his adviser in selecting courses in Groups II and III so that he, in his graduate study, may do more than merely accumulate graduate credits.

Curricula in Education

The twenty-two curricula in the field of Education are as follows:

Curriculum	Adviser	Prerequisite
Curriculum Development and Coordination	Dorothy McCuskey	A minimum of one year of teaching experience before candidacy
Elementary Administration and Supervision	John A. Buelke	A minimum of one year of teaching experience before candidacy
General Administration and Supervision	Roland S. Strolle	A minimum of one year of teaching experience before candidacy
Guidance	Arthur J. Manske	A minimum of one year of teaching experience before candidacy

(People who choose the guidance curriculum prepare themselves for various guidance positions such as: directors of school guidance programs; elementary, secondary and college counselors; teacher-counselors; dormitory directors and counselors; and religious and other social service counselors. The program of studies usually includes three of the core classes; six guidance courses including practicum; and courses in psychology, sociology and economics, depending upon the student's previous undergraduate preparation.)

Secondary School Administration and Supervision	Roy C. Bryan	A minimum of one year of teaching experience before candidacy
---	--------------	---

Special Education

1. In electing specific courses, the student will follow directions under guidance in the latest edition of the State of Michigan Department of Public Instruction bulletin, **Educational Requirements for Teachers of Exceptional Children**, pp. 2, 3. Specific courses for all categories, with the exceptions of Teachers of Mentally Handicapped Children, Teachers of the Deaf and Hard of Hearing, and Crippled and Homebound Children, must be taken at other approved colleges under combined guidance of counselors at the college selected and at Western Michigan University.

2. The courses selected in Group II should be equivalents of those listed on p. 4, **Educational Requirements for Teachers of Exceptional Children**.

3. If the student has elected some of the courses required in the bulletin as an undergraduate, he may under guidance substitute other courses for those named.

4. In some cases if the student can produce evidence of successful teaching of the type of handicapped children for whom he is preparing to teach, he may be allowed to substitute, under guidance, other courses for 670 Directed Teaching.

Teaching in the Elementary School	Sara R. Swickard and Louis A. Govatos	
Teaching in the Junior High School	Clara R. Chiara	
Teaching of: Art	Harry S. Hefner	Twenty-five hours in Art or the equivalent
Business Education	George K. Cooper	Major or minor in Business or the equivalent
Distributive Education	Adrian Trimpe	Must qualify for a vocational certificate as a coordinator
Home Economics	Eunice E. Herald	Major or minor in Home Economics
Industrial Education	William P. Spence	Major or minor in Industrial Education
Literature and Language	Frederick J. Rogers	Major or minor in English
Music	Elwyn F. Carter	Major in Music
Physical Education	George G. Dales	Major or minor in Physical Education
Science and Mathematics	Gerald Osborn	Major or minor in one department of the division of Science and Mathematics
Social Sciences	Leonard C. Kercher	Twenty hours in combined fields of Economics, History, Philosophy, Political Science and Sociology
Speech Correction	Charles Van Riper	Nine hours of undergraduate Speech Correction before or in conjunction with graduate work, and consent of adviser

(This curriculum with its prerequisites and with the added requirement of 200 clock hours in supervised speech therapy will satisfy the academic requirements for Basic Certification in the American Speech and Hearing Association. With the appropriate education courses and directed teaching, it meets the requirements for public school speech correction in Michigan and in most other states.)

General Speech	Zack York	Major or minor in Speech with suitable cognates
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 in this curriculum.

The courses required for this curriculum are:

- Educ. 604 Educational Psychology
 - 610 Guiding Child Development in the Elem. School
 - 534 Methods and Mat. for Mentally Handicapped Child
 - 533 Education and Control of the Mentally Handicapped
- Psych. 650 The Deviant Individual
 - 651 Clinical Diagnosis
 - 560 Vocational Psychology
 - 681 Meas. of Interests, Aptitudes and Personality
 - 680 Measurements of Intelligence
- Educ. 585 Mental Hygiene of Childhood and Adolescence
- Psych. 624 Personality Theory
 - 682 Individual Testing
 - 661 Psychological Counseling
 - 662 Counseling Practicum

The psychology courses deemed advisable for a background in this program include: Abnormal Psychology, Psychology of Personality, Laboratory 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-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 examiner. The pattern of courses to be followed will be arranged through a conference with the adviser.

Teaching at the Junior College Level	William C. Van De- venter	A certificate to teach in Michigan or fifteen hours of course credit in Education suitable for a junior college teacher
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Courses of a professional nature. 6 sem. hrs.

to be selected from:

- Educ. 601 Introduction to Research
- 650 Growth and Development in Later Adolescence
- 690 The Community College
- 670 Directed Teaching

Courses in the major academic field. 16 sem. hrs.

The courses in this area would be offered by one department such as chemistry, history, English, or mathematics. It would be assumed that the student would have an undergraduate major in this area.

Courses in a minor area or cognate courses. 8 sem. hrs.

It would be assumed that the courses in this area would be based on at least a minor at the undergraduate level and would be related to the major field.

LIBERAL ARTS AND SCIENCES

All of the programs leading to the degree of Master of Arts in fields outside the area of Education demand the same basic qualifications for admission and candidacy as described earlier. Certain additional qualifications, however, may be required, depending upon the background of the student. In general, in all of these programs, a minimum of twenty hours of graduate work will be elected in the major field and a minimum of six hours in a field or fields allied with the major.

Biology

While the degree is intended to be a general degree in the field of Biology, it includes 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, in research, in biological laboratory and field work, and in conservation. It may be used as a foundation for continued graduate work toward 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 complete satisfactorily at least twenty hours of graduate work in Biology and six to ten hours of graduate work in a related field or fields. The choice of the related courses will be made with the recommendation of the student's advisory committee and must involve a demonstrable relationship in terms of the student's goals.

The requirement of a thesis is at the discretion 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, parasitology, conservation, public health, general biology, and science education.

Chemistry

The degree of Master of Arts in Chemistry is planned to give a broad background in the various fields of chemistry with concentration in one field.

Entrance requirements include (1) admission to the Graduate School, (2) a satisfactory grade on four qualifying examinations in General, Analytical, Organic and Physical Chemistry. These examinations will be given at 9:00 A.M. and 1:00 P.M. on June 20, 1960; on September 12 and 13, 1960; and January 30 and 31, 1961. Deficiencies demonstrated on these examinations may be removed only by registration in the appropriate undergraduate courses (without credit) and the attainment of the minimum grade of B.

The graduate program consists of twenty-four hours of course work and six hours of research and thesis. A maximum of ten hours may be elected in a related department. The course sequence will be planned by a graduate committee assigned to each student. The following shall be included:

1. One three-hour course from four of five areas, Analytical, Biochemistry, Inorganic, Organic and Physical.
2. 505 Chemical Literature for two hours.
3. 601 Graduate Seminar for two semesters, one hour credit total.
4. One-half of the work must be at the 600 level.
5. A final oral examination by the student's graduate committee.

Economics

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

1. As a prerequisite for admission to candidacy, the student must have completed 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. Satisfactory completion of a minimum of twenty hours of graduate work in Economics in courses that will be selected in consultation with his graduate adviser. Specific graduate course requirements include:
 - a. Six hours of work dealing with 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 production of a thesis.
 4. Before being recommended for candidacy, the student may be required to pass an oral examination.

English

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

1. An 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. (These courses must be included: 568 Literary Criticism, 574 Structure of Modern English, and 661 Seminar in English.) Six hours of this block may, at the department's discretion, be earned by the preparation of an acceptable thesis.
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.

History

In order to earn the Master of Arts degree in History, a student, in addition to meeting the general requirements of the School of Graduate Studies applicable to all curricula, must satisfy the following departmental requirements:

1. As a prerequisite for admission to candidacy, either (a) presentation of thirty semester 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 at least twenty semester hours of work in History, including 592 The Literature of History, a course in historical method, at least one seminar, and not less than six semester hours in other closely related subjects.

3. The preparation of an acceptable thesis for which six semester hours of credit will be awarded. Under certain conditions, the department may waive this requirement.

4. Distribution of work 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 semester hours in each of three fields, including one European and one United States: (a) United States to 1865 and contemporaneous Latin America; (b) United States since 1865 and contemporaneous Latin America; (c) Ancient and Medieval; (d) Modern Europe, 1500-1815; (e) Modern Europe, 1815 to the present; (f) Asia, including the Middle East and Russia.

5. Pass the comprehensive examinations set by the department.

Political Science

In order to earn the Master of Arts degree in Political Science, a student, in addition to the basic requirements for admission to the School of Graduate Studies, must qualify as follows:

1. Have completed at least twenty-four hours of work in the social sciences at the undergraduate level.

2. Complete a minimum of twenty hours of graduate work in Political Science. This is to be distributed among the three areas of study listed below with a minimum of four credit hours in each.

a. American Government and Administration

b. International Relations and Comparative Government

c. Political Theory and Methodology

3. Upon the recommendation of the departmental adviser and with the approval of the departmental chairman, the student will be permitted to write a thesis.

4. Before being recommended for the degree of Master of Arts in Political Science, the student will be required to pass, with a satisfactory rating or better, an oral examination. The examination will cover bibliographical information and the basic subject matter of the field, as well as the subject matter of a thesis if one is written.

Psychology

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 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 on the basis of the area of psychology in which the student wishes to specialize.

3. A thesis for six hours credit will ordinarily be required. The 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 elsewhere.

b. Industrial—for those wishing to specialize in industrial psychology. Five courses should be selected from Psychology 516, 517, 542, 560, 644, 645, 646, 647.

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) 700 The Thesis for 6 hrs.

(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

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

In order to earn the Master of Arts degree in Sociology, a student, in addition to meeting the general requirements of the School of Graduate Studies applicable to all curricula, must satisfy the following departmental requirements:

1. The student must have completed at least twenty-four hours of undergraduate work in the combined fields of Economics, History, Political Science and Sociology with a minimum of twelve semester hours in Sociology, or in equivalent course work approved by the departmental graduate adviser.

2. A student will take a major of twenty hours of graduate work in Sociology in courses that will be selected from the graduate offerings listed in the graduate bulletin. The program of courses will be worked out in consultation with the departmental adviser.

3. Unless a student is specifically exempted in writing, an original thesis is required in which the candidate will demonstrate his competence to use appropriate methods for investigating a sociological problem. An oral examination will be administered covering the thesis problem.

OTHER DEGREE PROGRAMS

Business Administration

Thirty hours of graduate credit are required as a minimum for the Master of Business Administration degree. The student who has had little or no college work in Business Administration will be expected to complete additional work either on the graduate or undergraduate level. The student will be expected to exhibit mastery in four of the following areas: Accounting, Business Law, Finance, Management, Marketing, and Statistics.

In addition, the student will be required to take at least twenty hours of business subjects on the graduate level, of which six hours may be assigned to a thesis. His program will be selected under the guidance and approval of his graduate adviser. At the time of graduation, the student should present at least fifteen hours of work in the field of economics which may have been taken on an undergraduate program or combined with his graduate work.

Immediately upon completion of ten hours of graduate courses, the student will apply for candidacy status. He will be regulated under the candidacy specifications for the master's degree established by the School of Graduate Studies.

Librarianship

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 curriculum offers 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 processes; (3) library resources; (4) library clientele; (5) library organization and administration. Courses in these areas together with specific electives prepare 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. Give evidence of ability to carry graduate work in library science. Applicants will be judged on the basis of their scholastic

record, their college program and adaptability for the library profession, and

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

In order to earn the Master of Arts degree in Librarianship, in addition to meeting the general requirements of the School of Graduate Studies, a student must satisfy the following departmental requirements:

1. Successful completion of thirty to thirty-four semester hours of approved graduate courses of which a minimum of twenty semester hours must be in library science at the graduate level. The program for each student is developed according to his needs.

Candidates who have completed eight to ten semester hours in an approved program in library science with at least a B average at the undergraduate or post-baccalaureate level may fulfill the degree requirements in the minimum thirty hours required of all graduate students at Western Michigan University. These candidates may elect from eight to ten semester hours in related fields with the approval of the 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. Submission of a satisfactory research paper required as partial fulfillment of a course requirement or, with the consent of the graduate adviser, candidates may present a thesis for which no more than six semester hours of course credit will be given.

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

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)

Required Courses		Sem. Hrs.
510	Selection of Books and Related Materials	3
512	Reference Service	3
530	Introduction to Classification and Cataloging	4
600	Foundations of Librarianship	2
622	Library Organization and Administration	2
601	Introduction to Research	2

*Elective Courses in Library Science

602	History of Books and Printing	2
612	Subject Bibliography, Humanities and Soc. Sci.	3
613	Subject Bibliography, Sciences	3
629	Seminar in Administrative Problems	2
630	Adv. Classification and Cataloging	3
520	Field Assignment and Seminar	2
516	Elem. School Library Materials	2
617	Reading Guidance for Children	2
546	Storytelling	2
624	Children's Library Service	2
620	Public Library Service	2
644	Adult Reading Interests	2
648	Adult Education Methods in Libraries	2
*522	School Library Service	2
616	Curriculum Enrichment Materials	2
542	Reading Interests of Young Adults	2
626	Library Service to Youth	2
712	Professional Field Experience	2-4
700	Thesis	6

Application for candidacy for the master's degree in Librarianship must be filed upon completion of ten semester hours in residence. At least two of the following courses must be included in the ten semester hours: 510, 512 and 530.

Occupational Therapy

The curriculum is designed to prepare occupational therapists in supervision and administration of Occupational Therapy. In addition to the general admission requirements, the candidate must hold a bachelor's degree in Occupational Therapy, or a bachelor's degree in another field with a certificate in Occupational Therapy. It is recommended that the candidate have at least one year of experience in the field between undergraduate and graduate study.

In order to qualify for a master's degree in Occupational Therapy, the student must successfully complete thirty semester hours of approved graduate courses according to the following departmental requirements:

* 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.

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

2. Fourteen hours in Occupational Therapy courses:

- 632 Supervision of Occupational Therapy
- 633 Administration of Occupational Therapy
- 712 Professional Field Experience
(in organization and administration of Occupational Therapy)
- 630 Professional Literature
- 650 Clinical Training and Scheduling

The remaining six hours may be selected from the following group:

- Bus. 556 Office Management
- 552 Management Report Writing
- Psych. 644 Personnel Psychology
- 645 Psychology of Work Effectiveness
- O.T. 510 Instructional Aids
- 550 Occupational Therapy Modalities
- 532 Training of Amputee Patients
- 710 Professional Individual Studies

SIXTH-YEAR PROGRAMS

In February, 1960, the State Board of Education approved the extension of the graduate offerings into two programs requiring a second year of graduate work. Persons satisfactorily completing the program described below will receive a diploma bearing the designation of Specialist in Education. A minimum of sixty semester hours is required with a minimum residence requirement of three summer sessions or one semester and one summer session on a full-time basis.

Educational Administration

The program in Educational 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 following areas: General Administration, Secondary Administration, Elementary Administration, and Curriculum Development and Coordination.

The selection of applicants for the advanced program will ordinarily be made at the end of the fifth-year program on the following factors: undergraduate and graduate records, 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 will consist 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

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. Satisfactory completion of any examinations 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.

Graduation requirements include the following:

1. The successful completion of a minimum of sixty semester hours of graduate work.
2. A recommendation from both the Psychology and Education Departments for certification as a School Psychological Examiner.

Description of Graduate Courses

Two types of courses are offered in the School of Graduate Studies: (1) Those bearing numbers 600 and above and open only to graduate students, and (2) those bearing numbers 500 through 599 and 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.

GRADUATE STUDIES

For Graduates and Upperclassmen

500 Studies in American Culture 3 hrs. Summer, Spring

An interdisciplinary study of perennial issues in American life. The materials for this course are drawn from literature, the arts, the social sciences and philosophy.

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. This selection may not be made in more than two units and must be made within a calendar year. Application forms are to be submitted at the time of election of the thesis.

710 Professional Individual Studies 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 are to be submitted prior to the time of election of this course.

711 Professional Individual Studies 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.)

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 Dean of the School of Graduate Studies. 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.)

AGRICULTURE

Baker, Head.

For Graduates and Upperclassmen

530 Agriculture in Michigan 2 hrs.

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. Not offered 1960-61.

ART

Hefner, Head.

For Graduates and Upperclassmen

515 Advanced Commercial Art 3 hrs. Spring

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. 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, Fall

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, Art Composition, or consent of instructor.

For Graduates Only

640 Workshop in Art for Elementary Teachers

2 hrs. Summer, Fall

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 Arts for Secondary Teachers

2 hrs. Spring

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.

BIOLOGY

Van Deventer, Head; Professors Bartoo, Hinds, Steen and Wiseman; Associate Professor Vander Beek; Assistant Professors Baker, Davis, Robinson and Schultz; Instructor Brewer.

For Graduates and Upperclassmen

500 Selected Experiences in Biology

2 hrs.

Designed primarily for elementary teachers and secondary school non-science teachers who need to improve 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. This course cannot be used as a prerequisite for other graduate courses in biology. Offered only by extension and in summers. Prerequisite: consent of instructor. Not offered in 1960-61.

505 Advanced Studies in Genetics

2 hrs.

Special problems in genetics with emphasis on laboratory work. Prerequisite: Biology 306 or its equivalent. Not offered in 1960-61.

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: sixteen hours in biology and/or chemistry, or consent of the instructor.

514 Methods and Materials for School Health Education 2 hrs.

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. Not offered in 1960-61.

515 Alcohol Problems 2 hrs.

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: Twenty hours in the field of biology and/or sociology or consent of the instructor. Not offered in 1960-61.

516 Neurology 3 hrs. Fall

This course includes 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 undergraduate work in anatomy and physiology, or consent of instructor.

518 Endocrinology 2 hrs. Fall

The glands of internal secretion, the active principles produced by each, and their effects on bodily metabolism. Prerequisite: Three semesters of laboratory biology, or consent of instructor.

521 Plant Taxonomy 2 hrs.

Designed for those interested in carrying on investigations in the identification, classification and ecological distribution of higher plants. Students should have some knowledge of plant classification and plant families. They should be able to use standard plant keys and should be familiar with the organization of an herbarium. Time will be spent in the use of such knowledge to work out a field problem and a special area of interest, selected after consultation with the instructor. Prerequisite: An equivalent of an undergraduate minor in the field of biology, including a course in botany. Not offered in 1960-61.

522 Phytogeography 2 hrs. Fall

This course 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 including 421 Flowering Plants, or consent of the instructor.

523 Paleobotany 3 hrs.

Intended 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: twelve hours of biology, including 221. Not offered in 1960-61.

525 Biological Constituents **2 hrs. Spring**

The elements present in plants and animals as well as the synthesis, characterization and degradation products of the more important compounds. Prerequisite: Eight hours of laboratory courses in biology and consent of instructor.

527 Advanced Studies in Plant Physiology **2 hrs.**

An advanced course in plant physiology covering such topics as Photosynthesis, respiration, tropisms, plant-growth regulators and enzymes. This course is especially adapted to those students who expect to teach biology at the college level, but whose past training has been largely in the field of animal or general biology. Students are required to carry out individual investigations. Prerequisite: Twelve hours of biology including 220 or its equivalent. A knowledge of chemistry is desirable. Not offered in 1960-61.

530 Conservation Education **2 hrs.**

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. This course is designed primarily for teachers in service. Prerequisite: consent of the instructor. Not offered in 1960-61.

542 Entomology **2 hrs. Summer**

A general study of insects, their structure, classification, life histories, ecological relationships, economic importance, and methods of control. Prerequisite: 100 and 101 or equivalent, or consent of instructor.

543 Protozoology **2 hrs. Fall**

The anatomy, physiology and ecology of the free-living protozoa, with considerations of their evolutionary relationships. Prerequisite: Three semesters of laboratory biology, or consent of instructor.

545 Ichthyology **2 hrs. Spring**

The anatomy, physiology, taxonomy and ecology of the fresh-water fishes, with particular emphasis on those occurring in Michigan. Prerequisite: eight hours of college biology or consent of instructor.

547 Advanced Ornithology **3 hrs.**

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 college laboratory courses in biology, or consent of instructor. Early morning field trips. Not offered in 1960-61.

551 Parasites and Parasitism 2 hrs. Summer, Spring

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: Biology 100 and 101 or equivalent, or consent of the instructor.

554 Field Studies in Ecology 2 hrs. Fall

This course is 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: Twelve hours of college biology.

555 Natural History of Land Vertebrates 3 hrs.

To acquaint students and teachers with the classification, life histories, adaptations, ecology and behavior of amphibians, reptiles and mammals. Prerequisite: Two college laboratory courses in biology or the equivalent, or consent of the instructor. Not offered in 1960-61.

557 Natural History of Invertebrates 3 hrs. Summer

To acquaint students and teachers with the ecology, distribution and taxonomy of the invertebrates of the region with special reference to the life histories and economic importance. Students will prepare their own teaching collections. Prerequisite: Two college laboratory courses in biology or equivalent, or consent of instructor.

For Graduates Only

600 Recent Developments in Biological Science 2 hrs. Fall

Students will be expected to survey extensively current literature in biology at the popular, semi-technical and technical levels, and to carry on an intensive investigation on a specific topic. Prerequisite: Eight hours of college biology, or consent of instructor.

602 Human Ecology 2 hrs.

A study of the man-dominated biotic community of civilization and its interrelationships. Lectures and field work. Prerequisite: Eight hours of college biology, or consent of instructor. Not offered in 1960-61.

609 Historical Studies in Biology 2 hrs. Spring

Designed to give to graduate students an understanding of scientific attitude and methodology, and an opportunity to study the application of these to specific situations in the development of biological science. Prerequisite: 309, or consent of the instructor, with concurrent fulfillment of special assignments equivalent to this course.

616 Hematology and Immunology 2 hrs.

A study of the properties of blood, including immuno-hematologic mechanisms, observation of blood cells, both normal and dyscrasic, and appropriate serologic phenomena. Prerequisites: Bacteriology and organic chemistry or consent of instructor. Not offered in 1960-61.

631 Advanced Conservation

2 hrs.

Special studies in selected areas of conservation of natural resources. Prerequisite: An undergraduate course involving principles of conservation or consent of instructor. Not offered in 1960-61.

652 Plant Ecology

2 hrs. Summer

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, including a course involving plant taxonomy, or consent of instructor.

653 Environmental Analysis (Advanced Ecology)

2 hrs.

This is designed for students who have had basic work in ecology and who wish to gain further knowledge regarding the integration of ecological principles in order to evaluate the interactions and interrelationships of organisms. Prerequisite: 201 or 554, or consent of instructor. Not offered in 1960-61.

655 Terrestrial Micro-Environments

2 hrs. Spring

This course is 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: 12 hours of biology, including at least one course in field biology, and consent of instructor.

BUSINESS STUDIES

Schneider, Dean; Wetnight, Head of Accounting Department; Cooper, Acting Head of Business Education Department; Professor Grossnickle; Associate Professor Hartenstein; Assistant Professors Behling, Carter, Hardin, Kogiku, Morrison and Niemi.

For Graduates and Upperclassmen

510 Advanced Accounting

3 hrs. Fall

This course is designed specifically for the balance sheet accounts. Also included will be corporations and determination of net income. Prerequisite: Accounting 211.

511 Advanced Accounting

3 hrs. Spring

This is a study of accounts for special sales, consolidations and miscellaneous accounting methods.

512 Cost Accounting

3 hrs. 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; joint and by-product costs and budgetary control. Prerequisite: Accounting 310, or consent of instructor.

- 514 Income Tax Accounting** **3 hrs. Summer, Fall**
Federal income tax laws for individuals, partnerships and corporations. Prerequisite: Accounting 310, or consent of instructor.
- 516 Auditing** **3 hrs. Fall**
The theory and practice of making audits of business enterprises. Prerequisite: Accounting.
- 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.
- 520 Security Analysis** **3 hrs. Spring**
Analysis of securities, market values and investment programs. Interpretation of financial reports, factors and conditions. Prerequisite: 440 Current Business Trends.
- 522 Life Insurance** **3 hrs.**
Deals with the place of life insurance in the over-all financial picture of economic life of the nation. Covers life insurance, not only from its consumer aspects, but also as a vocational field. Not offered 1960-61.
- 524 Financial Management** **3 hrs. Spring**
Study of the principles and problems underlying the management of capital employed in the business. Prerequisites: Core subjects for the B.B.A.
- 540 Law of Personal Property** **2 hrs.**
The study of the law of Personal Property, including Sales, Bailments and Transportation. Not offered 1960-61.
- 542 Law of Real Property** **2 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.
- 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 Human Relations in Management** **3 hrs. Fall**
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. Prerequisite: Business 350.

552 Management Report Writing **2 hrs. 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.

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.

558 Purchasing Problems **3 hrs. Spring**

A case study course of purchasing problems such as organization, operation, materials management, vendors relations, value analysis and the evaluation of purchasing department performance.

570 Advanced Salesmanship **3 hrs. Fall, Spring**

A detailed course with background of basic principles and analysis of selling techniques applied principally to specialty fields.

572 Advanced Advertising **3 hrs. Fall**

A detailed course with special concentration on media, copy and layout. Study and projects on radio, television, newspapers and magazines.

576 Marketing Research **3 hrs. Summer, Fall, Spring**

Designed to give business students experience in using maps, map analysis and other geographic techniques in presenting market data, evaluating market potential, delineating trading and selling territories and selecting locations for wholesale, retail and service establishments: Prerequisites: Business 222, or approval of instructor.

For Graduates Only

600 Seminar in Business **2 hrs. Fall, Spring**

Intensive problem solving in the primary business fields. Consent of instructor required.

610 Advanced Accounting Theory—Income Determination **2 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 asset evaluations as they relate to income determination.

611 Advanced Accounting Theory—Equities **2 hrs. Spring**

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 **2 hrs.**

A study of the more mature methods of cost measurement and control. Includes standard costs, budgetary control, profit-volume analysis, direct cost and return on employed capital. Not offered 1960-61.

613 Accounting Systems **2 hrs.**

The principles of accounting system development. Will include the systems of various types of businesses. Not offered 1960-61.

620 The Capital Market **2 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: 440 Current Business Trends and 520 Security Analysis, or permission of the 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.

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. Fall**

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. Spring**

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 function to the goals of the enterprise as a whole.

656 Electronic Data-Processing Seminar **3 hrs. Spring**

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

658 Advanced Industrial Management Practices **3 hrs. Fall**

Current trends and advanced problems in the organization and management of manufacturing enterprises.

672 Marketing Management **3 hrs. Fall**

Analysis of marketing activities from the management point of view. Includes study and decision making relative to competition, demand analysis, cost analysis, product design, promotion, pricing and channels of distribution.

680 Principles of Business Education **2 hrs. Fall**

Principles of business education and their implications for the teachers of business subjects. A study of objectives, guidance, occupational research, extra-curricular activities and the growth of business education in the United States.

682 Curriculum in Business Education **2 hrs.**

Principles, practices and problems involved in the evaluation and construction of business curricula. Not offered 1960-61.

684 Improvement of Instruction in Shorthand and Secretarial Subjects **2 hrs. Spring**

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.**

A study of the latest research findings, materials, teaching procedures, tests and measurements, and possible future development in typewriting. Not offered 1960-61.

688 Improvement of Instruction in Bookkeeping and General Business Subjects **2 hrs. Summer**

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. Summer**

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.

CHEMISTRY

Meyer, Head; Professors Iffland, Knowlton and Osborn; Associate Professor Tuller; Assistant Professors Anderson, Holkeboer, Nagler and Zimmerman.

For Graduates and Upperclassmen

505 Chemical Literature **2 hrs.**

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. Not offered 1960-61.

530 Physical Chemistry **3 hrs. Fall**

The course includes studies in kinetic theories of gases, liquids, solids, solutions, thermodynamics, physical basis for molecular structure, thermo-chemistry, homogeneous equilibria, heterogeneous equilibria, etc. Prerequisite: Quantitative Analysis 222, Physics 113, College Algebra and Analytic Geometry or equivalent, and Calculus.

531 Physical Chemistry **3 hrs. Spring**

A continuation of course 530. The course includes radioactivity, quantum theory, atomic structure, conductance of solutions, pole potentials, oxidation potentials, polarization, chemical thermodynamics, colloids, etc. Prerequisite: Physical Chemistry 530.

532 Physical Chemistry Laboratory **2 hrs. Fall**

Includes experiments on molecular-weight determination, viscosity, surface tension, vapor pressure, distillation of liquid mixtures, etc. Corequisite: 530.

533 Physical Chemistry Laboratory **2 hrs. Spring**

A continuation of 532. Includes experiments on adsorption, colloids, reaction rate, spectrophotometry, phase rule, etc. Corequisite: 531.

536 Theoretical Chemistry **3 hrs. Summer**

This course is intended to acquaint the high school science teacher with elementary knowledge of physical chemistry. It includes the properties of gases, liquids, solids, solutions and colloids. Prerequisite: Quantitative Analysis, one year of Physics, College Algebra, Analytical Geometry.

537 Theoretical Chemistry **3 hrs.**

Thermochemistry, homogeneous and heterogeneous equilibrium, electro-chemistry, kinetics, etc. Prerequisite: 535. Not offered 1960-61.

551 Biochemistry **2 hrs. Spring**

Elementary study of the chemistry of the body, digestion, metabolism, excretion, the endocrines and vitamins. Prerequisite: 360.

552 Biochemistry Laboratory **1 hr. Spring**

Analysis of blood, urine and gastric juice and experiments on carbohydrates, lipides and proteins. To accompany 551 Biochemistry. Prerequisites: 222, or 340, and 360.

553 Special Topics in Biochemistry Laboratory **1 hr. Spring**

Further topics in biochemistry laboratory. This course will accompany Biochemistry 551 and 552.

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 familiarization with many organic reactions and the development of deductive reasoning in the field of organic chemistry.

564 Organic Preparations **2 hrs. Fall**

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 is arranged each week. Consult instructor before enrolling. Prerequisite: 361.

565 Organic Preparations **2 hrs.**

A continuation of 564. Consult instructor before enrolling.

580 History of Chemical Theory **2 hrs. Summer**

This course is taught from the point of view of the history of chemical theory in which the evidence for the theories is critically presented. Prerequisite: 24 hours of college chemistry.

590 Special Problems in Chemistry **2 hrs. Summer**

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 permission of instructor. Given on request.

591 Special Problems in Chemistry **2 hrs.**

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)

610 Advanced Inorganic Chemistry **3 hrs.**

This course 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, complex ions and coordination compounds, acids and bases, and non-aqueous solvents are included in the study of chemical principles. The remainder of the course concerns the chemical elements and their compounds. Not offered 1960-61.

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 or chemistry and physics. Not offered 1960-61.

620 Advanced Analytical Chemistry **3 hrs. Spring**

The theory and technique involved in the more complex separations and determinations in quantitative analysis. In addition to gravimetric and titrimetric methods, such physicochemical methods as spectrophotometry, colorimetry, chromatography, and potentiometry are discussed. The laboratory work is an application of the above techniques. Prerequisite: Physical Chemistry 531.

630 Advanced Physical Chemistry **3 hrs.**

This course covers in more detail topics which can not be developed extensively or were not included in the introductory physical chemistry class. Some of these are equations of state, chromatography, physical properties and molecular structure, viscosity applied to molecular weight determinations, crystal structure, fractionation using columns, activities, electrochemistry, kinetics. Prerequisite: Physical Chemistry 530. Not offered 1960-61.

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. Not offered 1960-61.

632 Electrochemistry **2 hrs. Fall**

This course includes chemical thermodynamics, conductivity of solutions, transport number, electrode potentials, electrolysis and over voltage. Prerequisites: Mechanics, Sound and Heat; Calculus; Physical Chemistry 531 and Quantitative Analysis 222.

650 Advanced Biochemistry **3 hrs. Fall**

Study of enzymes and hormones. Methods of enzyme chemistry, mode of action, role in metabolism, the chemistry of hormones and their functions. Prerequisite: 551, 361, 531.

660 Advanced Organic Chemistry **3 hrs. Spring**

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.

DISTRIBUTIVE EDUCATION

Trimpe, Head.

Open to Graduates and Upperclassmen

570 Organization and Operation of Distributive Education

2 hrs. Summer, Fall

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.

572 Teaching Techniques for Cooperative Education 2 hrs. Fall

This course 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 2 hrs. Spring

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.

Open to Graduates Only

671 Job Supervisory Training 2 hrs. Spring

This course 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.

ECONOMICS

Bowers, Head; Professors Bigelow and Carlson; Associate Professors Copps and Wend; Assistant Professors Beinhauer and Rahbany.

For Graduates and Upperclassmen

502 Modern Economics 3 hrs. Summer, Fall, Spring

A one-semester survey course 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.

505 Price Theory 2 hrs. Fall

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

506 Business Cycles 2 hrs. Spring

An historical and theoretical analysis of business cycles. Prerequisites: Economics 200 and 201.

510 Labor Problems 2 hrs. Fall

An analysis of the nature and underlying causes of the problems facing the worker in modern economic society. Prerequisite: Principles of Economics.

511 Labor Problems**2 hrs. Spring**

A study of the methods by which workers, employers and the public have been and now are attempting to solve labor problems. Present programs are evaluated in the light of underlying economic principles in order to develop sound thinking about these problems. Prerequisite: Labor Problems 510.

512 Collective Bargaining**3 hrs. Fall**

An analysis of the major problems in present-day collective bargaining including the negotiation of collective agreements, the practical aspects and the economic implications. Prerequisite: Labor Problems 510 and 511 or consent of instructor.

514 Labor and Government**3 hrs. Spring**

The course 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.

524 Public Finance**3 hrs. Fall**

A study of government expenditure, revenues, debts and problems of fiscal administration. Prerequisite: Principles of Economics. Work in government may be substituted in special cases by permission of the instructor.

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 Economics of Consumption.

542 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 regulation, and to provide an analysis and evaluation of the various laws from the viewpoint of encouragement, subsidization and control. Special attention 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.

546 Public Utilities**3 hrs. Spring**

The nature and problems of public utility industries and the reason for and methods of government regulation. Prerequisite: Economics 200, 201.

547 Business Administration **3 hrs. Spring**

This course deals with the elementary principles of internal organization and management of industrial enterprises. It includes a discussion of plant location and types of construction; material equipment and power; planning and routing; statistics and accounting; marketing methods and problems; production management; personnel administration; purchasing, traffic, credit and collections. Prerequisite: Principles of Economics.

580 International Economics **2 hrs. Spring**

A general course in international relations with special emphasis on the fundamentals of international trade theory and the impact of national economic policies on international relations. Prerequisite: Principles of Economics.

584 Comparative Economic Systems **2 hrs. Spring**

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 Economics.

588 Economic Development **3 hrs. Summer**

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.

Open to Graduates Only

604 Economic Problems **2 hrs. 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**

The course aims to give 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**

The seminar offers the graduate student 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**

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.

613 Social Security **2 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.

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 **2 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.

EDUCATION

Griggs, Dean; Strolle, Head; Professors Bryan, Buelke, Carter, Chiara, Ellis, Frederick, Mallinson, Manske, McCuskey, Sebaly and Swickard; Associate Professors Duvall, Govatos and Snow; Assistant Professor Lamper.

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 1960-61.

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 1960-61.

506 Adult Education **2 hrs.**

This course will include 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 1960-61.

508 Parent Education **2 hrs. Summer, Spring**

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.

510 The Elementary Curriculum **2 hrs.**

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. Not offered 1960-61.

511 The Elementary Curriculum **2 hrs. Summer, Spring**

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.

520 The Junior High School **2 hrs. Summer, 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.

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. Spring**

The course deals with curricula, curricular materials and special methods to be employed in teaching deaf and hard-of-hearing children.

532 Mental Deficiency **2 hrs. Summer, Fall, Spring**

A course in 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, Fall**

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

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.

535 Introduction to Lip Reading 2 hrs.

A course designed to acquaint 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. Not offered 1960-61.

536 Speech for the Deaf 2 hrs. Fall

Teaching methods used for the development of speech in congenitally deaf children. The formation of speech elements and their combination into words. Use of residual hearing for speech and voice improvement.

537 Language for the Deaf 2 hrs. Summer

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.

538 Anatomy and Pathology of the Aural Mechanism 2 hrs.

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. Not offered 1960-61.

539 Clinical Audiometry and Audiology 2 hrs. Summer

This course deals with the physics of sound, with the 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.

540 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.

541 Hearing Rehabilitation 2 hrs. Spring

Considers lip reading, hearing aids, auditory training and speech re-education as rehabilitative measures. Laboratory teaching of hard-of-hearing children and adults.

542 Therapeutic Care of Crippled Children **2 hrs.**

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. Not offered 1960-61.

543 Education of Crippled Children **2 hrs.**

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. Not offered 1960-61.

546 Driver and Safety Education **Post-Session Workshop**
(Aug. 1-12) **2 hrs. 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 **2 hrs. Summer, Fall**

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.

550 Workshop: Education for Moral and Spiritual Values **2 hrs.**

Designed as a pilot project of the AACTE Committee on Teacher Education and Religion. Open to teachers, counselors, administrators and others who are interested in helping children and youth develop desirable behavior patterns based on fundamental moral and ethical principles. Involves a study of procedures and activities designed to develop good value-judgments which will carry over in family, school and community relationships. Not offered 1960-61.

551 Philosophy of Education **2 hrs. Summer**

For graduate students and teachers of experience. Analyzes and interprets the changes in education taking place in this and other countries. Not offered 1960-61.

580. Introduction to Guidance Services 2 hrs. Summer, Fall, Spring

Basic introductory course for all secondary and elementary teachers including a survey of the history, principles, problems, methods, organization and administration of guidance. Readings and discussions will include the following areas: study of the individual, imparting information essential to adjustment, counseling, placement and follow-up.

581 Techniques of Guidance 2 hrs. Summer, Fall, Spring

This course is designed to give competencies in the use of school records, measurement, case studies, interview, group guidance, placement, follow-up and community resources.

582 Occupational Information for Counselors and Teachers 2 hrs. Summer, Spring

Stresses knowledge of sources, use, evaluation and techniques of imparting occupational information. Recent trends in the major occupations are also discussed.

583 Guidance Workshop 2 hrs.

The workshop is 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. Not offered 1960-61.

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.

587 Educational Therapy in Reading 2 hrs. Summer

A study is made of 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

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

In 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

A study of 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, July 31-August 12.**

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.

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

This course is 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.

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. Fall

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.

615 Seminar in the Teaching of Reading Post-Session Workshop,
(Aug. 1-12) 2 hrs. Spring

This course is 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.

*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.

620 Improvement of Teaching in Secondary Schools 2 hrs.

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. Not offered 1960-61.

621 The Secondary School Curriculum 2 hrs. Fall

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

622 Teaching in the Core Curriculum 2 hrs.

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. Not offered 1960-61.

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

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.

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.

630 Clinical Study of Exceptional Children 2 hrs.

This course is intended to illustrate methods of diagnosing and treating the problems of exceptional children. Not offered 1960-61.

632 Problems in Education of the Mentally Handicapped 2 hrs.

Problems in education of mentally handicapped children including educability; philosophy of education of the mentally handicapped; organization of programs; and functions of institutions. Not offered 1960-61.

646 Advanced Driver and Safety Education 2 hrs.

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. Summer

This course is designed to develop an understanding of the behavior patterns, problems and adjustments of college-age youth. Special em-

phasis 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.

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 1960-61.

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 organization. Presupposes a rudimentary knowledge of administration and some practical field experience.

661 Social Interpretation **2 hrs. Summer, Spring**

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 1960-61.

663 Workshop in Educational Administration **Post-Session Workshop**
(Aug. 1-12) **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.

664 School Plant Planning **2 hrs. Summer**

This course is 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, principles of budget making, techniques of borrowing, bonding, tax allocations, state aid formulas, accounting procedures and similar financial problems facing school administrators.

669 Supervision of Student Teaching 2 hrs. Summer, Spring

This course 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.

680 Seminar in Guidance 2 hrs.

A critical review of the research literature relating to guidance and allied fields. Emphasis will be placed upon the practical application of these findings in the respective schools of the participants. Not offered 1960-61.

681 Interpretation and Use of Tests in Guidance 2 hrs.
Summer, Spring

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.

683 Organization and Administration of Guidance Programs 2 hrs.
Summer, Spring

Administrative and supervisory problems of guidance directors. Need for local and state administration, function of administration and supervision, improvement of group guidance programs in homeroom and classroom.

684 Elementary School Guidance 2 hrs. Fall

Designed to give teachers, administrators and guidance workers an understanding of principles and techniques of guidance programs in elementary schools.

687 Improvement of Reading in Secondary Schools 2 hrs. Fall
Post-Session Workshop (Aug. 1-12)

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

688 Evaluation in Education 2 hrs.

This course is 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 develop-

ment of a philosophy of evaluation as an integral part of learning. Not offered 1960-61.

690 The Community College **2 hrs.**
Post-Session Workshop (Aug. 1-12)

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.

ENGLISH

Rogers, Head; Professors Limpus and Miller; Associate Professors Freund, Holaday, Malmstrom and Nelson; Assistant Professors Callan, Denenfeld, Galligan, Lo and Sadler.

Open to Graduates and Upperclassmen

534 Restoration Literature **3 hrs.**
Studies in Dryden, Swift and Pope. Not offered 1960-61.

535 Eighteenth-Century Literature **3 hrs.**
Studies in the decline of the old and the development of new literary interests as revealed in the work of Thomson, Gray, Cowper, Blake and others. Not offered 1960-61.

536 Early Romantic Literature **2 hrs. Fall**
Readings in Blake, Burns, Wordsworth, Coleridge, Scott, and the major criticism of the period.

537 Later Romantic Literature **2 hrs. Spring**
Readings in Byron, Shelley, Keats, Hazlitt, Lamb and DeQuincey.

559 Midwestern Literature **2 hrs. Spring**
The origins, characteristics and historical development of the imaginative literature of the American Midwest.

566 Creative Writing Roundtable **2 hrs.**
Writing of poetry and fiction; intended for advanced students in English and for other students interested in writing.

568 Literary Criticism **2 hrs. Summer, Fall**
A study of ancient and modern writers on the nature of literature and how it may be examined and judged.

574 Structure of Modern English **2 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: Literature for Children. Not offered 1960-61.

Open to Graduates Only

622 American Literary Themes 2 hrs. Summer, Fall

A study of the "search for a subject" evident in the works of selected 19th century American authors.

640 Poetics 2 hrs.

A study of poetry in terms of subject, diction, form, imagery and philosophy, supplemented by readings in the theory of poetry. Not offered 1960-61.

642 Studies in Drama 2 hrs.

A consideration of selected plays with a view toward grasping dramatic method and studying problems of the drama. Not offered 1960-61.

644 Studies in the Novel 2 hrs. Spring

A comparative study of the form and function of the novel.

652 Studies in Shakespeare 2 hrs. Fall

A study of the dramatic structure, characterization, imagery and world outlook of selected plays.

661 Seminar in English 3 hrs. Spring

Study of a problem involving an author, a period or a genre. Prerequisite: Consent of instructor.

662 Graduate Writing 2 hrs.

A course in writing clear and effective prose. Not offered 1960-61.

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 1960-61.

GEOGRAPHY AND GEOLOGY

Brueckheimer, Head; Professor Stout; Associate Professor Horst; Assistant Professors Kirchherr, Moore and Schmaltz.

For Graduates and Upperclassmen

510 Geography of Michigan 2 hrs. Summer, 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 Economic Development in Latin America 2 hrs.

Intensive study is directed toward problems of economic development in Latin America. These are considered in light of varied resource bases and involve a consideration of socio-economic, political and geographic conditions. Not offered 1960-61.

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.

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.

517 The Middle East 2 hrs.

Diversity and homogeneity in the Middle East, with emphasis on regional interrelations, developmental potentialities and the economic-geographic problems of Israel, Egypt and the Moslem world. Not offered 1960-61.

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.

539 Field Geology 4 hrs.

A study of geologic materials and features in the Upper Great Lakes Region and the Black Hills. Not offered 1960-61.

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.

541 Geographic Foundations of National Power 3 hrs. Spring

The study of 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 land forms as related to problems of transportation and economic development. The concept of "autarchy" and the field of "geopolitics" are considered in detail.

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 1960-61.

560 Studies in Geographic Education**2 hrs.**

Gives prospective geography teachers guidance in the selection, organization and presentation of the best materials available in this field. Not open to students who have had Geographic Techniques. Not offered 1960-61.

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.

Open to Graduate Students Only**600 Advanced Studies in Earth Science****2 hrs.**

An intensive course designed to cover the areas of physical geology, weather and climate needed by junior high science teachers to teach general science. The bulletins of the IGY will be utilized in dealing with modern developments in the earth sciences. Individual deficiencies will be met by individually assigned readings and by teacher consultations. Not offered 1960-61.

620 Advanced Physical Geography**2 hrs. Spring**

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.

631 Geology for Teachers**2 hrs. Summer**

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 two hours of lecture and one hour of laboratory.

642 Historical Geography of North America.**2 hrs.**

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. Not offered 1960-61.

652 World Resources**2 hrs. Fall**

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.

664 The Development of Geographic Thought**2 hrs.**

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. Not offered 1960-61. May be offered on an individual or seminar basis.

HISTORY

Russel, Head; Professors Dunbar, Friedmann, Macmillan, Mange, and Starring; Associate Professors Elsasser and Mowen; Assistant Professors Breisach, Brown, Brunhumer and Hamner; Instructor Sommerfeldt.

Open to Graduates and Upperclassmen

506 Intellectual History of Western Man to 1550**2 hrs. Fall**

Leading ideas and intellectual movements in Western Civilization, their foundations in Judaeo-Christian traditions, Medieval thought, Arab influences, the spirit of Gothic art, the Renaissance and Humanism, and the final breakup of the Medieval system through the Protestant Revolution.

507 Intellectual History of Western Man, 1550 to the Present**2 hrs. Spring**

Four hundred years of the Modern mind; the dominance of the scientific perspective and its conflict with Christian ideas and ideals; Calvinism and the economic revolution; rationalism, the Enlightenment, and the secularization of life; romanticism, liberalism and the challenge of socialism; and the world at a crossroads.

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 1960-61.

516 Constitutional History of the United States**3 hrs. Spring**

A study of the development of the political institutions of this country from Colonial times to the present with emphasis on the growth of the Federal constitution.

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 American Foundations

2 hrs.

The English colonies in America both continental and island, 1607-1763, with emphasis upon the development of institutions and upon imperial policy and administration. Not offered 1960-61.

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 History, 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 History, 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 United States History, 1848-1877

2 hrs. Spring

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

527 The Old South

2 hrs.

A study of economic, social and cultural conditions in the antebellum South with emphasis on the plantation system and Negro slavery and the social and political philosophy of Southern leaders. Not offered 1960-61.

532 United States History, 1901-1933

2 hrs. Fall

An intensive study of a short period. The principal topics are the Progressive Movement, World War I, and the causes of the Great Depression.

533 United States History, 1933 to the Present

2 hrs. Spring

A continuation of 532. The big topics are the Great Depression, the New Deal, World War II, and our foreign relations since the war.

552 The Medieval Church

2 hrs. Summer, Spring

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. Spring

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

- 555 The Reformation** **2 hrs.**
 A history of the religious reformation in Europe at the beginning of Modern Times. Not offered 1960-61.
- 558 The Old Regime.** **2 hrs. Fall**
 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.
- 559 The French Revolution and the Napoleonic Era, 1789-1815** **2 hrs. Summer, 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.**
 A study of British political, social and economic developments since 1900 and of the changing character of the Empire and Commonwealth. Not offered 1960-61.
- 571 History of Mexico** **3 hrs. Fall**
 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.

592 The Literature of History

2 hrs. Spring

The reading of selected writings of great historians. The purpose is to develop (1) standards for evaluating approaches, the use of sources and the handling of controversial matters and (2) appreciation of good history.

Open to Graduates Only

602 Studies in the Middle East

2 hrs.

Studies pertaining to the major aspects of the history of the Middle East. They involve lectures, supplementary reading and the critical use of historical materials in the preparation of papers. Not offered 1960-61.

610 Studies in Michigan History, 1815-1856

2 hrs.

Studies in the history of Michigan Territory and State. Attention is given to the critical use of historical materials and the preparation of bibliographies. Not offered 1960-61.

620 Seminar in Michigan History, 1865-1933

2 hrs. Spring

Research papers in the economic development of the state, with social and political implications, are prepared in this course.

628 Studies in the History and Culture of the Old Northwest

2 hrs. Fall

Reading, discussion and research on various aspects of the development of government, education, social institutions and economic life in the Old Northwest, 1776-1840.

656 Seminar in European History, 1500-1815

2 hrs. Fall

Intensive exploration of selected topics in the history of the period.

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 *philosophes*. Not offered 1960-61.

662 Studies in Russian History

2 hrs. Summer

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.

666 Seminar in the History of Victorian England

2 hrs.

Attention is devoted to economic, social, intellectual and political problems and developments of the period. Not offered 1960-61.

674 Seminar in Recent Latin American History 2 hrs. Summer

An intensive exploration and analysis of various aspects of the modern Latin American scene will be undertaken with emphasis on the relationship between present-day realities and past experience.

686 The United States and the Far East Since 1945 2 hrs. Fall

Considers the mid-twentieth century reorientation of United States policy and the shift in the balance of power and force in so far as they relate to the Orient.

HOME ECONOMICS

Herald, Head; Professor Taylor; Associate Professor Savage.

Open to Graduates and Upperclassmen

500 Textile Fiber Clinic 2 hrs.

A workshop type program. Specialist and visual aids will present the newest information on textiles. To be followed by a study of methods implementing the new learnings. Not offered 1960-61.

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, Quantity Foods. Not offered 1960-61.

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.

Study of marketing problems and consumer credit. Students work on individual problems which concern the technique of buying a specific type of consumer goods. Prerequisite: Consent of instructor. Not offered 1960-61.

518 Experimental Foods 2 hrs.

Application of principles affecting food preparation. Development of experimental techniques. Prerequisites: Chemistry, Foods and Advanced Foods. Not offered 1960-61.

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 1960-61.

550 Family Living in the Schools 2 hrs. Summer

Problems of organizing materials in Family Living for the purpose of teaching classes and working the groups in the school program.

552 The Homemaking Center and Equipment 2 hrs. Summer, Spring

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. Fall

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.

Open to Graduates Only

600 Advanced Clothing Techniques (Workshop July 5-July 15)

2 hrs. Summer

This course is planned to meet the needs of the advanced student in clothing construction techniques. Prerequisites: Clothing, Family Clothing and consent of instructor.

602 Advanced Tailoring Techniques 2 hrs. Fall

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

640 Supervision of Home Economics 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. Not offered 1960-61.

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 1960-61.

644 Curriculum Planning in Home Economics

(Workshop: July 18-July 29)

2 hrs. Summer

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.

646 Evaluation in Home Economics **2 hrs. Spring**

A study of the techniques of evaluation applicable in home economics. Review of published devices in this field. Construction of objective devices and their use in the classroom. Prerequisite: consent of instructor.

648 Adult Education in Homemaking **2 hrs.**

A study of the developmental needs of adults and changes in society affecting families as a basis for developing adult programs in homemaking education. Prerequisite: consent of instructor. Not offered 1960-61.

650 Advanced Study of Home Management
(Workshop: June 20-July 1) **2 hrs. Summer**

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.

652 Teaching of Homemaking **2 hrs.**

Designed to develop ways of implementing newer methods and techniques used in an effective homemaking program. Planned for experienced homemaking teachers. Not offered 1960-61.

INDUSTRIAL EDUCATION

Feirer, Head; Assistant Professors Lindbeck, Risher and Spence.

506 Furniture Construction **3 hrs. Summer, Spring**

An advanced course in 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.

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 materials in the industrial and craft areas will be stressed.

542 Course Planning and Construction **2 hrs. Summer, 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.**

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. Not offered 1960-61.

572 Arts and Crafts for Teachers **2 hrs. Summer, Spring**
Post-Session Workshop (Aug. 1-12)

This course will cover 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.

582 Aviation for Classroom Teachers **2 hrs.**

This course is intended 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. Not offered 1960-61.

Open to Graduates Only

605 Problems in Woodworking **2 hrs. Summer**

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.**

Advanced laboratory experiences in the fields of mechanical, architectural and machine drawing in conjunction with a study of current technical literature in these areas. Written reports will be required. Advanced instruction in engineering drawing and descriptive geometry will also be available. Course content will be adapted to individual needs. Not offered 1960-61.

630 Research in Machine Shop Practices **2 hrs. Summer**

A course designed for teachers who wish to carry out advanced techniques in the area of machine shop.

638 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.

641 Trends in Industrial Arts **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. Summer, Fall**

A study of the technique for preparing and using correctly written and practical tests. Attention will be given to interpretation of test results and grading student achievement.

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 1960-61.

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 arts philosophy. Not offered 1960-61.

646 Teaching Problems in Industrial Arts **2 hrs.**

Special attention will be given to teaching methods and the techniques that are useful to experienced industrial arts teachers. Emphasis will be placed on problem solving in industrial arts, 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 1960-61.

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 1960-61.

661 Electricity for Shop Teachers **2 hrs. Summer**

This is a skill course 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.

670 The General Shop Program **2 hrs. Spring**

Covers the place of the general shop in general education and the historical development of the general shop program. Problems of organization, administration, methods, articulation, equipment and supplies will be investigated.

671 Industrial Arts 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.

688 Advanced Power Laboratory**2 hrs. Summer**

This course is 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 principles.

INDUSTRIAL TECHNOLOGY

Giachino, Head; Professor Nantz; Associate Professor Wilcox.
Wilcox.

For Graduates and Upperclassmen**500 Practical Labor-Management Relations****3 hrs.**

A course dealing with existing relationships between government agencies, labor organizations and management. Particular emphasis will be placed on collective bargaining procedures.

510 Automotive Transportation Workshop**2 hrs.**

Practical experience is provided to secure an understanding of the basic elements of automotive and aircraft transportation. Instructional material will be developed for use in teaching units of transportation in junior or senior high schools. Not offered 1960-61.

514 Automotive Performance Problems**2 hrs.**

A brief study of the operating curves, advance testing procedures, automotive ratings and requirements as they apply to automotive performance and service life. Not offered 1960-61.

LANGUAGE

Steckelberg, Head; Professor Rothfuss; Associate Professor Noble.

Open to Graduates and Upperclassmen**500 Studies in Contemporary France****2 hrs.**

This course investigates more deeply some phases of French life which were only mentioned in 304 and 305. An effort is made to understand those factors in French thinking which strongly affect inter-

national thought today. There is no prerequisite in foreign language. Not offered 1960-61.

502 Masters of Contemporary French Thought 2 hrs. Fall

This course proposes to study 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.

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 Comedie-Française and to make the student aware of the renovation of stagecraft in France under the impulse of great producers.

510 The Central European Area 2 hrs.

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. Not offered 1960-61.

512 Development of German Thought 2 hrs. Fall

A study of the development of Germany and the German national character. Includes a study of selected authors on history, philosophy and pedagogy as well as German literature in translation. No foreign language prerequisite.

514 Germany Through the Centuries 2 hrs. Summer

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.

530 Contemporary Spanish Theater 2 hrs.

The Spanish theater and the dramatists of the 20th century are studied. Lectures and reading assignments in English include representative works of the important writers for the theater.

533 Cervantes 2 hrs.

The life and works of Miguel Cervantes with special emphasis on *Don Quixote* are studied. The course may be elected by those who will read the masterpiece in translation as well as by those with a good foundation in Spanish. Not offered 1960-61.

558 Mythology 3 hrs. Summer

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.**

This is a course for teachers of French, German or Spanish in the high school and grades. Problems common to all three will be considered. The basis for the course will be psychological principles underlying language learning, an evaluation based on them of current methodology, and a critical survey of cultural materials in the three civilizations, suitable for present-day school use. Not offered 1960-61.

LIBRARIANSHIP

LeFevre, Head; Associate Professors Lowrie and O'Hara.

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

Principles of selection and evaluation of books and non-book materials. Appraisal of printed aids, book reviewing media and other sources of information used in building the library collection. Opportunity given for developing competence in writing annotations and book reviews.

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.

522 School Library Service**2 hrs. Spring**

The function of the library as a department in elementary and secondary schools. Includes study of special problems in budget planning,

*Starred courses are open to students from other departments.

in provision of staff and in planning for space and equipment. Standards for the evaluation of school library services are studied. Open to students in school administration programs as well as to librarianship students.

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.

***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 to 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. Fall

The course aims to give 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

*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.

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 a bibliography on a topic of his choice. Prerequisite: an introductory course in Reference. 612 need not precede 613.

***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 audio-visual 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.

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 Administration and Organization or equivalent.

622 Library Organization and Administration **2 hrs. 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. Prerequisite: 510, 512 or equivalents.

623 Elementary School Library Service **2 hrs. Summer**

Opportunities for individual and group study to investigate methods and techniques for establishing, extending and improving elementary school library service. Lectures, field trips, and discussion augmented by resource consultants. Laboratory periods in Campus Elementary School Library.

*Starred courses are open to students from other departments.

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.

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 1960-61.

629 Seminar in Administrative Problems **2 hrs. Summer, Fall**

Analysis of administrative problems in various types of libraries; larger units of service, new buildings, centralization and supervision. Students may develop a term project relating to their own institutions. Prerequisite: Library Administration and Organization.

630 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. 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. Summer**

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.

MATHEMATICS

Butler, Head; Professors Beeler and Hannon; Associate Professors McCully, Powell and Seber; Assistant Professors Alavi and Leja.

Open to Graduates and Upperclassmen

504 Theoretical Mechanics **2 hrs.**

A vectorial treatment of the kinematics and dynamics of particles and of rigid bodies, with emphasis on problem solving. Prerequisite: Vector Analysis. Not offered 1960-61.

505 Vector Analysis **3 hrs. Spring**

The formal processes of vector analysis, with application to geometry and mechanics. Prerequisite: Calculus.

540 Introduction to Higher Geometries 2 or 3 hrs. Spring

Selected topics from set theory, topology, affine and projective geometry, and symbolic logic. Topics discussed are related to mathematics taught in secondary schools. Especially recommended for students planning to teach mathematics. Prerequisite: 221 Calculus or the equivalent.

550 Teaching of Secondary Mathematics 2 or 3 hrs. Fall

In this course some consideration is given to curriculum problems and trends in secondary school mathematics, but the main emphasis will be upon specific problems of teaching mathematics effectively to secondary school students. Prerequisite: 221 Calculus or the equivalent.

552 History of Mathematics 2 hrs. Summer, Fall

An introduction to the history and foundations of mathematics. A strongly historical treatment of some fundamental mathematical concepts. Topics considered will include sets, relations, functions and algebraic structures. Prerequisite: 221 Calculus or the equivalent.

560 Introduction to Statistical Analysis 3 hrs. Fall

The study of statistics as the science of experimentation: averages, dispersions, sampling, correlation, and statistical tests valid for small or large samples. Prerequisite: 221 Calculus or the equivalent.

570 Advanced Calculus 3 hrs. Spring

This course constitutes a further study of limits, continuity, ordinary and partial derivatives, improper integrals and infinite series, beyond that in the first year's work in calculus. Prerequisite: Calculus.

For Graduates Only

610 Concepts of Mathematics I 2 hrs. Fall

Introductory material on sets, relations, mappings and operations will be given prior to considering integral domains, fields and groups. This material is to be motivated by and related to a discussion of the real number system. The topic of groups will include permutation groups, abstract groups, the symmetric group, cosets of a sub-group, invariant sub-groups and quotient groups.

611 Concepts of Mathematics II 2 hrs. Spring

The concepts introduced in course 610 will be utilized in a discussion of affine and projective geometry. Introductory material on vector spaces, linear transformations and matrices will be included.

650 Mathematics for Elementary School Teachers 2 hrs. Spring

This course, which emphasizes understanding of the concepts and foundations of the mathematics commonly taught in the elementary school, and of associated problems of learning and teaching, should be valuable to all elementary school teachers. 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.

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 1960-61.

MUSIC

Carter, Head; Professors Matthews, Meretta and Stulberg; Associate Professors Beloof and Birkby.

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 1960-61.

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 1960-61.

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.

542 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.

543 Psychology of Music Education 2 hrs. Summer, 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.

560 Counterpoint **2 hrs. Fall**

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: 206A and 206B.

561 Counterpoint **2 hrs. Spring**

A continuation of 560.

562 Advanced Composition **2 hrs. Fall**

Original work in composition dealing with the larger forms in both the vocal and instrumental fields. Prerequisite: Composition.

563 Advanced Composition **2 hrs. Spring**

A continuation of 562.

567 Orchestration **2 hrs. Fall**

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: Sophomore Theory.

568 Orchestration **2 hrs. Spring**

A continuation of 567.

570 Music of Wagner and Beethoven **2 hrs. Summer, Fall**

Designed to acquaint one with the music of these composers, its style, its place in the field of music literature and its relationship to the period in which they lived.

590 Operetta and Musical Production **2 hrs.**

A course 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 1960-61.

For Graduates Only

640 Band Techniques and Organization **2 hrs.**

Organization of the school instructional program. Rehearsal techniques. Survey of band literature. Analysis and discussion of the problems of the instrumental teacher. Offered odd-numbered summers. Not offered 1960-61.

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.

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.

670 Opera and Oratorio **2 hrs. Spring**

Designed to give the graduate student the historical and appreciative background into two of the great vocal forms of music from the 17th century to the present. Style and analysis are considered.

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

OCCUPATIONAL THERAPY

Kiss, Head.

For Graduates and Upperclassmen

502 Advanced Weaving **2 hrs.**

Studies in the more complex forms of fabric structure and design
Not offered 1960-61.

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 1960-61.

523 Introduction to Orthopedics **2 hrs. Summer**

A study of the musculo-skeletal system and integrative mechanisms for students in special education. Admission on approval of instructor.

524 Orthopedics

2 hrs.

A series of lectures on neurological and orthopedic conditions. Prerequisite: Anatomy 216, Physiology 217, or with the consent of the instructor. Not offered 1960-61.

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 1960-61.

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 1960-61.

For Graduates Only

630 Professional Literature

2 hrs. Fall

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 relationships.

640 Advanced Clinical Training

2 hrs. Summer, Fall, Spring

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. Prerequisite: Clinical Training 411.

650 Clinical Training and Scheduling

2 hrs. Spring

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

Nadelman, Head; Professor Diehm; Associate Professor Von Koepen.

For Graduates and Upperclassmen

530 Chemistry and Technology of Plastics 2 hrs. Fall

A general survey of the chemistry and technology of plastics with emphasis upon the synthetic resinous materials used by paper makers and converters. Prerequisite: Organic Chemistry.

540 Principles and Practice of Coated Paper Manufacture 1 hr. Summer, Spring

Lectures on aspects of formulating, preparing and applying pigmented coatings to paper. Lectures on rheology, on control methods, finishing methods and on testing of finished product, with special reference to printability. Laboratory experience in formulation, in laboratory methods of application, in testing and in calendering. Visitations to nearby mills engaged in coating paper and paperboard.

541 Principles and Practice of Coated Paper Manufacture 1 hr. Summer

A continuation of 540.

542 Groundwood Substitutes from Hardwoods by Chemi-Mechanical Processes 2 hrs.

Chemi-mechanical processes for the production of groundwood from hardwoods throughout all important operation and research stages will be discussed. Not offered 1960-61.

550 Microbiology of Pulp and Paper 2 hrs.

A lecture course on morphological characteristics and biochemical activities of micro-organisms in the pulp and paper mill. Methods of controlling micro-organisms in the paper industry are evaluated. Prerequisite: A course in bacteriology or equivalent. Not offered 1960-61.

570 Research Problems in Pulp and Paper 2 hrs. Fall

Laboratory development work pertaining to pulp and paper technology preceded by a survey of available literature.

571 Research Problems in Pulp and Paper 2 hrs. Spring

A continuation of course 570.

PHILOSOPHY AND RELIGION

Loew, Head; Professor Friedmann

520 The Religious Heritage of America 2 hrs. Summer, Spring

A survey of the histories of Judaism, Protestantism and Roman Catholicism in the United States, followed by a comparative study of distinctive beliefs and practices characteristic of the three traditions at the present time.

PHYSICAL EDUCATION FOR MEN

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

For Graduates and Upperclassmen

530 Sports Officiating **2 hrs. Fall**

This course considers rules and officiating techniques with the emphasis on the four major sports, football, basketball, baseball and track. Prerequisite: Fundamentals and technique courses in the various sports.

560 Curriculum Planning in Physical Education **2 hrs. Spring**

A study and evaluation of present-day trends in secondary physical education for boys. A discussion of principles and procedures for curriculum construction and criteria for selection of activities and judging of outcomes. Individual projects will be developed.

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**

The course will consider 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, Spring

This course considers problems and coaching techniques in minor sports such as wrestling, tennis, archery, badminton 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.

650 Tests and Measurements in Physical Education 2 hrs. Fall

Purpose of the course is to acquaint the students with the theory, selection, construction, administration 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, Spring

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.

670 Community Recreation 2 hrs. Summer

Course considers problems in community recreation. The essential elements pertaining to leadership, areas, facilities, program, 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. Summer

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.

672 Methods and Materials in Recreation 2 hrs. Fall

A study of the 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.

PHYSICAL EDUCATION FOR WOMEN

Roell, Head.

For Graduates and Upperclassmen

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

This course presents the problem that arise in the everyday experience of the instructor. Among the topics considered are administration of activities, physical examinations, excuses, special cases, records,

schedules and relations with other services in the school. Prerequisite: Methods in Physical Education.

For Graduates Only

640 Rhythms in Elementary Education 2 hrs. Summer, 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. Spring

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. Fall

A course in the development of a practical progressive physical education program for the elementary schools and for secondary school girls. 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.

PHYSICS

Rood, Head; Professors Bradley, Kruglak and Marburger; Associate Professor Nichols; Assistant Professors Derby and Miller.

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, electric and magnetic fields. Prerequisites: Electricity and Light, Calculus.

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: one year of General College Physics, Light or consent of instructor.

562 Electrical Measurements **3 hrs. Fall, 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, Calculus.

564 Advanced Electronics **3 hrs. Spring**

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.

570 Atomic Physics **3 hrs. Fall**

A study is made of the electron, the photoelectric effect, thermionic emission, the physics of X-rays, quantum theory, devices for accelerating nuclear particles, isotopes, spectra and atomic structure. Prerequisite: Electricity and Light, Calculus.

572 Nuclear Physics **3 hrs. Spring**

A continuation of Atomic Physics. 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.

For Graduates Only

612 Current Developments in Physics **2 hrs. Summer**

This course 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.

674 Nuclear Science for High School Teachers **2 hrs.**

Primarily organized around the fundamental experiments of nuclear physics, this course 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 or 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 courses are not prerequisites. This course is in line with the spirit of the High School Teacher Institutes sponsored by the Atomic Energy Commission and its establishment has been encouraged by the Commission. Not offered 1960-61.

POLITICAL SCIENCE

Weber, Head; Professor Stine; Associate Professors Clark, Greenberg and Plano; Assistant Professors Olton, Phillips and Wachs.

For Graduates and Upperclassmen

500 Municipal Government **2 hrs. Spring**

City governments: their relation to the state, the rights and liabilities of municipal corporations, city pressure groups, and detailed analysis of the forms of municipal governments.

504 Rural Local Government **2 hrs.**

A survey of governmental organization, functions and political relationships of counties, townships, towns, villages and special districts. Attention will be directed to the urbanization of rural areas and the emergence of the metropolitan problem. Not offered 1960-61.

506 Current Problems of American Government **2 hrs. Summer, Spring**

An advanced study of the issues and policies in government, politics, and economics in their historic and sociological perspectives for elementary and secondary teachers. Specific units for teaching may be developed by individuals or groups.

520 The Constitution and Civil Liberties **2 hrs. 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.

540 British Government and Politics **2 hrs.**

The organization and operation of the government of Great Britain and a survey of contemporary British political issues and problems. Prerequisite: Political Science 202 or equivalent. Not offered 1960-61.

542 Governments and Politics of Modern Asia **3 hrs. Summer, Fall**

A survey of contemporary government in several selected Asian nations, including China, Japan, India and Thailand. Particular attention will be given the historical, cultural and environmental factors which influence political and administrative behavior. The rise of communist states, the problems of underdeveloped areas and the influence of former colonial powers will be considered in regional context.

544 Governments and Problems of Central and South America **2 hrs.**

This course includes a study of the governmental organization and an analysis of some of the more current economic and social problems of selected Latin American countries. Not offered 1960-61.

546 Government of the Soviet Union 2 hrs. Fall

The organization and government of the Soviet Union. Deals primarily with the present political structure with special emphasis on the Communist Party and its relationship to the organization of the state. Attention will be paid to youth organizations and education in general as well as to the socio-economic basis of the current system.

550 American Foreign Policy 2 or 3 hrs. Spring

An analysis of the diplomatic relations of the United States with emphasis on present foreign problems. Consideration will be given to the formation and execution of American foreign policy. Prerequisite: National Government and Administration, or a course in American History, or equivalent.

560 History of Political Philosophy—Plato to Machiavelli 3 hrs. Spring

An introduction to the important portions of the political thought of the Ancient and Medieval world. The works of the great political philosophers will be studied in their historical setting.

561 History of Political Philosophy—Machiavelli to the Present 3 hrs.

Includes the great works of political philosophy from the late Middle Ages to the present. Not offered 1960-61.

For Graduates Only

600 National Government 2 hrs.

Considers the major aspects of the national government of the United States with emphasis upon constitutional questions and inter-governmental relations; executive, legislative and judicial branches; and problems of citizenship and civil liberties. Not offered 1960-61.

602 State Government 2 hrs. Summer

Emphasis is placed upon the role of the states in government, the state legislature, the executive, the courts, the role of the citizen, pressure groups and political parties.

604 The Political Process of Government 2 hrs. Summer, Fall

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 formal institutions of government.

606 Pressure Groups and Propaganda 2 hrs. Spring

A study of the politics of interest groups; an analysis of group organization and internal politics, legislative programs, and ideological coalitions of groups. Propaganda techniques are examined as a tool of legislative influence. Group politics is examined as one of several major influential factors in public policy development.

608 Problems of Municipal Government

2 hrs.

Deals with problems resulting from the growth of cities; auxiliary departments such as personnel, finance, planning and law; and line departments including police, fire, public works and utilities, public health, parks and recreation. Prerequisite: Political Science 204 or equivalent. Not offered 1960-61.

650 Seminar in Contemporary American Foreign Policy

2 hrs.

Case studies of the major foreign policy problems currently confronting the United States. Analysis of background, principal issues, alternative actions, formations of policy. Prerequisite: 550 American Foreign Policy, or consent of instructor. Not offered 1960-61.

652 Problems of International Politics

2 hrs. Fall

Analysis through case studies of major current international problems, their backgrounds, solutions offered and current status.

655 The United Nations

2 hrs.

The structure and organization of the United Nations and the specialized agencies. Consideration will be given to the procedures and machinery of international cooperation, dispute settlement, legislation and administration of other international systems and agencies. Not offered 1960-61.

658 Seminar in Asian Governments and Political Problems

2 hrs. Spring

Consideration of specific problems associated with the modern Far East or the Southern Asian regimes. Students will be encouraged to select individual topics for research and seminar presentation. Research methods and materials related to the Asian field will be stressed. Prerequisite: Desirable, a course in the Non-Western World.

660 American Political Thought

2 hrs.

A survey of the leading American contributions to our political thought, grouped around each of several great eras and issues of our national development. Not offered 1960-61.

662 Political Philosophy

2 hrs. Fall

This course does not consider political philosophy historically but rather examines certain areas of concern to the political philosopher. Among the problems to be considered will include: the nature of man, the meaning of liberty, the purposes of government and the extent of political authority.

666 The Elements of Democratic Government

2 hrs.

Deals with the nature and types of government and the effects of education, technology, tradition and geography. Considers constitutionalism, representation, federalism and means used to achieve political ends. Not offered 1960-61.

PSYCHOLOGY

Kuffel, Head; Professor Fatzinger; Associate Professor Schmidt; Assistant Professors Asher, Pavlik and Popplestone.

For Graduates and Upperclassmen

510 Learning and Memory 2 hrs. Summer, Fall

A survey of the general principles of learning and memory and an introduction to learning theory. Lectures and laboratory.

512 Physiological Psychology 2 hrs. Spring

Neurophysiological correlates of learning, perception, emotion motivation and problem solving. Interrelation between physiological processes and behavior theory is considered.

514 Motivation-Emotion 3 hrs. Spring

The psychological and physiological aspects of the topics are examined. Presents the current theories of motivation and emotion and attempts to integrate the conflicting views. Shows the influence of motivation on human behavior.

516 Advanced General Psychology 2 hrs. 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.

534 Sensation and Perception 3 hrs. Fall

Laboratory projects in the psychology of sensation and perception. Emphasis on experimental methods. One hour lecture, four hours laboratory. 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

The problems of vocational choice and of occupational group-differences. Lectures, reading and an occasional laboratory period substituted for a class hour.

For Graduates Only

- 615 Systematic Psychology** **3 hrs. Fall**
An examination of the various schools of psychology with emphasis on the development of contemporary theoretical explanations of human behavior.
- 616 Differential Psychology** **2 hrs.**
A study of individual and group differences in behavior with particular emphasis on methodological and theoretical considerations.
- 624 Personality Theory** **2 hrs. 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.
- 644 Personnel Psychology** **2 hrs. Spring**
A survey of the psychological problems of personnel administration and to the methods of personnel psychology. Lectures, discussions and examination of research.
- 645. Psychology of Work Effectiveness** **2 hrs. Fall**
Factors affecting effectiveness of industrial work, such as fatigue and monotony, hours of work, rest pauses, biomechanics and working conditions, with particular emphasis on psychological aspects.
- 646 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, apprentices, inspectors, new workers and supervisors is considered.
- 650 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.
- 651 Clinical Diagnosis** **2 hrs. Fall**
Introductory study of the nature and application of clinical tools to the study of illustrative cases of problem behavior with consideration of means and methods of clinical treatment. Prerequisite: Abnormal Psychology.
- 661 Psychological Counseling** **2 hrs. Fall**
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. 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.**

Supervised practice in the administration and interpretation of projective techniques appropriate to the student's professional interest area. Prerequisite: Permission of instructor. Not offered 1960-61.

SCIENCE DIVISION

Professors Mallinson, Marburger, Osborn and Van Deventer; Associate Professor Nichols.

For Graduates Only

610 Science for Elementary Teachers **2 hrs. Summer, 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, Macmillan, Mowen, Seibert and Stine; Assistant Professor Beinhauer.

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. Summer

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.

506 Studies in the Non-Western World 2 hrs. Post-Session Workshop (Aug. 1-12)

This course is designed to give 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.

For Graduates Only

600 Seminar in the Teaching of the Social Studies 2 hrs.

The course is designed to assist social studies teachers to evaluate their philosophy and teaching methods in the light of accepted principles and current practices 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 1960-61.

SOCIOLOGY

Kercher, Head; Professors Horton and Hunt; Associate Professor Manis.

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: Principles of Sociology or Social Dynamics of Human Behavior. Not offered 1960-61.

502 Contemporary Social Movements 3 hrs.

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: Principles of Sociology or Social Dynamics of Human Behavior. Not offered 1960-61.

514 Juvenile Delinquency and the Community 2 hrs. 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: Principles of Sociology or Social Dynamics of Human Behavior, 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 240, 600 or the equivalent.

534 Comparative Culture Studies: Britain and the United States 2 hrs.

A comparative study of the structure and the functioning of selected aspects of culture in Britain 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: Principles of Sociology or Social Dynamics of Human Behavior. Not offered 1960-61.

536 The Dynamics of Culture Change 2 hrs. Spring

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.

542 Family Life Education and Counseling 2 hrs. Fall

This course is designed to provide 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.

554 Population Problems **3 hrs. Fall**

A study of population trends and their human significance. The social and cultural factors influencing the reproductive behavior of man are examined. Bio-social facts are presented and analyzed, but primary stress is on the social implications of present and probable future population trends. World pressure spots as well as the United States are considered. Prerequisite: 12 semester hours of Social Science.

556 Social Stratification **3 hrs. Fall**

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, 600 or consent of instructor.

558 Social Forces in Underdeveloped Areas **2 hrs. Spring**

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 or 600.

572 Community Agency Resources **2 hrs. Summer, 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.

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.

For Graduates Only

600 Social Dynamics of Human Behavior **2 hrs. 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 designed for those who have not had a foundation course in sociology.

610 Social Pathology and Personal Deviation 2 hrs. Fall

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: Principles of Sociology, or Social Dynamics of Human Behavior, or equivalent.

615 Techniques of Intercultural Adjustment 2 hrs.

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: Principles of Sociology, or Social Dynamics of Human Behavior, or equivalent. Not offered 1960-61.

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 1960-61.

624. Primary Group Dynamics 2 hrs. Summer

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: Principles of Sociology or Social Dynamics of Human Behavior, or equivalent.

642 Family Development 2 hrs. Summer, 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. Recommended for students in the fields of education, business, special education and home economics, as well as for those majoring in sociology. Prerequisites: Sociology 200, 600 or consent of instructor.

SPEECH

York, Head; Professors Becker, Brown, Pruis and Van Riper; Associate Professor Kuykendall; Assistant Professor Wilson.

For Graduates and Upperclassmen

500 Speech for the Classroom Teacher 2 hrs. Summer, Fall

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. Fall**

Platform reading of the one-act and the three act play. Through class analysis and criticism, a basis for judging the drama is established. Prerequisite: Fundamentals of Speech, Interpretive Reading, Acting, and Advanced Interpretive Reading, or the consent of the instructor.

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 of creative acting. Each student will create at least one role in a play. Prerequisite: Fundamentals of Speech, Interpretive Reading, Acting. Not offered 1960-61.

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 summer dramatic and opera workshop productions. Not offered 1960-61.

526 Technical Problems of Play Production **2 hrs.**

A companion course to 525 with the emphasis placed on technical problems in planning and executing scenery, lighting, costuming and makeup. Laboratory provided in summer dramatic and opera workshop productions. Not offered 1960-61.

530 Public Speaking II **2 hrs. Spring**

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. Prerequisite: Fundamentals of Speech, Public Speaking or consent of instructor.

532 Persuasion **3 hrs. Fall**

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.**

Growth of self regulation and governmental regulation of the radio and television industry. Requirements and responsibilities of the broadcaster as an administrator of a public trust. Not offered 1960-61.

542 Radio in Education **2 hrs.**

An exhaustive study is made of the sources of radio programs and transcriptions available to supplement other teaching aids. The group will study methods of preparation for utilization, techniques of class-listening, and follow-up procedures. Not offered 1960-61.

544 Workshop in Radio **4 hrs. Summer**

A practical workshop in radio with emphasis upon the use of radio equipment. Includes planning program series, directing radio production and editing radio scripts.

550 Basic Voice and Speech Science **3 hrs. Fall**

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. Spring**

Designed to acquaint the student with the nature, causes, development and treatment of the more serious speech disorders. The literature of stuttering, cleft palate, deaf and aphasics individuals will be surveyed as well as the various methods for treating these disorders. Prerequisite: Principles of Speech Correction.

554 Applied Speech Correction **3 hrs. Summer, Fall, Spring**

Deals with the actual practice of speech correction. Involves training in the remedial treatment of speech defectives in the college clinic and schools associated with the university, service in a traveling speech clinic and the study of the principles of clinical practice. Prerequisite: Fundamentals of Speech, Principles of Speech Correction, and consent of instructor.

558 Organic Speech Disorders **3 hrs. Spring**

This course is concerned with the diagnosis and treatment of the speech disorders of organic origin; cleft palate, cerebral palsy, aphasia, aphonia and dysarthria.

560 Teaching Speech in the Elementary School **2 hrs. Spring**

This course is designed to give 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. It will deal 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 and consent of instructor. Not offered 1960-61.

For Graduates Only

600 Problems in Listening 2 hrs. Summer

This course concerns itself with 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.

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. Not offered 1960-61.

632 Speech and Social Control 2 hrs. Fall

Inquires 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 1960-61.

650 Teaching of Speech Correction 2 hrs. Spring

A study of the methods of individual and group therapy for common speech disorders.

652 Public School Speech Correction 2 hrs. Summer, Fall

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.

656 Speech Therapy 2 hrs.

Includes 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. Not offered 1960-61.

660 School Assemblies and Community Programs 2 hrs. Summer

This course is designed to provide help to 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.

VOCATIONAL DIVISION

Kohrman, Dean

For Graduates and Upperclassmen

520 Principles of Practical Arts and Vocational Education 2 hrs. Summer, Fall

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

A supervised business and industrial experience program involving full-time employment for at least eight weeks. 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 1960-61.

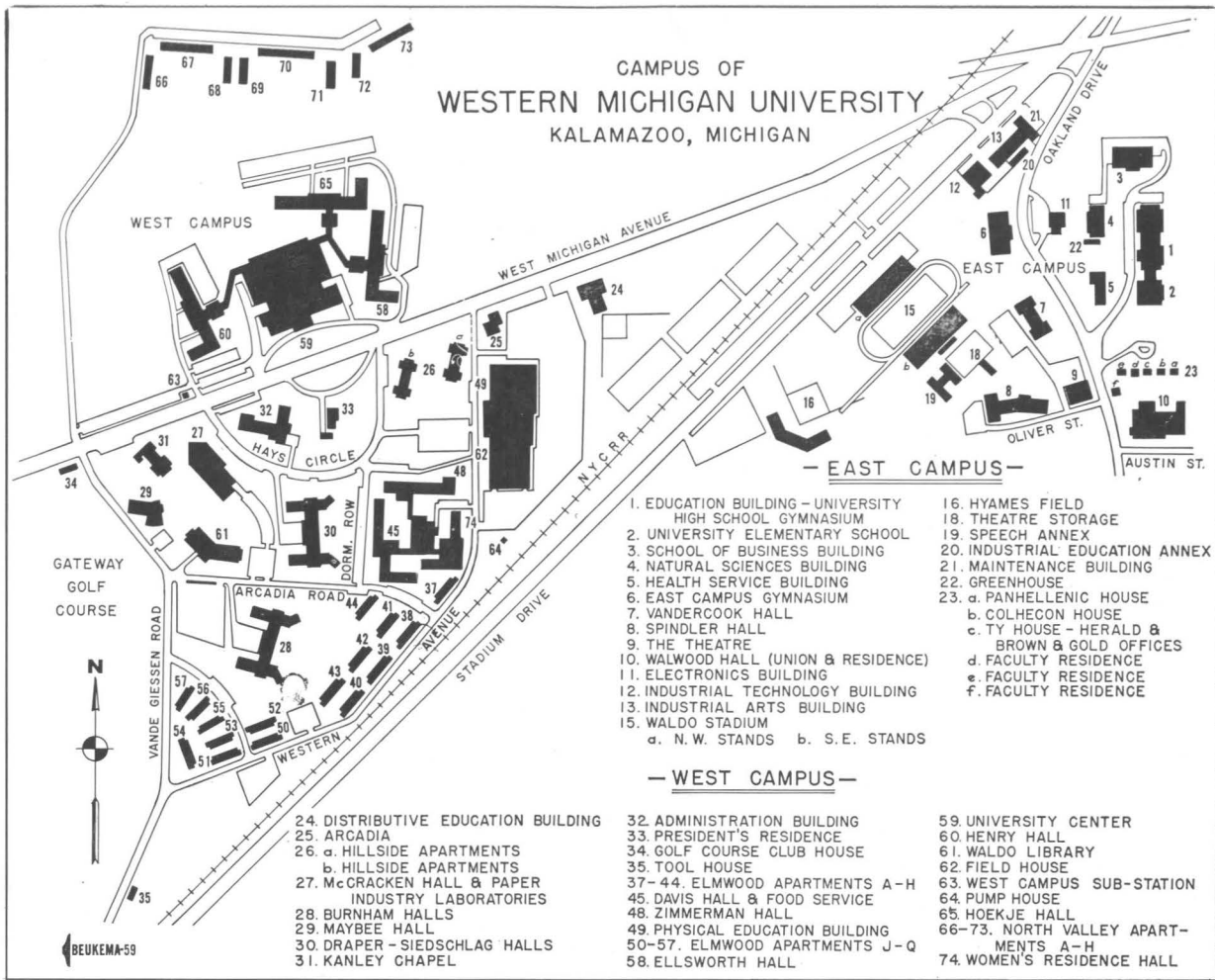
628 Seminar in Vocational Education

2 hrs.

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 1960-61.



CAMPUS OF
WESTERN MICHIGAN UNIVERSITY
KALAMAZOO, MICHIGAN



1. EDUCATION BUILDING - UNIVERSITY HIGH SCHOOL GYMNASIUM
 2. UNIVERSITY ELEMENTARY SCHOOL
 3. SCHOOL OF BUSINESS BUILDING
 4. NATURAL SCIENCES BUILDING
 5. HEALTH SERVICE BUILDING
 6. EAST CAMPUS GYMNASIUM
 7. VANDERCOOK HALL
 8. SPINDLER HALL
 9. THE THEATRE
 10. WALWOOD HALL (UNION & RESIDENCE)
 11. ELECTRONICS BUILDING
 12. INDUSTRIAL TECHNOLOGY BUILDING
 13. INDUSTRIAL ARTS BUILDING
 15. WALDO STADIUM
 a. N.W. STANDS b. S.E. STANDS

16. HYAMES FIELD
 18. THEATRE STORAGE
 19. SPEECH ANNEX
 20. INDUSTRIAL EDUCATION ANNEX
 21. MAINTENANCE BUILDING
 22. GREENHOUSE
 23. a. PANHELLENIC HOUSE
 b. COLLEGON HOUSE
 c. TY HOUSE - HERALD & BROWN & GOLD OFFICES
 d. FACULTY RESIDENCE
 e. FACULTY RESIDENCE
 f. FACULTY RESIDENCE

— WEST CAMPUS —

24. DISTRIBUTIVE EDUCATION BUILDING
 25. ARCADIA
 26. a. HILLSIDE APARTMENTS
 b. HILLSIDE APARTMENTS
 27. McCracken Hall & Paper Industry Laboratories
 28. BURNHAM HALLS
 29. MAYBEE HALL
 30. DRAPER - SIEDSCHLAG HALLS
 31. KANLEY CHAPEL

32. ADMINISTRATION BUILDING
 33. PRESIDENT'S RESIDENCE
 34. GOLF COURSE CLUB HOUSE
 35. TOOL HOUSE
 37-44. ELMWOOD APARTMENTS A-H
 45. DAVIS HALL & FOOD SERVICE
 48. ZIMMERMAN HALL
 49. PHYSICAL EDUCATION BUILDING
 50-57. ELMWOOD APARTMENTS J-Q
 58. ELLSWORTH HALL

59. UNIVERSITY CENTER
 60. HENRY HALL
 61. WALDO LIBRARY
 62. FIELD HOUSE
 63. WEST CAMPUS SUB-STATION
 64. PUMP HOUSE
 65. HOEKJUE HALL
 66-73. NORTH VALLEY APARTMENTS A-H
 74. WOMEN'S RESIDENCE HALL