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4-1962

## Bulletin: Western Michigan University Undergraduate Catalog 1962-1963

Western Michigan University

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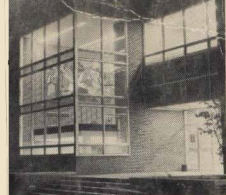
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**BULLETIN: UNDERGRADUATE**



**CATALOG & ANNOUNCEMENTS**

**1962 - 1963**

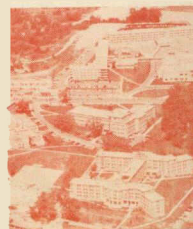


**WESTERN**



**MICHIGAN UNIVERSITY**

**KALAMAZOO, MICHIGAN**





WESTERN MICHIGAN UNIVERSITY is located in Kalamazoo, midway between Chicago and Detroit. It is served by the New York Central and Pennsylvania Railroads, by Lake Central and North Central Airlines. Three major highways and numerous bus routes connect the city with other mid-western cities. The population of greater Kalamazoo is more than 100,000.

## DIRECTIONS FOR CORRESPONDENCE

### Director of Admissions

Admissions, University literature, Credits, Provisional certificates, Scholarships and Transcripts

### Comptroller

Business and financial arrangements

### Dean of the School of Applied Arts and Sciences

Matters relating to vocational education

### Dean of the School of Business

### Dean of the School of Education

Professional courses and permanent certification

### Dean of the School of Graduate Studies

Graduate offerings

### Dean of the School of Liberal Arts and Sciences

### Dean of Men or Dean of Women

Student housing and part-time employment

### Director of Counseling

Counseling and guidance

### Director of Field Services

Adult Education, In-Service courses and credits, Consultative services to schools, Speakers for special occasions

### Director of the Division of Military Science

R.O.T.C.

### Director of Placement

Teacher placement, Business and Industrial Placement

### Director of Rural Life and Education

Rural life and education, the community college-cooperative teacher education program and state limited certificates

### Director of the Summer Session

Summer session offerings

*Bulletin*

**WESTERN MICHIGAN UNIVERSITY**

**KALAMAZOO, MICHIGAN**

**UNDERGRADUATE CATALOG**

**1962-1963**

*with* **ANNOUNCEMENTS**

**FOR 1963-1964**

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**VOL. 57, NO. 4**

**APRIL 1962**

Published four times annually by Western Michigan University: October, February, March and April. Entered Second Class postage paid at Kalamazoo, Michigan.



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## 1962

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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7	8	9	10	11	12	13	4	5	6	7	8	9	10	11	12	13	14	15	16	17
14	15	16	17	18	19	20	11	12	13	14	15	16	17	18	19	20	21	22	23	24
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24
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## 1963

JANUARY							FEBRUARY							MARCH							
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JULY							AUGUST							SEPTEMBER							
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OCTOBER							NOVEMBER							DECEMBER							
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27	28	29	30	31	..	..	24	25	26	27	28	29	30	29	30	31	..	..	..	..	

# UNIVERSITY CALENDAR 1962-63

## FALL SEMESTER

September 15, Saturday	Final Day for Registration
September 17, Monday	Orientation for New Students
September 18, Tuesday (8:00 a.m.)	All Classes Begin
October 20, Saturday	Homecoming
November 21, Wednesday (12 noon)	Thanksgiving Recess Begins
November 23, 24 (Friday & Saturday)	University Offices Close
November 26, Monday (8:00 a.m.)	Classes Resume
December 4, Tuesday	Principal-Freshman Conference
December 19, Wednesday (10:00 p.m.)	Christmas Recess Begins
December 24, Monday	University Offices Close
December 31, Monday	University Offices Close
January 3, Thursday (8:00 a.m.)	Classes Resume
January 15 to January 25 (Tuesday-Friday)	Final Examinations
January 26, Saturday (2:00 p.m.)	Commencement
January 26, Saturday	Semester Ends

## SPRING SEMESTER

February 2, Saturday	Final Day for Registration
February 4, Monday (8:00 a.m.)	All Classes Begin
April 12, Friday (12:00 noon)	Easter Recess Begins
April 13, Saturday	University Offices Close
April 22, Monday	Classes Resume
May 28-June 7 (Tuesday-Friday)	Final Examinations
May 30, Thursday	Memorial Day Recess
June 8, Saturday (9:30 a.m.)	Commencement
June 8, Saturday	Semester Ends

## SUMMER SESSION

June 17, Monday	Registration
June 18, Tuesday	Classes Begin
June 18, Tuesday	Final Day for Registration
July 4, Thursday	Independence Day Recess
July 26, Friday	Six-Week Session Closes
July 26, Friday (6:00 p.m.)	Commencement
July 29, Monday	Final Registration Post Session
August 9, Friday	Eight-Week Session Closes

## *State Board of Education*

Hon. Chris H. Magnusson, Detroit	Term expires June 30, 1963
Hon. Cornelia Robinson, Kalamazoo	Term expires June 30, 1965
Hon. Frank Hartman, Flint	Term expires June 30, 1967
Hon. Lynn M. Bartlett, Lansing	Term expires June 30, 1963

## *State Superintendent of Public Instruction*

Hon. Lynn M. Bartlett

## *Executive Council of Presidents*

James W. Miller, 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

# *Administration*

## *Officers*

James W. Miller, Ph.D., LL.D., President  
Russell H. Seibert, Ph.D., Vice President for Academic Affairs  
L. Dale Faunce, Ed.D., Vice President for Student Services and Public Relations  
Cornelius B. MacDonald, M.A., Comptroller  
John A. Goldsworth, Director of Physical Plant  
Paul L. Griffeth, Ph.D., Dean of Students  
James H. Griggs, Ed.D., Dean, School of Education  
George E. Kohrman, Ed.D., Dean, School of Applied Arts and Sciences  
Elizabeth E. Lichty, Ph.D., Dean of Women  
George G. Mallinson, Ph.D., Dean, School of Graduate Studies  
Clayton J. Maus, M.S., Registrar and Director of Admissions  
Gerald Osborn, Ph.D., Dean, School of Liberal Arts and Sciences  
Cornelius Loew, Ph.D., Acting Dean, School of Liberal Arts and Sciences, 1962-63  
Arnold E. Schneider, Ph.D., Dean, School of Business  
J. Towner Smith, M.A., Dean of Men  
Otto Yntema, M.A., Director, Field Services  
Raymond E. Fenwick, B.A., Director of Alumni Relations  
Leonard Gernant, M.A., Associate Director, Field Services  
Robert M. Limpus, Ph.D., Director, Basic Studies  
Vern E. Mabie, M.A., Director of Placement  
John J. Pruis, Ph.D., Director, Summer Session, and Administrative Assistant to the President  
Donald N. Scott, M.A., Director, University Student Center and Residence Halls  
Russell A. Strong, M.A., Director, News and Information Services  
Robert Baxter, Assistant Comptroller  
Earl Borr, M.A., Assistant Registrar  
Lewis Crawford, M.A., Dean of the Chapel  
Russell Gabier, M.A., Assistant Director of Admissions  
Elizabeth Householder, M.A., Assistant Dean of Women  
John G. Hungerford, M.A., Assistant Director, University Student Center  
L. Bruce Kocher, M.A., Administrative Assistant, Registrar's Office  
Francis J. LeMire, M.A., Assistant Dean of Men  
Vern L. Norris, M.A., Assistant Director of Placement  
Charity R. Risher, Ed.D., Assistant Dean of Women  
Joseph R. Serra, M.A., Assistant Dean of Men



*Administration*

Keith W. Smith, Ph.D., Assistant Registrar

Marie L. Stevens, M.A., Assistant Dean of Women

Roland S. Strolle, Ed.D., Assistant Dean, School of Education

Robert H. Williams, B.S., Assistant Director, Physical Plant

*Staff*

Eva Falk, B.A.

Secretary, Dean of Women

Margaret Feather, B.A.

Advisor, Student Aid

Kenneth R. Hawkins, M.A.

Manager, Campus Stores

Edna L. Hirsch, B.S.

Secretary, Counseling

Virginia M. Jarman

Secretary, Campus School

Lloyd E. Jesson, B.A.

Secretary to the President

Eleanor Linden, B.S.

Secretary, Teacher Education

Archie Potter, M.A.

Director, Housing

John W. Randall

Director, Food Services

Myrna Ross

Secretary, Field Services

C. Keith Sheeler, B.A.

Director, Safety & Security Division

Leah M. Smith

Secretary, Field Services

Ralph Willis

Supervisor, Janitorial Services

## ADMINISTRATIVE GROUPS

### THE ADMINISTRATIVE COUNCIL

The Council meets bi-weekly to keep informed on University affairs, to fix general administrative policies, and to coordinate and unify administrative decisions, practices, and services designed to promote the educational program of the University.

The members of the Council are: The President, Vice President for Academic Affairs, Vice President for Student Services and Public Relations, Comptroller, Registrar, Director of Field Services, Director of Placement, Director of Basic Studies, Assistant to the President, President of the Faculty Senate, Director of News and Information Services and deans of the five academic schools.

### THE SENATE

The Senate is composed of members elected by the faculty and others appointed by the President to represent the departments of the University and the University at large. It meets each month to promote the common interests of the faculty and to give the faculty a share in the determination of institutional policy in such areas as the academic program, field services and student services.

Its officers for 1961-62 are:

Philip Denenfeld	President
Leo VanderBeek	Vice President
Wendall Fidler	Treasurer
George Cooper	Recording Secretary
Bernyce Cleveland	Corresponding Secretary

### UNIVERSITY COUNCILS, 1961-1962

The university councils are composed of members elected by the Senate for three-year terms and others who are members by reason of the office they occupy. The terms of elected members expire in June of the year indicated.

Ex Officio	Elected	
<i>Educational Policies Council</i>		
Russell Seibert, Vice President, Chairman	Norman Russell	1962
Gerald Osborn, Dean	Robert Seber	1962
George Kohrman, Dean	Leo VanderBeek	1962
James Griggs, Dean		
George Mallinson, Dean	Robert Bowers	1963
Arnold Schneider, Dean	William Burdick	1963
Katharine Stokes, Librarian	Robert Wetnight	1963
Clayton Maus, Registrar		
	John Lindbeck	1964
	Hermann Rothfuss	1964
	Frederick Rogers	1964

*Administration**Graduate Studies Council*

George Mallinson, Dean, Chairman	Harry Hefner	1962
Gerald Osborn, Dean	Jack Plano	1962
George Kohrman, Dean		
James Griggs, Dean	Elwyn Carter	1963
Arnold Schneider, Dean	Harvey Overton	1963
Russell Seibert, Vice President		
	George Bradley	1964
	James Powell	1964

*Student Services Council*

Dale Faunce, Vice President, Chairman	Herbert Ellinger	1962
Paul Griffeth, Dean of Students	Avis L. Sebalý	1962
Lewis Crawford, Dean of Chapel	William Yankee	1962
Towner Smith, Dean of Men		
Elizabeth Lichty, Dean of Women	Donald Scott	1963
Clayton Maus, Registrar	Russell Strong	1963
Edward Zwergel, Director of Student Health	Merrill Wiseman	1963
Vern Mabie, Placement	David Adams	1964
	Nellie Reid	1964
	William Wichers	1964

*Field Services Council*

Otto Yntema, Director, Chairman	Edwin Grossnickle	1962
Leonard Gernant, Associate Director	Donald W. Nantz	1962
George Mallinson, Dean		
Robert Dye, Director of Broadcasting	Louis A. Govatos	1963
Ray Fenwick, Alumni Director	Milton Greenberg	1963
	Ernst Breisach	1964
	Stanley Phillips	1964

**THE ATHLETIC BOARD OF CONTROL**

Cornelius B. MacDonald, Comptroller, *chairman*; Dale Faunce, Vice President; Mitchell J. Gary, Director of Athletics; Clayton J. Maus, Registrar; Albert Becker, Robert B. Trader, William V. Weber, *secretary*, John W. Gill, appointed by President; President of the W Club; President of the Student Council.

# Western Michigan University

Western Michigan University, founded in 1903, has grown to an institution of 10,000 students in less than sixty years. It is dedicated to serving the educational, cultural and intellectual needs of the citizens of Michigan and its youth in particular.

Created to educate teachers for the public schools of the state, this initial purpose has continued to be one of the primary concerns of the University. Today Western Michigan University educates the second largest number of certified teachers in the state and the graduates of its School of Education have served in every state of the union and in many foreign countries.

The largest enrollments in the University are found in the classes of the School of Liberal Arts and Sciences. Students in this school enrolled in the liberal arts program major in one of the sciences, social sciences, humanities or arts, or in one of the pre-professional curricula. The School of Business offers programs leading to the degree of Bachelor of Business Administration and prepares teachers of business subjects. The School of Applied Arts and Sciences, which offers opportunity for specialization in agriculture, home economics, engineering and technology, paper technology, industrial education, distributive education and work in R.O.T.C., completes the undergraduate offerings. Graduate work leading to the Master of Arts and Master of Business Administration degrees and the sixth year Specialist in Education diploma is offered through the School of Graduate Studies.

Western Michigan University, under the control of the State Board of Education, has been fortunate in the wisdom, vigor and continuity of its leadership. Dwight B. Waldo, pioneering first president, served from 1903 to 1936 and laid firm foundations upon which his successor, Paul V. Sangren, who served as president from 1936 to 1960, ably and courageously built. James W. Miller, who took office in January, 1961, after rich years of academic and fiscal experience in higher education and state government, continues the tradition of far-sighted leadership.

Since the spring of 1960, the influence of Western Michigan University has extended to Nigeria, one of the leading countries in West Africa, where it is assisting in the establishment of a Technical College at Ibadan. The impact of the newer nations of the world is felt upon the local campus through the activities of the Institute of Regional Studies, which has been particularly concerned with the development of studies on the Non-Western World.

## PROGRAM OF STUDY

The program of study for the first and second years is organized:

1. to provide the student with a general education which includes an integration of knowledge, skill, and perspective with regard to the processes of communication, the social sciences, the natural sciences, and the humanities; and



PAPER INDUSTRY  
LABORATORIES

2. to prepare the student for undertaking the more advanced and specialized work embraced in the curricula of the third and fourth years or for more advanced work elsewhere.

This program represents sixty semester hours of work, at least half of which must fall in the Divisions of Basic Studies, Languages and Literature, Science, and Social Science. The student must complete during the first year at least two semesters of Communication or College Writing.

Admission to the program of the third and fourth years is based upon the satisfactory completion of the work outlined above or upon evidence of equivalent work done satisfactorily elsewhere. In addition, in the teaching curricula, the student must satisfy such special tests or examinations as may be prescribed to determine his general intelligence, scholastic aptitude and fitness for the teaching profession.

The program of study for the third and fourth years is organized:

1. to provide intensive cultivation of the fields of the student's special or professional interest; and
2. to broaden his general education.

The University offers the following degrees:

Bachelor of Arts  
 Bachelor of Science  
 Bachelor of Science in Engineering  
 Bachelor of Music  
 Bachelor of Business Administration

Western Michigan also conducts graduate programs leading to the Master of Arts and Master of Business Administration degrees. The School of Education offers a diploma for a sixth year of study in its Specialist in Education program.

## ACCREDITATION

In 1915 the University was placed on the approved list of the North Central Association of Colleges and Secondary Schools, and the following year was approved by the National Council for Accreditation of Teacher Education for the preparation of elementary and secondary teachers and school service personnel. In 1941 it was approved by the Association of American Universities, and 1951 gained membership in the National Association of Schools of Music.

Western Michigan University is a member of the Association of American Colleges and of the American Association of Colleges for Teacher Education.

It is also approved by the American Association of University Women.

Major administrative offices of the University are to be found in the Administration building at the left, a 1952 addition to the campus, and also functioning as a classroom building.

*Enrollment Data***ENROLLMENT DATA**

<b>Fall Semester</b>	<b>Undergraduate</b>	<b>Graduate</b>	<b>Total</b>
1957	6304	571	6857
1958	7107	697	7804
1959	7598	705	8303
1960	8382	945	9327
1961	8553	992	9545
<b>Spring Semester</b>			
1957	5640	580	6220
1958	6017	635	6652
1959	6638	674	7312
1960	7024	762	7786
1961	7747	1080	8827
<b>Summer Semester</b>			
1957	1500	890	2390
1958	1625	962	2587
1959	1797	1211	3008
1960	1997	1361	3329
1961	1981	1573	3554



# *Admission, Degrees and Certificates*

## ADMISSION

Qualified students will be admitted at the opening of any semester or summer session after their applications have been approved.

As the training of the mind is the first function of the university, the applicant's most important qualification is the intellectual capacity to carry college work successfully. The best evidence of this capacity is a superior academic record attained in previous high school or college attendance. Beyond this first requirement, the applicant's character, promise, special abilities and readiness will be considered by the Committee on Admissions. The university will arrange testing and personal interviews whenever they are deemed desirable.

Admission to the university is a privilege that carries with it certain responsibilities. The university reserves the right to cancel matriculation and to require withdrawal whenever it becomes evident that the student is not conforming to the university's standards of scholarship and conduct.

To prepare for study at the university, a high school student should carry a good proportion of academic courses (language, mathematics, science, social science) and should do a good quality of work in them. He should carry the high school prerequisites to his intended curriculum as they are made known to him in consultation with his principal or counselor. Although he may be admitted to the university without these prerequisites, he will be required to prepare adequately before he can proceed in his chosen curriculum.

## METHODS OF ADMISSION

Students may be admitted in any one of the following ways:

1. Admission by certificate: A graduate of a high school, academy or equivalent may be admitted upon presentation of an acceptable written record.
2. Admission by examination: A person who does not qualify for admission by certificate may be admitted by passing examinations prescribed by the university provided he meets all other requirements.
3. Admission by advanced standing. A student wishing to transfer from another accredited college, university or junior college, or from a Michigan county normal, may be admitted upon presentation of an acceptable written transcript of credits showing honorable dismissal. This transcript must be official, mailed directly from the institution previously attended to the director of admissions of this university. Transferred credits, except those from Michigan county normals, will be acceptable only when they have been earned at a college which at the time was accredited by the North Central Association of Colleges and Secondary

*Admission, Degrees and Certificates*

Schools, by an equivalent organization or by the Michigan Commission on College Accreditation. The maximum credit which may be accepted from a junior college is sixty semester hours in addition to physical education. Each transfer case is handled individually, with separate evaluation of credit.

4. Admission as a special student: (a) A person who does not plan to work toward a degree or certificate may be admitted as a special student if he presents evidence that he can profit by instruction; (b) A person who holds a Bachelor's Degree or a higher degree for which it is prerequisite, may be admitted to the university as a special student upon presentation of credentials showing that he holds such degree or degrees. A person twenty-one years of age or older who wishes to study at this university may be admitted by the director of admissions, provided he is unable to furnish other credentials upon which his admission might be based. Before any special student can receive a degree or certificate from this university, he must have met the requirements for admission prescribed under the other admission procedures numbered 1-3 above.
5. Admission as a guest: One who is regularly matriculated at another college may be admitted as a guest student. The student assumes full responsibility for determining whether or not the courses he takes at this university will apply on his program of study. A guest matriculant is urged to have the courses to be taken approved in advance by the Registrar of the university to which the credits are to be transferred.

## APPLICATION FOR ADMISSION

### Freshmen

1. A prospective freshman should request an official application form from the Director of Admissions or his high school principal or counselor, and complete that part as directed in the application.
2. The application should then be returned to the high school principal, or counselor, who will be responsible for including his high school personal data and academic record.
3. The completed application will be sent to the Director of Admissions by the principal. It is not acceptable if presented by the student.
4. The above three steps must be completed before the student can be considered for admission.
5. The student must be officially admitted before he can be counseled or enrolled, therefore all credentials must be in the admissions office in advance of registration for any course.
6. Applications for admission may be sent to the university any time during or after the seventh semester in high school.

### Transfers

1. An application blank must be secured from the Director of Admissions and completed according to instructions.
2. The applicant must request an official transcript be sent to the Director of Admissions directly from *each of the colleges* he has attended. These transcripts will not be accepted if presented by the student. The record must be complete.
3. The student must be officially admitted before he receives an official evaluation of credits, is counseled or enrolled.
4. A prospective student desiring admission as a "guest" student should have the Dean of his college approve his program and recommend the student to the Director of Admissions. An application for admission as a "guest" student may be secured from the Director of Admissions of any Michigan College or University.

## DEGREES

The State Board of Education, on recommendation of the President and faculty of Western Michigan University, confers degrees as follows:

### BACHELOR OF ARTS

The student who regularly completes a curriculum conforming to the degree requirements and embracing at least 70 hours in the Divisions of Basic Studies, Language and Literature, Science, and Social Science, including at least eight hours in one foreign language, is eligible for the degree of Bachelor of Arts. If two or more units of one foreign language are presented for entrance, the requirements for foreign language may be waived.

### BACHELOR OF BUSINESS ADMINISTRATION

This degree will be conferred upon completion of the Business Administration curriculum as outlined in this catalog.

### BACHELOR OF SCIENCE

The student who regularly completes a curriculum conforming to the degree requirements and embracing 38 hours or more in the Divisions of Basic Studies, Language and Literature, Science, and Social Science is eligible for the degree of Bachelor of Science. This degree is also awarded in the field of industrial engineering.

### BACHELOR OF MUSIC

This degree will be conferred upon the completion of the music curriculum as outlined in the Music Supplement Catalog. A total of 132 hours is required for graduation.

### SECOND BACHELOR'S DEGREE

A graduate of Western Michigan University with the degree of Bachelor of Music or Bachelor of Science who subsequently becomes a candidate for

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the degree of Bachelor of Arts, or vice versa, is required, in addition to the credits he already has, to complete 30 hours of resident credit and to satisfy any other specific requirements for the degree. The 30 hours need not be taken subsequent to the first degree.

**MASTER OF ARTS**

Western Michigan University confers the Master of Arts degree with specialization in education, biology, chemistry, economics, English, history, librarianship, occupational therapy, physics, political science, psychology and sociology. For information request the Graduate School bulletin.

**MASTER OF BUSINESS ADMINISTRATION**

Offered through the School of Business and School of Graduate Studies. For information request the Graduate School bulletin.

**SPECIALIST IN EDUCATION DIPLOMA**

A sixth-year program offered through the School of Education and School of Graduate Studies, with specialization in Educational Administration or School Psychological Examiner. Special bulletin available.

**DEGREE REQUIREMENTS**

Any curriculum leading to a bachelor's degree consists of at least 124 hours of credit including only four hours of general physical education.

The student must meet the following requirements or their equivalent:

**1. GENERAL REQUIREMENTS**

- a. All students must take three semester hours of government in accordance with Act 106, Public Acts of 1954.
- b. Each student must complete four semester hours of general physical education. Persons 40 years of age or older are not bound by this requirement, however. Such a waiver applies only to general physical education and not to specific curricular requirements nor to total hours required for graduation. The general physical education requirement is waived for male students who enroll and complete the basic course (two years) of Military Science (ROTC). See page 185, General Physical Education Requirements.
- c. At least two-thirds of the work beyond the second year must be in courses not open to first-year students, except where curricular requirements demand otherwise.
- d. Courses must be selected so that the requirements in at least one of the curricula are fulfilled before graduation.
- e. The student must complete a major with a minimum of 24 hours and a minor with a minimum of 15 hours. In elementary education the student may complete three minors.

*Basic Studies Courses*

- f. A minimum point-hour ratio of 2.0 must be attained in any major or minor (s) presented for graduation.
- g. Minimum residence requirements:  
It is expected that all candidates for the Bachelor's degree or full certification will have earned at least 15 hours of credit on the campus of Western Michigan.
- h. A minimum of 30 hours of credit must be taken through Western Michigan. Ten (10) of the last 30 hours must be taken through Western. Correspondence credit cannot satisfy any of the requirements in (g) or (h).

**2. BASIC STUDIES COURSES**

- a. Communication Area ..... 6-8 hours  
Communication 114, 115 (8 hours) or  
College Writing 116, 117 (6 hours)
- b. Science Area ..... 8 hours  
Biological Science 107 (4 hours)  
Physical Geography 105 (4 hours)  
Physical Science 108, 109 (4 or 8 hours)
- c. Social Science Area ..... 8 hours  
Foundations of Western Civilization 100, 101  
(8 hours) or  
Man and Society 102, 103 (8 hours)
- d. Humanities Area ..... 6 hours  
Humanities 220, 221 (6 hours) or  
Humanities 222, 223 (6 hours)  
(See counselors for alternative courses  
temporarily permitted.)

Eight hours additional work (10 if a student takes College Writing) must be elected from non-professional liberal arts courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any non-professional courses in the Divisions of Language and Literature, Social Sciences, and Science and Mathematics.

**BASIC STUDIES EQUIVALENTS**

In determining the extent to which the Basic Studies (General Education) requirements of Western Michigan University have been met by credits earned at other colleges the following rules shall apply:

- 1. Communication
  - a. A student must present at least 5.5 semester or 9 term credits in a freshman writing or communication course for a full waiver.
  - b. If he presents a minimum of 2.5 semester or 4 term hours but less than 5.5 semester credits, he will be required to take either 117 (College Writing), 114 or 115 (Communication).

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- c. If the institution from which he wishes to transfer credit has granted a waiver for the freshman English requirement or any part of it, this waiver will be honored by Western Michigan University.
- d. If he has less than 2.5 semester or 4 term credits, he will be required to meet the Basic Studies requirements in communication at Western.

## 2. Science

- a. Students who present a minimum of 8 semester or 12 term credits in physical science or in any combination of two or more of the following: physics, chemistry, biological science or earth science, will not be held for the general education requirements in the science area. Courses acceptable under the sciences include: **Biological Science:** Biology, Botany, Nature Study, Physiology, and Zoology; **Chemistry:** General College Chemistry, Industrial Chemistry (if taught by the Chemistry Department); **Earth Science:** Conservation, Geography, Geology and Meteorology; **Physics:** Astronomy, General College Physics, Technical Physics (if taught by the Physics Department).
- b. If a student presents 8 semester or 12 term credits in either physics, chemistry, biological science or earth science, he can meet the Basic Studies requirements by taking a 4 semester credit course in any of the other areas mentioned above, or physical science.
- c. Students who present a minimum of 2.5 semester credits or 4 term credits in any area mentioned above will be expected to take additional credits in another area to total 8 semester credits. If the 2.5 credits are in any combination mentioned above (or physical science), he can take the additional work in any of the areas.
- d. A student with less than 2.5 semester credits or 4 term credits will be expected to meet the Basic Studies science requirements at Western.

## 3. Social Science

- a. Any student who presents a minimum of 8 semester or 12 term credits in Western Civilization or in General Social Science or in any combination of two or more of the following subjects will be considered to have met his general education requirements in social science:

American History  
 Cultural Anthropology  
 Economics (Principles)  
 History of Modern Europe  
 Sociology (Principles)

- b. Students who present a minimum of 8 semester or 12 term credits in any one of the above subjects will be expected to take two semester credits in one of the above subjects in which he does not have credit.

*Major and Minor Requirements*

- c. Students who present a minimum of 6 semester or 9 term credits but less than 8 semester credits in Western Civilization, General Social Science or in any combination of two or more of the above areas will be expected to take additional hours in one of the above subject areas to bring the total to 8 semester credits.
  - d. Students who present a minimum of 2.5 semester or 4 term credits but less than 8 semester credits in Western Civilization, General Social Science or any of the above areas will be expected to take additional work in Western Civilization, General Social Science or in one of the above subject areas in which he does not have credit, to total 8 semester credits.
  - e. If a student has less than 2.5 semester or 4 term credits, he will be expected to meet the Basic Studies social science requirement at Western.
4. Humanities

Students who present a minimum of six semester or nine term credits in combination of courses representing at least two of the following fields—art, music, literature (including drama), foreign language, and philosophy—will be considered to have met the general education requirements in the Humanities.

**EXEMPTIONS AND COMPREHENSIVE EXAMINATIONS**

- 1. Any student having a major or two minors in either the physical science area (physics and/or chemistry) or in the geo-biological science area (biology and/or earth science) is exempt from four hours of his Basic Studies science requirement, with the provision that the remaining four hours must be taken in the opposite area.
- 2. Any student having a minimum of two minors in biology, earth science, chemistry and/or physics, is exempt from the full eight hours of the Basic Studies science requirement, provided that the two minors are divided between the physical science area and the geo-biological science area.
- 3. Comprehensive examinations in the Basic Studies science areas are available for well-prepared students. Information about them can be obtained from counselors or the Director of the Division of Basic Studies. An exemption earned by examination does not award credit hours.

**MAJOR AND MINOR REQUIREMENTS**

A major is a sequence of courses totaling a minimum of 24 hours; a minor is a sequence of courses totaling a minimum of 15 hours (18 hours in Secondary Education). Under certain conditions students may elect beyond this minimum up to a maximum of 40 hours offered by any department.



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1. The student's major and minors will be his subject specialization, such as: mathematics, accounting, biology or chemistry.
2. His curriculum may be general or specific preparing him for a specialized career or profession such as business, medicine, law, auto mechanics or engineering.
3. Students should consult the departmental advisers for approval of their major and minor programs as soon as it is known what they are to be and by the last semester of the junior year.
4. The candidate for a degree must complete a major and a minor. A candidate for the elementary provisional certificate may elect, instead, three minors for a minimum of 15 hours each.
5. In certain cases "group" majors totaling a minimum of 30 hours and "group" minors totaling a minimum of 20 hours are permitted. They usually consist of courses selected from the related departments of a division (see the Division of Social Sciences and the Division of Science and Mathematics).
6. General Education courses are partially acceptable toward major and minor requirements. (See Departmental requirements).
7. Minors may often be related to majors, so as to recognize naturally or closely related fields; for example, mathematics and physics, history and geography, literature and history, etc.
8. It is usually not permissible to use education as a major or minor in any undergraduate curriculum.
9. The following courses are not to be counted as satisfying major and minor requirements:
  - a. Required courses in College Writing or Communication
  - b. Required courses in education
  - c. Required courses in general physical education
  - d. Basic ROTC courses.
10. A combination of foreign languages, or of English or American Literature with a foreign language, is not permissible. A major or minor must be in one language only.
11. Mathematics may not be combined with science (physics, geography, chemistry, biology) for any major or minor sequence.

**TEACHER CERTIFICATION—PROVISIONAL**

The following types of teaching certificates are granted:

1. **State Elementary Provisional**  
This certificate qualifies the holder to teach for a period of five years in the elementary grades in any public school in Michigan. The candidate must meet the requirements for a degree as defined above.
2. **State Secondary Provisional**  
This certificate qualifies the holder to teach for a period of five years in the secondary grades in any public school in Michigan, in subject

or subject fields indicated on the certificate. The candidate must meet the requirements for a degree as defined above.

## TEACHER CERTIFICATION—PERMANENT

1. Requirements to be fulfilled:
  - a. Application must be made to the university within one year following the expiration of the Provisional Certificate.
  - b. The candidate must submit evidence that he has taught successfully during the life of the certificate for not less than three years in schools of the level indicated on his provisional certificate.
  - c. The candidate must have earned, in addition, 10 hours of acceptable college credit.
2. Procedure for certification:  
The candidate must obtain an application blank from the Registrar, complete this blank and return it to the University, accompanied by his provisional certificate and his Teacher's Oath.
3. The University will investigate the qualifications of the candidate, ascertain if he satisfies the requirements for permanent certification, and make appropriate recommendation to the State Board of Education.

## Miscellaneous Provisions Regarding Certificates

1. A candidate presenting credits as a graduate of a Michigan County Normal School and who in addition thereto presents entrance credits satisfying the requirements of this institution shall be granted 25 hours toward the Provisional Certificate.
2. Each student enrolling for credit in *correspondence* courses after December 31, 1951, shall be limited to 15 hours on a degree program. Students having completed more than 15 hours but not to exceed 30 hours on a degree program are entitled to such credit if used prior to June 30, 1957.
3. No teacher's certificate will be granted to any person who is less than eighteen years of age.
4. No teacher's certificate will be granted to any person who is not a citizen of the United States or who has not declared his intention of becoming a citizen.
5. Certificate Renewal. A person who holds an expired provisional certificate may renew such certificate and restore it to good standing by completing 10 hours of acceptable college work. Application for reinstatement must be made through the institution upon whose recommendation the certificate was issued. For an application for reinstatement, please write to the Registrar.

## TEACHER CERTIFICATION—LIMITED

Because of the limited number of persons now under the provisions of Limited Certification, we refer you to the 1961-62 Bulletin of Western

Michigan University for a full discussion of renewal policies; or to Bulletin No. 601, Teachers' Certification Code, published by the Superintendent of Public Instruction, Lansing, Michigan. 1942 revision.

## CHANGING COURSES

Necessary changes in enrollment must have been made by the end of the first complete week of a semester. Permission to drop courses will be given to upperclassmen for adequate reasons through the third complete week of a semester; to freshmen, through the fourth week. A mark of "WP" will be recorded for a subject dropped after the above time limits, if the student is then doing passing work; a mark of "WE" if the student is then failing, and a mark of "E" if the course is dropped without written permission.

## CLASS ATTENDANCE

Students are responsible directly to their instructors for class and laboratory attendance as well as for petitions for excuses for absences.

Students who anticipate being absent or who have had prolonged periods of absence should confer with the appropriate dean and give explanation concerning their cases. But such "explanations of absences" are not to be construed by instructors as constituting "excuses for absences." The "cut system" is not recognized.

## CLASS LOAD

A student may not enroll for more than eighteen hours of work, during any semester, except by special permission, unless curriculum requirements indicate otherwise. (This is considered to be a "normal load.") This regulation applies to total credit for work taken by extension or in some other institution, in addition to credit desired in residence at Western.

A student may make application for "extra hours" by securing approval from his counselor. The maximum load for a given student is regulated on the basis of apparent ability and other pertinent factors.

A student in his first semester at Western is seldom permitted to carry "extra hours."

The normal maximum load for summer session students is seven hours for six weeks or nine hours for eight weeks.

Students employed part-time should reduce their class loads proportionately. If a student works full time, his academic load should not exceed eight to ten hours.

Full time teachers will be limited to a maximum of six hours each semester either on campus, through Field Services or both.

By special permission, a student who received a point-hour ratio of three or more in the preceding semester and who had no "incompletes," may carry a program rising to a maximum of 19 semester hours.

No full time teacher may enroll at any time in more than two courses offered by the Field Service Division.

## CLASSIFICATION

Students at Western Michigan University are classified officially as follows:

Freshmen—Students credited with 0-25 hours inclusive.

Sophomores—Students credited with 26-55 hours inclusive.

Juniors—Students credited with 56-87 hours inclusive.

Seniors—Students credited with 88 hours or more.

## COLLEGE ABILITY TESTS

Tests of ability to do university work acceptably are required of each student upon entrance. This applies to both freshmen and upperclassmen. The results of these tests are of service in advising students regarding their scholastic work and therefore are to be taken before the student is counseled.

## COMMENCEMENT

All students who complete the requirements for graduation and are entitled to receive degrees and/or certificates are expected to be present at the commencement exercises.

## CONDUCT

Conduct in harmony with the ideals of the institution is expected of each student. Effort is made to stimulate the student to earnest, honest endeavor, and to develop new and worthy interests. In the furtherance of this policy, a Dean of Women and a Dean of Men devote their time to matters pertaining to the welfare of the student body. They may be consulted freely on any matter in which they can be of assistance.

The university has never assumed an attitude of paternalism toward its students. On the assumption, however, that the student has entered the institution for the definite purpose of educational advancement, regularity of class attendance, reasonable evening hours, and a sane social program are required.

The university is opposed to the use of liquor in any form. It will not allow the use of liquor at university functions, in university buildings, or on university property. Students entering their rooming places, either residence halls or private houses, under the influence of liquor, and students who introduce liquor into any rooming place or university building will be subject to dismissal from the university.

The university reserves the right to inspect student housing at any time.

## COURSE NUMBERING SYSTEM

The course numbering system is limited to three digits. The first digit indicates the level of work. The second digit indicates an area of study

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within the series or level. The third digit indicates the specific course number in each area and each series. Undergraduate courses are numbered from 100 through 599. Graduate courses are numbered 600 through 799.

Course Numbers	Level
0 - 89	Non-credit courses.
90 - 99	Terminal course credit that may not be applied toward degree programs.
100 - 199	Courses primarily for Freshmen
200 - 299	Courses primarily for Sophomores
300 - 399	Courses primarily for Juniors and Seniors
400 - 499	Courses primarily for Seniors
500 - 599	Courses for advanced undergraduates and graduate students
600 - 699	Courses for graduate students only
700 - 799	Graduate Seminars, Theses, Independent Research, etc.

Generally speaking, an even numbered third digit is the first half of the course and an odd numbered third digit is the second half of the course. Courses that terminate at the end of one semester and may not be divided into two courses in the immediate future may be assigned an odd numbered third digit to protect the system from becoming overloaded with even numbered third digits. Frequently, applied music has variable credit and will be two digits with a prefix of either "H" or "Z."

The number of a course which has been discontinued is not to be reassigned for a period of five years. It is the responsibility of the Registrar to approve course numbers and keep an accurate file of all courses and assigned numbers.

## CREDIT FOR MUSIC ACTIVITIES

1. A maximum of two hours of academic credit annually is given for one year's regular participation in any of the music ensembles.
2. Eight hours of academic credit is the maximum allowed for participation in any one of the music ensembles.
3. A grand total of not to exceed twelve hours of academic credit is allowed for participation in the music ensembles.
4. Participation in Band may be substituted for physical education credit up to a maximum of three hours. A minimum of one hour of credit must be earned by actual participation in general physical education classes by each student who is participating in the University Band. Substitution of University Band participation for physical education credit during second semester is possible only if the student has participated in the University Marching Band during the first semester.
5. Official enrollment cards must bear notations of the work in music the student wishes to carry. Semester-hour values must be indicated.

## EXAMINATIONS

1. A final examination is given in every course in accordance with the official schedule issued each semester. No examination may be held except as announced in this schedule, and no date of examination may be changed without special permission of the Examination Schedule Committee.

2. Students are required to take examinations in all courses in which they are enrolled.

3. Students may not request an examination at any other than the scheduled time. Any unavoidable conflict should be reported to the registrar as soon as known so that special arrangements can be made.

4. Failure to meet the schedule due to illness is to be reported to the appropriate dean immediately.

## LATE ENROLLMENT FEE

By action of the State Board of Education, all students who enroll after the established registration day of a semester will be charged an additional fee of \$5.00. Checks returned by a bank constitute late registration and the same late enrollment fee will be levied.

## EXPENSES

### 1961-62 FEES FOR UNDERGRADUATES

Resident Students				Non-Resident Students		
Semester						
Hours	Tuition	*Local Fees	TOTAL	Tuition	*Local Fees	TOTAL
1 - 2	10.00	23.00	33.00	25.00	23.00	48.00
3 - 4	20.00	29.00	49.00	55.00	29.00	84.00
5 - 6	30.00	35.00	65.00	85.00	35.00	120.00
7 - 8	40.00	41.00	81.00	115.00	41.00	156.00
9 - 10	50.00	47.50	97.50	145.00	47.50	192.50
11 or more	60.00	47.50	107.50	175.00	47.50	222.50

\*These local fees are collected each semester for the support of student activities, health service, student union, library purposes, departmental laboratories, identification photograph, cap and gown, diploma, etc. The above charges for both tuition and fees apply without exception to all students enrolling.

There is a special departmental music fee for Applied Music of \$60.00 per semester for one hour per week of private instruction, or \$30.00 per semester for one-half hour per week of private instruction.

All tuition and fees must be paid in full on the established payment days; no partial payments will be accepted.

There is a special departmental fee for Flight Instruction of \$280.00 for the Pilot Training Course No. 118 which covers a maximum of forty hours' flying time. The fee for Commercial Pilot Program No. 119 will be arranged individually on the basis of the current rate per hour to be flown. There is a special refund policy applicable to this course.

## RESIDENCE REQUIREMENTS

Residence in Michigan for the purpose of registration IN THE INSTITUTIONS OF HIGHER EDUCATION UNDER THE STATE BOARD OF EDUCATION shall be determined according to the state constitutional provision governing the residence of electors (See Article III, Section 1); that is, no one shall be deemed a resident of Michigan for the purpose of registration in the University unless he has resided in this state six months next preceding the date of his proposed enrollment.

- A. THE PARENT, GUARDIAN, OR PERSON OVER 21 YEARS OF AGE MUST RESIDE IN THIS STATE FOR SIX MONTHS PRIOR TO THE DATE OF REGISTRATION.
- B. The residence of minors shall follow that of their legal guardian.
- C. MILITARY PERSONNEL STATIONED IN MICHIGAN, AND UNIVERSITY STAFF SHALL BE CONSIDERED AS MICHIGAN RESIDENTS.
- D. Persons of other countries, who have been granted immigrant or permanent residence visas and who otherwise have met these requirements for residence shall be regarded as eligible for registration as residents of Michigan. (A PERSON FROM ANOTHER COUNTRY MUST POSSESS A PERMANENT RESIDENCE OR IMMIGRANT'S VISA AS WELL AS POSSESS OTHER STATED QUALIFICATIONS FOR MICHIGAN RESIDENCE. HOLDERS OF STUDENT VISAS CANNOT QUALIFY.)

It shall be the duty of every student at registration, if there are any possible questions as to his right to legal residence in Michigan under the rules stated above, to raise the question with the COMPTROLLER and have such questions passed upon and settled prior to registration.

In determining the residence status, the designated official will apply the following rules:

- 1. The residence of any student under the age of 21 will be determined by the residence of his parent or legal guardian.
- 2. Any student previously registered as a non-resident student, if a minor, may be given residence status as soon as he can prove his parent, parents or legal guardian has been accepted by an election official as a resident elector in the State of Michigan. If the student is 21 or older, he may be given residence status as soon as he can prove he has been accepted as a resident elector in like manner.
- 3. Any student previously registered as a resident student and who later fails to qualify as a resident of Michigan in accordance with the above policy, will be considered as a non-resident.



## LIVING EXPENSES

The following residence halls furnish board and room at \$355.00 per person per semester:

Bigelow Hall (Men)	West Campus
Ernest Burnham Hall (Women)	West Campus
Smith Burnham Hall (Women)	West Campus
Davis Hall (Women)	West Campus
Draper Hall (Women)	West Campus
Ellsworth Hall (Men)	West Campus
French Hall (Women)	West Campus
Henry Hall (Men)	West Campus
Hoekje Hall (Men)	West Campus
Moore Hall (Women)	West Campus
Spindler Hall (Women)	East Campus
Walwood Hall (Men)	East Campus
Zimmerman Hall (Women)	West Campus

Vandercook Hall for Men, East Campus, is the only residence hall where board is not furnished. The rate, for room only, is \$117.00 per semester, per person.

All prices quoted are on the basis of two or more students per room or suite. Due to the unsettled condition of prices for food and labor, the University reserves the right to increase the charge during the year, if in its opinion, such an increase is necessary.

Address requests for reservation in men's residence halls to the Dean of Men, and reservation in women's residence halls to the Dean of Women. All applications for resident housing must be accompanied by a \$20.00 room deposit. Make check payable to Western Michigan University.

It is the responsibility of each student to file his application for resident housing. This is not automatic upon acceptance by the University.

## REFUND POLICY

Tuition and Local Fees will be refunded (according to the following schedule) when a student withdraws from the university. A refund will not be granted for reducing the credit hour load after the final day for adding a course as established by the registrar. The refund date will be determined by the date of completion of official withdrawal or change of credit load recorded by the Registrar.

1. After payment of fees and through seven calendar days after the last official registration day—90% of total.
2. More than 7 calendar days and less than 22 days after the last official registration day—60% of total.
3. More than 21 calendar days and less than 36 days after the last official registration day—40% of total.

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4. More than 35 calendar days and less than 50 days after the last official day—20% of total.
5. No refund will be granted if the student withdraws after the 49th calendar day after the last official registration day.
6. No refund will be granted unless applied for by the 56th calendar day after the last official registration day of the semester in which the student withdraws.
7. No refund will be made to a student eligible for benefits under Act 245 of the Public Acts of 1935, as amended, unless request is made not more than one week after registration.
8. Refunds are not automatic but must be applied for at the Business Office within 7 days after withdrawal.
9. The above refund policy does not apply to late enrollment fees.

**AUDITOR'S FEES**

Auditors (students who attend classes but do not desire credit) are governed by the same regulations as are students desiring credit.

**GRADUATION**

The candidate for degree is expected to make application for graduation by the last semester of his junior year so that his record may be checked before his senior year. The student can help to avoid the embarrassing situation of planning to participate in commencement activities when he has not met requirements.

Off-campus students are to apply before the last semester of the senior year.

**HONORS IN COURSE**

Honors in Course are conferred upon graduating students who have displayed special attainments in scholarship during their university course. Such honors are announced at a special convocation.

Recipients of honors receive their degrees:

**Cum laude**—when their point-hour ratio is 3.50 to 3.69, inclusive

**Magna cum laude**—when their point-hour ratio is 3.70 to 3.89, inclusive

**Summa cum laude**—when their point-hour ratio is 3.90 to 4.00, inclusive

In computing point-hour ratios for honors in course, the following rules will apply:

1. Credits and honor points earned during a student's second to seventh semester, inclusive, only will be counted toward honors.
2. Credits and honor points earned in correspondence and extension classes as well as those transferred from other duly accredited institutions will be considered toward honors.

3. No student will be eligible for an honor in course who has not earned at least 160 honor points in this university during the interval mentioned in Rule 1.

## MARKING SYSTEM

The student receives one grade in each course that he takes. This grade combines the results of class work, tests, and final examinations. Grades are indicated by letters, to each of which is assigned a certain value in honor points per hour of credit, as shown in the table below.

Grade	Significance	Honor Points per hour credit
A	Excellent	4
B	Good	3
C	Fair	2
D	Passing	1
E	Failure	0
I	Incomplete	
W	Withdrawn	

### "I" INCOMPLETE

This is a temporary grade given for work which is passing in quality but lacking in quantity to meet course objectives. It is assigned when illness, necessary absence, or other reasons satisfactory to the instructor prevent completion of the course requirements by the end of the semester. This grade may not be given for unsatisfactory work.

A grade of "I" must be removed by the termination date of the next regular semester following the date it was assigned or a grade of "E" will be recorded for the course. When the "I" is removed, a permanent grade will be recorded in its place.

An instructor who assigns a grade of "I" will submit to the Department Chairman and to the Registrar a statement of remaining requirements for removal of the incomplete grade for each student concerned.

### "W" WITHDRAWN

A grade of "W" is given in a course when a student officially withdraws from that course or from the university preceding the established date for withdrawing from courses without penalty.

"WP" is given to indicate that a student has officially withdrawn from a course after the penalty date and was doing passing work in that course when he withdrew.

"WE" is given to indicate that a student has withdrawn from a course after the penalty date and was doing failing work when he withdrew.

## SCHOLARSHIP INDEX

The general quality of a student's work in the university is revealed by the grades he receives in courses, the number of honor points he earns, or by his point-hour ratio.

### HONOR POINTS

The number of honor points earned in a course is the number of semester hours credit given by the course multiplied by the number of honor points per hour of credit corresponding to the letter grade received, as shown in the preceding table. For example, a grade of B in a four hour course gives  $4 \times 3$ , or 12 honor points.

### POINT-HOUR RATIO

A point-hour ratio is obtained by dividing the total number of honor points earned by the total number of semester hours of work for which the student is officially enrolled during any period. For example, a total of 32 honor points earned in a semester by a student officially enrolled for 16 hours of work gives a point-hour ratio of  $32/16$  or 2.0 for that semester.

### HIGH SCHOLARSHIP

To gain a place on the High Scholarship List for a semester, a student must:

1. Have taken at least 14 hours of work during the semester.
2. Have taken not more than 8 hours of work in any one department.
3. Have a point-hour ratio of 3.64 or higher.
4. Have not more than 5 hours of B grade.
5. Have no grade below a B.

### LOW SCHOLARSHIP

1. Any student who receives grades of E in 75 per cent or more of the work for which he is officially enrolled at the end of any semester (or its equivalent) will be dismissed from the university.
2. FRESHMEN. Any freshman not on probation whose point-hour ratio for any semester falls below 1.50 will be placed on probation for his next semester in attendance.  
Any freshman currently on probation whose point-hour ratio for the semester falls below 1.70 will be dismissed from the university. He may apply for readmission; if accepted, he will be placed on probation for another semester.
3. UPPERCLASSMEN. Any student classified above freshman and not on probation whose point-hour ratio for any semester falls below 1.80 will be placed on probation for his next semester in attendance, unless he is disqualified under Rule 4, below. Any student classified above

freshman and currently on probation whose point-hour ratio falls below 2.00 will be dismissed from the university. He may apply for readmission, unless he is disqualified under Rule 4, below. If accepted, he will be placed on probation for another semester.

4. No student will be granted academic probation more than three times. If he fails to raise his scholastic record above the probation level within these periods he will be dismissed from the university.
5. Rules 2, 3, and 4 will be applied to students who transfer to Western from other colleges. The scholarship level of a transfer student will be determined from his record. Transfer students may, however, be placed on probation as a condition of admission if the admission office considers this action advisable.
6. A student will not be placed on or removed from low scholarship status as a result of work taken during a Summer Session.

## STANDARD FOR GRADUATION

No student will be graduated in any curriculum if his point-hour ratio is less than 2.00.

No student will be granted a degree or certificate at the end of a semester during which he has been on academic probation unless his honor-point ratio for the semester is 2.0 or higher.

A student may not graduate if the work taken in his final semester would result in probation or dismissal. He will then be required to remove the low scholarship status.

## TRANSCRIPTS

A student desiring a transcript of his record in this university should write to the registrar, giving dates of attendance and, if a graduate, the date of graduation. He should give all names under which he may have been enrolled. Each student is entitled to one transcript of his record without charge, but all additional copies are charged for at the rate of one dollar a copy.

## UNIT OF CREDIT

The unit of credit is the semester hour; the number of semester hours credit given for a course generally indicates the number of periods a class meets each week.

## HOUSING REQUIRED

All single freshman men not living at home are required to live in university residence halls, in so far as facilities are available. Any deviation from the above will be carefully considered through the office of the Dean of Men. Other single men under 25 years of age are required to live in residences approved and acquired ONLY at the office of the Dean of Men.

The only approved housing consists of Residence Halls on campus, off-campus Fraternity Houses, or housing listed in the office of Student Personnel Services. The current list of approved housing is available and will be furnished upon request. Single men, 25 years and older at the time of enrollment, may reside in places of their choice but are required to register their residences in the office of the Dean of Men upon enrollment in the University. All men, regardless of age, must adhere to the social regulations of the University.

All undergraduate women students under 25 years of age enrolled at Western Michigan University are required to live in university residence halls insofar as space is available, unless they are living in their own homes, or with close relatives, or unless other arrangements are approved for them in writing by the Housing Committee. This is in accordance with the ruling of the State Board of Education of July 15, 1949.

The Office of the Dean of Women will be interested in considering applications from older women students, or women students on the graduate level, for positions as assistant directors in the residence halls. These positions pay board and room.

## IDENTIFICATION PHOTOGRAPH

When a student enrolls for the first time, he is required to have taken an identification photograph.

## *The University Honors Program*

The University Honors Program has been established by the University to give students of unusual ability maximum opportunities to develop their skills, to do work of the highest quality in their field of specialization, to become aware of the relation of their field with other fields of knowledge, to associate with their intellectual peers, and in a variety of ways to derive the greatest benefit from the whole of their collegiate experience.

The Program is supervised by the Committee on Honors Programs. Under the direction of the Committee two major divisions of honors work have been organized. One is the Basic Studies Honors Programs, which comprises courses and activities for freshman and sophomore students. A description of this program appears below.

The second is the University Honors Degree Program, organized for juniors and seniors. This comprises all departmental honors programs and includes in addition to departmental requirements the Junior-Senior Honors Colloquium, 334, reading in an approved bibliography, and examination by the Committee.

Honors work at the junior and senior level will lead to a degree in honors. Students in Basic Studies Honors as well as those who have demonstrated superior ability in the regular courses are eligible to enter the program. Upon successful completion of the program a certificate stating "University Honors in . . ." will be awarded the student, and the commencement program and the student's academic record will show that he earned an honors degree.

A student who desires to enter the program should consult, first, the head of the department in which he plans to major. It is advisable that he do this no later than the first half of the second semester of his sophomore year. He then must make application by letter to the Chairman of the Committee on Honors Programs. His application must be accompanied by an endorsement showing the approval of the head of the department in which he expects to do his work. The transcript of his college record will be obtained by the Committee. Approval of applicants to enter the program is granted by the Committee.

Honors students must satisfy all University requirements for graduation unless they are excused from particular requirements through a waiver arranged by the Committee and the appropriate University officials. They must also maintain an over-all B average in their courses. Upon completion of requirements, the honors students will be recommended for University Honors to the University authorities by the Committee.

## UNIVERSITY HONORS COURSES

### BASIC STUDIES HONORS COURSES

The Basic Studies Honors Program is available to freshmen and sophomores who, because of excellent high school records and exceptionally high test scores, appear capable of unusual academic achievement. The program consists chiefly of honors classes in the Basic Studies course areas. Rather than taking College Writing or Communication, Honors students enroll in Colloquium, 134-35 and 234-35.

**134 Honors Colloquium** **2 hours Fall**

Reading, writing, and discussion. Training in primary and secondary research. Fulfills the Communication Area requirement for students admitted to Basic Studies Honors.

**135 Honors Colloquium** **2 hours Spring**

A continuation of 134.

**234 Honors Colloquium** **2 hours Fall**

A continuation of 134 and 135.

**235 Honors Colloquium** **2 hours Spring**

A continuation of 234.

### UNIVERSITY HONORS COURSES

**334 Junior-Senior Honors Colloquium** **2 hours**

An inter-disciplinary course organized around topics drawing upon science, social science, and the humanities for resources and method. Required of students in the University Honors Program; open to other qualified students with approval of instructor. May be repeated for credit upon approval.



# THE INSTITUTE OF REGIONAL STUDIES

The Institute of Regional Studies was established by the University to assist in developing programs on various regions of the world. It cooperates with the Division of Basic Studies in offering a general education course on the non-Western world.

It is establishing through regular administrative channels minors programs for certain regions of the world. These programs involve inter-departmental committees and combinations of courses regularly offered by the departments of the University.

It recommends standards for area studies and coordinates the offerings in such areas. It cooperates with various governmental agencies in exchange programs, visiting leaders programs, etc.

It houses information on foreign study, faculty exchange, foundations and the like, providing assistance to faculty in grant applications and research projects. It maintains current files on foreign embassy releases, international conferences, information services, and other immediately current affairs. It conducts conferences, seminars, lecture series, grant programs, and the like, concerning different regions of the world.

In general, it coordinates activities of an international character centering at Western Michigan University.

## INSTITUTE OF REGIONAL STUDIES COURSES

### Basic Studies 104 The Non-Western World

4 hrs.

A cultural survey of those societies which have developed essentially apart from European forces. This course is taught in the Division of Basic Studies by a committee of the Institute of Regional Studies.

### Social Science 506 Studies in the Non-Western World

2 hrs.

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.

This course is offered in the Social Science Division in a cooperative arrangement with the Institute of Regional Studies.

## THE AREA COMMITTEES

Four area committees have been established under the Institute. Three are authorized to offer area minors.

*The Far East—South Asia Program***The Far East—South Asia Program:**

Students may minor in this program provided they elect 20 credit hours drawn from the following list and provided not more than 8 hours are taken from the approved list of cognate courses. Students are strongly urged to elect Social Science 104, Introduction to the Non-Western World.

## Course Offerings

English	519	Chinese Literature in Translation	2 hrs.
Geography	315	Geography of Asia	3 hrs.
	515	The Far East	2 hrs.
	516	Southeast Asia	2 hrs.
History	380	The Early Far East	3 hrs.
	381	The Modern Far East	3 hrs.
	580	China Since 1912	3 hrs.
	581	Modern Japan	3 hrs.
Philosophy & Religion	330	Great Religions of the World: The East	3 hrs.
	336	Asian Thought: China	3 hrs.
Political Science	542	Governments and Politics of Modern Asia	3 hrs.
Sociology	576	Social Forces in Under-developed Areas	2 hrs.

## Cognate Courses

Economics	504	Comparative Economic Systems	2 hrs.
	508	Economic Development	3 hrs.
	580	International Economics	2 hrs.
Geography	244	Economic Geography	3 hrs.
	540	Political Geography	2 hrs.
	541	Geographic Foundations of National Power	3 hrs.
Political Science	350	International Relations	3 hrs.
	470	Readings and Research in Political Science	1-3 hrs.
	550	American Foreign Policy	2 hrs.
Sociology & Anthropology	314	Race Relations	2 hrs.
	330	Cultural Anthropology	3 hrs.
	554	Population Problems	3 hrs.

The Far East-South Asia Program administers an annual essay contest, a scholarship program, film series, a student Asia Studies Society, and other services to students minoring in the program.

*The Latin American Studies Program***The Latin American Studies Program**

Students seeking a minor in the Latin American program must complete 8 hours in Spanish or Portuguese or their equivalent.

A student must take 20 semester hours from the offerings listed below.

Students are encouraged to take further work in Spanish or Portuguese at the 200 level or above.

Normally no more than eight hours beyond the basic language requirement of eight hours can be counted toward the 20 semester hours.

A course program of distinctively inter-disciplinary character is required.

**COURSE OFFERINGS**

Department	Course Title	Credit Hours
Economics	588 Economic Development	3
Geography	212 South America	3
	213 Mexico and Caribbean Lands	2
	512 Economic Development in Latin America	2
History	370 Colonial Latin America	3
	371 Latin American Republics	3
	571 History of Mexico	3
Political Science	544 Governments of Central and South America	2
	470 Readings and Research in Political Science	1-3
Spanish	230 Intermediate Spanish	4
	231 Intermediate Spanish	4
	330 Survey of Spanish Literature	4
	331 Survey of Spanish Literature	4
	332 Spanish Conversation	2
	333 Spanish Composition	2
	334 Latin American Life and Culture	2
	430 Spanish American Literature	2
	431 Spanish American Literature	2
Sociology	558 Social Forces in Underdeveloped Areas	2

**The Russian-East European Program:**

Students minoring in this program must elect 20 hours of work from the following list, a minimum of 12 hours of work from the core courses and eight hours from the language and cognate courses.

*The Russian-East European Program*

## Core Courses

Economics	586	Economics of the Soviet Union and East Europe	3 hrs.
Geography	314	Union of Soviet Socialist Republics	3 hrs.
	514	The Geography of Eastern Europe	2 hrs.
History	340	Russia to 1917	3 hrs.
	341	The Soviet Union	3 hrs.
	470	Independent Study in History	2-3 hrs.
Political Science	546	Government of the Soviet Union	2 hrs.
	562	Communist Political Thought	2 hrs.
Sociology	535	Social Structure of the Soviet Union	3 hrs.

## Language and Cognate Courses

Language	160	Elementary Russian	4 hrs.
	161	Elementary Russian	4 hrs.
	260	Intermediate Russian	4 hrs.
	261	Intermediate Russian	4 hrs.
Economics	584	Comparative Economic Systems	2 hrs.
	585	Economic Development	3 hrs.
Geography	540	Political Geography	2 hrs.
	541	Geographic Foundations of National Power	3 hrs.
Political Science	340	Comparative Governments of Europe	3 hrs.
	350	International Relations	3 hrs.
	362	Contemporary Political Thought	3 hrs.
	470	Readings and Research in Political Science	1-3 hrs.

**The Sub-Sahara Africa Program:**

A committee of the Institute is presently formulating a minors program in this area.

# *School of Applied Arts and Sciences*

**GEORGE E. KOHRMAN,  
Dean**

**Departments:**

**Agriculture**

**Distributive Education**

**Engineering and Technology**

**Home Economics**

**Industrial Education**

**Military Science**

**Occupational Therapy**

**Paper Technology**



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

The School seeks to assist young men and women in becoming useful and successful citizens in a democratic and technological society. At least three educational needs serve as guides in planning the various courses of study within the school. First, the critical shortage of skilled and scientific manpower in business and industry is recognized. High speed production, automation, the increasing use of electrical and atomic energy, the demand for more and better materials, the scientific developments in agriculture, and the revolutionary changes in home and family living are all indicative of the type of educational program needed by a large segment of our population.

Second, the School recognizes the personal values that should accrue to an individual from a well-planned educational program. It accepts the responsibility of contributing to the student's understanding and appreciation of himself and his surroundings, and to his emotional, physical and intellectual growth.

Third, the School attempts to assist the student in the development of desirable attitudes, habits, and character traits essential for successful living in his home, community, or occupational environment.

◀ The expanded Paper Industry Laboratories building offers the finest in instructional facilities for future paper industry leaders, an outstanding example of industrial and educational cooperation for the benefit of young Americans.

**I. DEGREE CURRICULA****Agriculture**

Students majoring in Agriculture may complete the B.S. degree at Western or arrange to transfer to Michigan State University's College of Agriculture at the end of the sophomore year without loss of credit. Students planning to transfer should follow the program outlined below.

First Year	S.H.	Second Year	S.H.
Communication 114, 115	8	Chemistry 100, 109 or 102 and 103	8
General Biology 101	8	Agronomy 220, 221	6
Animal Industry 110, 111	6	Phy. Sci. 108, 109	8
Man and Society 102, 103	8	U. S. Hist. 210, 211	6
Phy. Ed. or ROTC	2	Phy. Ed. or ROTC	2
	<hr/> 32		<hr/> 30

A major shall consist of 30 semester hours in the field of Agriculture and a minor eighteen. These courses will be selected with the approval of the advisor. Students who complete either a Major or Minor and who qualify for the secondary certificate may teach basic agriculture in Michigan schools.

**AGRICULTURAL DISTRIBUTION****B.S. Degree**

The Agriculture and Distributive Education Departments jointly offer a four-year program leading to a degree for students who are interested in the distribution of agricultural products and the technical services rendered to farmers.

First Year	S.H.	Second Year	S.H.
College Writing 114, 115 or		Agronomy 200, 221	6
Communication 116, 117	6 or 8	Economics 200, 201	6
Science Area	8	Agriculture Distribution 200	3
Animal Industry 110, 111	6	General Psychology 200	3
Technical Area	8	Marketing 240	3
Mathematics	3	Social Science Area	8
Physical Education or ROTC	2	Minor Area	5
		Physical Education or ROTC	2
	<hr/> 33 or 35		<hr/> 36
<b>Summer</b>			
Plant Survey	2		
	<hr/> 2		



*Degree Curricula*

Third Year	S.H.	Fourth Year	S.H.
Economic Geography 244	3	Agriculture (Elective)	6
Humanities Area	3	Business Law 340	3
American Government 200	3	Humanities Area	3
Soils and Fertilizers 320	3	Minor Requirements	6
Minor Area	6	Coord. Marketing Practice 202	4
Coord. Industry Practice 102	4		
			<hr/>
			22
	<hr/>		
	22		
Summer		Summer	
Coordinated Industry 300	3	Coordinated Industry 300	3
or		or	
Electives (Summer School)	7	Elective (Summer School)	7
	<hr/>		<hr/>
	3 or 7		3 or 7
TOTAL	125 Hours		

# Distributive Education

## COOPERATIVE OCCUPATIONAL EDUCATION

### B.S. Degree

Western Michigan University is approved by the State Board of Control for Vocational Education for the preparation of coordinators and related subjects teachers in the following fields: distributive, office, and diversified occupations.

The following is an outline of the sequence of courses that should be followed. The student should elect only one of the major options shown under the specialized studies heading. In addition to the B.S. degree, one is qualified to receive the Vocational Coordinator's Certificate and Secondary Provisional Teaching Certificate.

#### I. BASIC STUDIES

A. Communication Area .....	6-8 hrs.	
B. Science Area .....	8 hrs.	
C. Social Science Area .....	8 hrs.	
D. Humanities .....	6 hrs.	
E. Additional .....	8-10 hrs.	38 hrs.

#### II. ADDITIONAL REQUIREMENTS

A. Government .....	3 hrs.	
B. Physical Education or R.O.T.C. ....	4 hrs.	7 hrs.

#### III. SPECIALIZED STUDIES

##### OPTION I

A. Major: Related Subjects—Distributive Occupations .....		27-33 hrs.
<hr/>		
*Teaching Techniques in Cooperative Education .....	572	2 hrs.
*Coordination Techniques in Cooperative Education .....	573	2 hrs.
*Organization and Operation of Distributive Education .....	570	2 hrs.
*Supervised Work Experience .....		0-6 hrs.
The Super Market Industry .....	130	3 hrs.
Introduction to Petroleum Industry .....	120	3 hrs.
Principles of Retailing .....	275	3 hrs.
Salesmanship .....	370	3 hrs.
Advertising .....	374	3 hrs.
Electives .....		6 hrs.
B. Minor: (Teachable) .....		18 hrs.
<hr/>		

\*Core Subjects.

\*\*Dependent on amounts of previous acceptable work experience.

## OPTION II

A. Major: Related Subjects — Office Occupations .....	30-36 hrs.
Core Subjects .....	6-12 hrs.
Typing .....	182-3    4 hrs.
Office Machines .....	280    2 hrs.
Accounting .....	210-11    6 hrs.
Office Management .....	556    3 hrs.
Electives (Business) .....	9 hrs.
B. Minor: (Teachable) .....	18 hrs.

## OPTION III

A. Major: Related Subjects — Diversified Occupations .....	24-30 hrs.
Core Subjects .....	6-12 hrs.
Beginning Drafting .....	120    2 hrs.
Machine Shop .....	234    3 hrs.
Electricity .....	160    2 hrs.
Power Mechanics .....	180    2 hrs.
Introduction to Industrial Education ..	170    2 hrs.
Electives .....	7 hrs.
B. Minors: Office Occupations .....	18 hrs.
Distributive Occupations .....	18 hrs.

## IV. PROFESSIONAL EDUCATION .....

Human Growth and Development .....	250    3 hrs.
Introduction to Directed Teaching .....	300    3 hrs.
Directed Teaching .....	470    8 hrs.
Laboratory in Education .....	410 or 420    4 hrs.
Principles of Practical Arts and Vocational Education .....	520    2 hrs.

## V. ELECTIVES:

For Option I and II .....	5-11 hrs.
For Option III .....	0-2 hrs.    79 hrs.
TOTAL HOURS .....	124 hrs.

# Home Economics

The Home Economics Department offers four-year programs leading to a B.S. degree for teachers, dietitians, and Home Economics for business personnel as well as a two-year program in Home Economics for those not desiring a degree. A student who has a major in home economics and meets the requirements of the Department of Education for a certificate may teach home economics only in the non-vocational home economics departments of Michigan. Students desiring Vocational Homemaking Certificates will need an additional two semester hours in the area of Housing, and three semester hours in art.

## DIETETICS

B.S. Degree			
First Year	S.H.	Second Year	S.H.
Chemistry 100 or 102 and 103	8	Accounting 210	3
Communication 114, 115 or		Biological Science 107	4
College Writing 116, 117	6 or 8	Nutrition 210	3
Effective Living 150	2	General Psychology 200	3
Foods 114	4	Organic Chemistry 360	4
World Civil. 100, 101	8	Sociology 200	3
Physical Education	1	Textiles 100	3
Elementary Design 161	2	Physical Education	2
		Humanities 222, 223	6
	31-33		
			30 or 31
Third Year	S.H.	Fourth Year	S.H.
Meal Preparation 214	3	Bio. Chemistry	2
Food Chemistry 540	2	Diet and Disease 410	2
Amer. Govt. 200	3	Institutional Mgt. 512	3
Advanced Nutrition 510	3	Physiology 217	4
Bacteriology 312	4	Experimental Foods 518 or	
Quantity Foods 312	3	Food Technology 514	2
Physical Education	1	Principles of Economics 200	3
Methods in Home Economics 340	4	Psych. Aspects of Bus. 341	3
Electives	8-10	Electives	12 or 13
	31-33		31 or 32

Recommended minors: Chemistry and Combined Social Science.

Recommended electives: Home Management 350, Consumer Buying 516, Home Management Practice 352, Housing 554, Advanced Textiles 302, Food Demonstration 520, Equipment 552.

Each student is required to work twelve months in a hospital approved by the American Dietetics Association.

**HOME ECONOMICS IN BUSINESS****B.S. Degree**

First Year	S.H.	Second Year	S.H.
Chemistry 100 or 102 and 105	8	Biol. Science 107	4
Communication 114, 115 or College Writing 116, 117	6 or 8	Clothing 202	3
Effective Living 150	2	Costume Design 204	2
Elementary Design 161	2 or 3	Home Furnishings 250	2
Foods 114	4	Family Health 252	2
World Civil. 100, 101 or Man and Society 102, 103	8	Journalism 264	3
Textiles 100	3	Nutrition 210	3
Physical Education	1	Sociology 200	3
		Physical Education	1
		Humanities 220, 221 or 222, 223	6
		Electives	2 or 3
	34-37		31-32

Third Year	S.H.	Fourth Year	S.H.
Accounting 210	3	Advanced Nutrition 510	3
Meal Planning 214	3	Consumer Buying 516	2
Amer. Gov't. 200 or St. and Loc. Gov't. 204	3	Experimental Foods 518	2
Economics 200 or 502	3	The Homemaking Center and Equipment 552	2
Family Clothing 306	2	Mar. and Fam. Relations 354	2
Demonstration 520	2	Quantity Foods 312	3
General Psychology 200	3	Radio or Speech	3
Home Management 350	2	Tailoring 304	3
Home Management Prac. 352	3	Electives	12
Physical Education	2		
Electives	4 or 5		32
	30 or 31		

## TEACHING OF HOME MAKING

B.S. Degree				
First Year	S.H.	Second Year	S.H.	
Effective Living 150	2	Nutrition 210	3	
Textiles 100	3	Clothing 202	3	
Elementary Design 161	2	Costume Design 204	2	
Foods 114	4	World Civilizations 100, 101	8	
Chemistry 100 or 102 and 105	8	Meal Preparation 214	3	
Communication 114, 115	8	Human Growth 254	3	
Physical Education	1	Humanities 220, 221	3	
Electives	4	Family Health 252	2	
	—	Physical Education	2	
	32	Electives	2 or 3	
			31 or 32	
			—	
Third Year	S.H.	Fourth Year	S.H.	
Family Clothing 306	2	Quantity Foods 312	3	
Biological Science 107	4	Economics 200 or 502	3	
Home Management 350	2	Marriage and Family		
Home Management Practice 352	3	Relations 354	2	
Introduction to Directed		Directed Teaching 470	8	
Teaching 300	3	Lab. in Education 420	4	
Methods in Home Ec., 340	4	General Education Prob. 450	3	
American Government 200	3	or		
Sociology 200	3	Principles of Practical Arts and		
Home Furnishing 250	2	Vocational Education 520	2	
Physical Education	1	Electives	9 or 10	
Electives	3 or 4		—	
	—		32 or 33	
	30 or 31			

# Industrial Education

## OPTION I

### Industrial Arts

This curriculum meets the needs of students who wish a broad industrial background to enter business, industry, or teaching. The individual must have basic competence in and understanding of the various areas encompassed by the broad field of industrial arts. In addition, he must achieve a superior competence through a concentration in two of these areas. The student may major in industrial arts and minor in two of the following fields: drawing, woodwork, metalwork, electricity, graphic arts, or power-auto mechanics. To accomplish this dual objective, a required minimum of 45 semester hours is necessary.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	Power Mechanics 180	2
Physical Science 108, 109	8	Adv. Elec. 260	3
Drawing 120	2	Advanced Drafting 226	3
Woods 100	2	Industrial Arts Design 276	2
Intro. Elec. 160	2	Machine Shop 234	3
Metals 130	3	Machine Woodwork 205	3
Graphic Arts 150	2	Man and Society 102, 103	
Phy. Ed. or R.O.T.C.	2	or	
Intermediate Algebra	3	World Civil. 100, 101	8
		Humanities 220, 221 or 222, 223	6
		Phy. Ed. or R.O.T.C.	2
		Electives	2
Third Year	S.H.	Fourth Year	S.H.
General Shop 370	3	Shop Electives*	5-7
American Gov't. 200	3	General Electives**	25-27
Shop Electives*	7-9		
Gen. Electives**	17-21		

\*A concentration of 20 hours in two of the following shop areas is to be elected in terms of the student's interest.

Drawing—120, 226, 227, 322, 524, 525	Woodwork—100, 306, 205, 304, 204
Metalwork—130, 234, 235, 334, 336, 338	Graphic Arts, Electricity, and Power
	—See Departmental Advisor

\*\*To become an industrial arts teacher, the individual must take: 345 Plan and Org. of School Shop, 344 Teaching of Industrial Ed., and 542 Course Planning and Construction. These are in addition to the required courses in the School of Education.

## OPTION II

## Vocational Industrial Education

Western Michigan University has been approved by the State Board for Control of Vocational Education to prepare vocational industrial teachers for the secondary schools. In order to be eligible for a vocational certificate, the prospective teacher must have completed a B.S. degree, including required courses in education and in addition, (a) have completed four years of industrial experience in the shop area to be taught, or (b) if less than four years, pass a trade competency examination in the shop area to be taught. At the beginning of the second year, each student, in consultation with his Major advisor, will work out a twenty-four semester hour sequence of industrial courses which will adequately prepare him for teaching in the trade and industrial field of his choice. Twelve semester hours of this work may be earned through Coordinated Industry Course 300.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	Electricity 160, 260	5
or		Advanced Drafting 226	3
Communication 114, 115	8	Machine Shop 234	3
Physical Science 108, 109	8	Machine Woodwork 205	3
Beginning Drawing 120	2	Man and Society 102, 103	
Metals 130	3	or	
Woods 100	2	World Civilizations 100, 101	8
Graphic Arts 150 or		Voc. Shop Major	6
Power Mechanics 180	2	Phy. Ed. or R.O.T.C.	2 or 4
Intermediate Algebra	3		
Phy. Ed. or R.O.T.C.	2 or 4		
Third Year	S.H.	Fourth Year	S.H.
General Shop 370	3	Prin. of Voc. Edu. 520	2
Humanities 220, 221, or 222, 223	6	Plan. and Org. School Shop 345	2
Vocational Shop Major	12	Course Plan. and Const. 542	2
American Government 200	3	Education 300, 470, 420	15
Human Growth and Develop. 250	3	Voc. Shop Major	6
Teaching of Ind. Edu.	3	Electives	5-7
Electives	2-4		



**PRINTING MANAGEMENT**

This curriculum provides for a major in printing and a minor in business administration. It is designed to train for the management side of the printing industry as supervisors, estimators, salesmen, foremen, shop owners, or technicians. While laboratory experience in operating printing machinery is given, emphasis is on machine performance, best uses, limitations, etc., rather than skill in operation.

First Year	S.H.	Second Year	S.H.
Communication 114, 115 or College Writing 116, 117	6 or 8	World Civilizations 100, 101 or Man and Society 102, 103	8
Physical Science 108, 109	8	Humanities 220, 221, or 222, 223	6
Survey of Graphic Arts 150	2	Typography I and II 250, 251	6
Graphic Arts 154	2	General Psychology 200	3
Presswork 152	2	Physical Education or R.O.T.C.	2
Industrial Machine Shop 152, or	3	Elective	5
Industrial Processes	3		—
Business Correspondence 242	3		30
Physical Education or R.O.T.C.	2		
Elective	2		
<hr/>			
30 or 32			
Third Year	S.H.	Fourth Year	S.H.
Layout and Design 352	3	Business Statistics 244	3
Imposition and Lockup 350	2	Management Problems 550	3
Linotype Composition 254, 255	6	Labor-Management Relations 500	3
Accounting 210, 211	6	Motion Study 304	3
Fundamentals of Industrial Supervision 300	2	Time Study 305	3
Plant Maintenance and Safety 302	2	Estimating 452	2
American Government 200	3	Printing Production Control 453	2
Production Control 306	3	Advanced Presswork 450	2
Elective	5	Advertising 374	3
	—	Elective	8
	<hr/>		<hr/>
	32		32

# Engineering and Technology

## AUTOMOTIVE ENGINEERING TECHNOLOGY

B.S. Degree

The Automotive Engineering Technology curriculum is designed to provide a combination of applied and theoretical sciences and practical skills to enable students to move rapidly into technical positions in the automotive fields. To help students achieve their employment objectives, two options are offered. Option I leads toward careers in automotive sales and service. It is intended specifically to equip students with the necessary background to become Service Salesmen, Service Managers, Parts Managers, Automotive Salesmen or Automotive Business Managers. Option II is structured for positions in such areas as Manufacturing, Engineering, Production Testing, Service Engineering and Proving Ground work.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117 or Communication 114, 115	6 or 8	Fuels and Lubricants 222	2
College Algebra and Trigonometry 122	5	Automotive Engine Analysis 224	3
*Analytic Geometry and Calculus 123	5	American Government 200	3
Industrial Calculators 104	1	Automotive Electricity 126	2
Basic Automotive Engines 124	3	Technical Drawing 232	2
Automotive Chassis & Running Gear 125	2	Physical Education or R.O.T.C.	2
Industrial Processes 170, 171	6	Major Option	20
Technical Electricity 240	3		—
Physical Education or R.O.T.C.	2	(Including Science requirement)	34
<hr/> 33 or 35			

Third Year	S.H.	Fourth Year	S.H.
Man and Society 102, 103 or		Humanities 220, 221 or 222, 223	6
World Civilizations 100, 101	8	Industrial Sociology 575	2
Automatic Transmissions & Power Equipment 324	3	Automotive Design Analysis 424	3
Automotive Testing 325	2	Automotive Service Management 422	2
Industrial Relations 200	3	Major Option	21
Major Option	18		—
	<hr/> 34		34

\*Math. 123 not required in option I.

## OPTION I—SALES AND SERVICE

## OPTION II—PRODUCTION AND TESTING

	S.H.		S.H.
Accounting 210, 211	6	Machine Drawing & Design 330	3
Business Correspondence 242	3	Basic Electronics 241	3
Purchasing Principles 358	3	Testing of Materials 372	2
Salesmanship 370	3	Strength of Materials 371	2
Business Statistics 244	3	Statics 370	3
Small Business Management 250	3	Dynamics 474	3
Advertising 374	3	Thermodynamics 376	3
Physical Science 108, 109	8	Fluid Dynamics 374	2
Business and Professional Speech 104	3	Manufacturing Processes 252	3
Conference Leadership 406	3	Calculus 220, 221	10
Materials Handling 404	3	General College Physics 112, 113	10
Electives	16	Chemistry 100 or 102 and 109	8
	—	Electives	5
	57		—
			57
		Semester hours for graduation	136

**AVIATION ENGINEERING TECHNOLOGY****B.S. Degree**

The Aviation Engineering Curriculum provides two options—Transportation and Sales, Production and Testing. The Transportation and Sales Option is intended for those who are interested in the business aspects of aviation. The Production and Testing Option is primarily for those who wish to be associated with the manufacturing or engineering phases of aeronautics. Both Options permit students to qualify for the F.A.A. Airframes and Powerplant certificate.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117 or Communication 114, 115	6 or 8	Industrial Processes 170, 171	6
College Algebra and Trigonometry 122	5	Powerplants 212	3
*Analytic Geometry and Calculus 123	5	Airframes 210	3
Introduction to Aviation 116	3	Physical Education or R.O.T.C.	2
Airframes 110	3	Major Option	20
Airframes 113	2		—
Powerplants 112	3	(Including Science requirement)	34
Powerplants 115	2		
Industrial Calculators 104	1		
Technical Drawing 232	2		
Physical Education or R.O.T.C.	2		
	34 or 36		

Third Year	S.H.	Fourth Year	S.H.
Man and Society 102, 103 or World Civilizations 100, 101	8	Humanities 220, 221, or 222, 223	6
Airframes 213	2	Industrial Sociology 575	2
Powerplants 215	2	Jet and Rocket Powerplants 312	2
Industrial Relations 200	3	Major Option	24
American Government 200	3		—
Technical Electricity 232	3		34
Major Option	13		
	34		

**\*\*Summer Session**

Aircraft Servicing 218	4
Aircraft Welding 111	2

\*Math. 123 not required in option I.

\*\*Required for those students who wish to qualify for the F.A.A. Airframe and Powerplant Certificate.

## OPTION I

## TRANSPORTATION AND SALES

	S.H.
Accounting 210, 211	6
Business Statistics 244	3
Salesmanship 370	3
Management Problems 550	3
Marketing 240	3
Passenger & Freight Traffic 310	3
Airline Operations 410	2
Airline Administration 412	2
Transportation 444	3
Pilot Training 118	2
Physical Science 108, 109	8
Business and Professional Speech 104	3
Electives	14
—	—
	55

## OPTION II

## PRODUCTION AND TESTING

	S.H.
Testing of Materials 372	2
Strength of Materials 371	2
Basic Electronics 241	3
Statics 370	3
Dynamics 474	3
Thermodynamics 376	3
Fluid Dynamics 374	2
Machine Drawing and Design 330	3
Pilot Training 118	2
Calculus 220, 221	10
General College Physics 112, 113	10
Chemistry 100 or 102 and 109	8
Electives	4

—

55

Semester hours for graduation 136

## ENGINEERING TECHNOLOGY

(Mechanical or Electrical)

B.S. Degree

The Engineering Technology Curriculum is designed to train technicians and associate engineers in such fields of industry as design, manufacturing, communications, transportation, and power. It is especially intended to give students sufficient background so they may participate in these various industries in positions involving research, design, production, maintenance, and sales. *Students enrolling in this curriculum may pursue either the Mechanical or Electrical Option.*

First Year	S.H.	Second Year	S.H.
*College Writing 116, 117	6	Physical Science 108, 109	8
College Algebra and Trigonometry 122	5	or General Physics 110, and General Chemistry 100 or 102	4
Analytic Geometry and Calculus 123 or Math. 120, 121	5-6	Man and Society 102, 103, or World Civilizations 100, 101	8
Industrial Calculators 104	1	Basic Metallurgy 155	3
Industrial Machine Shop 152	3	Heat Transfer 160	3
Engineering Drawing 230	3	Manufacturing Processes 252	3
Descriptive Geometry 231	3	Physical Education or ROTC	2
Technical Electricity 240	3	Major Option	6
Physical Education or ROTC	2		—
Major Option	3		33
	—		
	34		
Third Year	S.H.	Fourth Year	S.H.
Humanities 220, 221, or 222, 223	6	Fluid Dynamics 374	2
Business and Professional Speech 104	3	Advance Metallurgy 356	3
Statics 370	3	Modern Economics 502	3
Strength of Materials 371	2	Industrial Sociology 575	2
Thermodynamics 376	3	Major Option	3
Testing of Materials 372	2	Electives	18
American Government 200	3		—
Industrial Relations 200	3		31
Major Option	9		
	—		
	34		

\*Communication may be substituted.

*Degree Curricula*

OPTION I		OPTION II	
MECHANICAL	S.H.	ELECTRICAL	S.H.
Industrial Welding 258	2	Basic Electronics 241	3
Machine Drawing & Design 330	3	Applied Measurements 342	3
Industrial Design 331	3	Electronic Devices 343	3
Molding & Coremaking 254	3	Industrial Electricity 346	3
Pressworking of Metals 352	3	Industrial Electronics 345	3
Air Conditioning 360	3	Instrumentation 449	3
Drafting for Production 430	3	Communication Electronics 443	3
		<hr/>	
		Semester hours for graduation	132

**INDUSTRIAL DISTRIBUTION****B.S. Degree**

This curriculum is designed to prepare personnel for employment in industrial distributors' organizations as purchasing agents, salesmen, management consultants, warehousing executives, etc. Since some graduates may wish to enter the manufacturing rather than the distributing phase, the curriculum also provides sufficient technical and supervisory training to enable them to eventually qualify for industrial positions in such areas as production control, personnel work and purchasing.

First Year	S.H.	Second Year	S.H.
Communication 114, 115	8	Science Area	8
Industrial Processes 170, 171	6	Industrial Relations 200	3
College Algebra and Trigonometry 122 or Math 120 and 121	6	Technical Electricity 240	3
Industrial Calculators 104	1	Technical Drafting 232	2
Physical Education or R.O.T.C.	2	Social Science Area	8
Business and Professional Speech 104	3	Physical Education or R.O.T.C.	2
Electives—Technical	5	Business Statistics 244	3
	30		—
			29
Third Year	S.H.	Fourth Year	S.H.
Humanities 220, 221 or 222, 223	6	Purchasing Principles 358	3
Accounting 210, 211	6	Production Control 306	3
General Psychology 200	3	Time Study 305	3
Business Correspondence 242	3	Materials Handling 404	3
American Government 200	3	Conference Leadership 406	3
Small Business Management 250	3	Industrial Distribution 402	2
Salesmanship 370	3	Motion Study 304	3
Management Problems 550	3	Electives—Technical or Business	13
Electives	2		—
	32		33
Summer	S.H.	Semester hours for graduation	126
Occupational Laboratory Experience 522*	2		

\*Students enrolled in this curriculum must spend one summer either during their junior or senior year with some industrial distributor or a student may elect Modern Industrial Practices 400.



**INDUSTRIAL ENGINEERING****B.S. Degree in Engineering**

The Industrial Engineering curriculum provides the essential foundation, experience and understanding in science, mathematics, humanities and engineering so graduates may find gainful employment in industries or utilities. The Industrial Engineer is particularly responsible for the improvement and development of management and production techniques. Special emphasis is therefore, placed on studies dealing with production, planning and control, plant organization, manufacturing processes and inspection, plant safety and employee and employer relations.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	General College Physics 112, 113	10
General Chemistry 102, 103 or 100, 109	8	Calculus 220, 221	10
College Algebra and Trigonometry 122	5	Man and Society 102, 103 or	8
Analytic Geometry and Calculus 123	5	World Civilizations 100, 101	2
Physical Education or R.O.T.C.	2	Physical Education or R.O.T.C.	3
Engineering Drawing 230	3	Industrial Processes 171	3
Descriptive Geometry 231	3	Basic Metallurgy 155	3
Industrial Calculators 104	1	Gen. Psychology 200	3
Business and Professional Speech 104	3		—
	—		39
	36		
Third Year	S.H.	Fourth Year	S.H.
Accounting 210	3	Modern Economics 502	3
Humanities 220, 221 or 222, 223	6	Production Control 306	3
Statistical Method for Industry 360	3	Time Study 305	3
Industrial Relations 200	3	Dynamics 474	3
Technical Electricity 240	3	Materials Handling 404	3
Fundamentals of Industrial Supervision 300	2	Labor-Management Relations 500	3
American Government 200	3	Thermodynamics 376	3
Motion Study 304	3	Fluid Dynamics 374	2
Plant Safety 302	2	Electives	14
Basic Electronics 241	3		—
Statics 370	3		37
	—		
	34		

Semester Hours for Graduation 146

Ordinarily most student will need an additional semester or summer session to complete this curriculum.

**INDUSTRIAL SUPERVISION****B.S. Degree**

This curriculum is intended for young men and women who are planning to qualify for industrial or commercial positions in such areas as supervision, production control, time and motion study, quality control, plant management, personnel work, purchasing and other managerial areas. If a student so desires, he may elect this curriculum on a cooperative basis, that is alternating between school and employment in industry on a semester basis.

First Year	S.H.	Second Year	S.H.
Communication 114, 115	8	Social Science Area	8
Industrial Processes 170, 171	6	Science Area	8
College Algebra and Trigonometry 122	5	Industrial Relations 200	3
Industrial Calculators 104	1	Technical Electricity 240	3
Business and Professional Speech 104	3	Technical Drafting 232	2
Physical Education or R.O.T.C.	2	Physical Education or R.O.T.C.	2
Electives-Technical	5	Humanities 220, 221 or 222, 223	6
	—		—
	30		32
Third Year	S.H.	Fourth Year	S.H.
American Government 200	3	Management Problems 550	3
Fundamentals of Industrial Supervision 300	2	Production Control 306	3
Accounting 210, 211	6	Materials Handling 404	3
Plant Safety 302	2	Conference Leadership 406	3
Quality Control 308	3	Time Study 305	3
Elementary Statistical Practice 260, or Business Statistics 244	3	Labor-Management Relations 500	3
Motion Study 304	3	Plant Layout 501	2
Business Law 340	3	Electives-Technical	12
Electives	5		—
	—		32
	30		
		Summer	S.H.
		Modern Industrial Practice 400	6

Semester hours for graduation ..... 130

# Military Science

## OPTION I

### NATIONAL AND MILITARY AFFAIRS CURRICULUM

B.S. or B.A. Degree

This curriculum is designed to provide an education for men who desire careers in civilian or governmental activities, especially beyond the limits of continental United States. It is also designed for students who wish to combine a major interest with specialization in some foreign region or activity.

The integration of Basic Studies, Military Science, Major Courses and Electives provides an opportunity for the student to combine industrial, agricultural, scientific or military specialization with competence in a foreign area and also obtain a commission in the Organized Reserves or the Regular Army. Flight training may be elected in the advanced course. Although not required, students are encouraged to elect a foreign language.

First Year	S.H.	Second Year	S.H.
Communication 114, 115 or College Writing 116, 117	8 or 6	Physical Science 108, 109 or equivalent	8
Physical Geography 105	4	Humanities 220, 221 or 222, 223 or Modern Foreign Language	6-8
Biological Science 107 or equivalent	4	Military Science 200, 201	4
World Civilizations 100, 101, or Man and Society 102, 103	8	Major Courses*	8
Military Science 100, 101	4	Psychology 200, 220	6
Elective	4 or 6		32-34
	32		

Third Year	S.H.	Fourth Year	S.H.
*Major Courses	12	*Major Courses	12
**Group Minor (Military Science 300, 301 and Approved Courses)	10	**Group Minor (Military Science 400, 401 and Approved Courses)	10
National Government and Administration 202, or State and Local Government Administration 204	3	History of U. S. Foreign Policy, 518, or Political Science 550	3
Geographic Foundations of National Power	3	Electives	7
Electives	4		32
	32		

\*Hours not required for the Major may be used for electives.

\*\*Five hours of ROTC taught subjects and five hours of university academic subjects.

*School of Applied Arts and Sciences***SUMMER**

Attendance at R.O.T.C. Summer Camp for six weeks at the end of third year is part of the required course.

**OPTION II****B.S. Degree**

Students who wish to combine study under some other school or curriculum with those studies required to obtain a commission in the Organized Reserve or the Regular Army, may do so under the following plan:

First Year	S.H.	Third Year	S.H.
Military Science 100, 101	4	*Military Science 300, 301	8
Second Year	S.H.	Fourth Year	S.H.
Military Science 200, 201	4	*Military Science 400, 401	8

\*Note: Five hours of ROTC taught subjects and three hours of university academic subjects.

**SUMMER CAMP**

Attendance at R.O.T.C. Summer Camp for six weeks at end of third year is part of the required course.

**ADVANCED COURSE**

The Advanced Military Science Course (third and fourth years) combines courses taught by the Military Science Department with courses taught by members of other departments as follows:

	S.H.
1. MS 300, 301, 400, 401 & (118*) .....	10
2. Psychology 200 .....	3
3. A course or courses of the 200, 300, 400, or 500 series, in communications, science, or social science, exclusive of basic studies .....	3
<b>TOTAL</b>	<b>16</b>

**MILITARY SCIENCE GROUP MINOR**

A Group Minor in Military Science consisting of at least twenty (20) semester hours may be chosen from the subject matter areas outlined below. All science, social science or language courses selected for the Minor must have the approval of the Professor of Military Science.

	S.H.
1. Advanced courses in Military Science (MS 300, 301, 400, 401) ...	10
2. Psychology 200 .....	3
3. Seven semester hours in a single science, social science, or modern language, exclusive of basic studies .....	7
<b>TOTAL</b>	<b>20</b>

\*Flight training—For details, see Page 112.

# Occupational Therapy

This curriculum is designed to prepare the student to work in the various disability areas associated with occupational therapy and to qualify graduates to take the American Occupational Therapy Association examination for registration. Each student is required by the American Medical Association to complete a minimum of nine months of clinical practice. The areas in which the student practices are psychiatric, pediatric, general medicine and surgery or tuberculosis and physical disabilities.

The department may refuse to allow a student to continue in this curriculum if at any time it is deemed that physical or emotional disability would jeopardize his professional success. Academically, no grade less than "C" will be accepted in courses in the major and minor sequences or their prerequisites.

At the completion of five semesters each student would be evaluated by a screening committee as to suitability for continuing their academic and clinical preparation for the profession of occupational therapy.

## B.S. Degree

First Year	S.H.	Second Year	S.H.
O.T. Orientation 130	1	Humanities 220, 221	6
Communication 114, 115 or College Writing 116, 117	8 or 6	American Government 200	3
Biology 100, 101	8	Anatomy 216	4
Physical Science 108 or Physical Geography 105	4	Physiology 217	4
Man and Society 102, 103	8	General Psychology 200	3
O.T. Printing 156	3	Abnormal Psychology 322	3
Physical Education	1	Elementary Design 200	3
		Minor Crafts 202	3
		Physical Education	1
		Electives	3
	31 or 33		—
			33

Third and Fourth Years	S.H.		S.H.
Kinesiology 520	3	O.T. Special Education	
Neuroanatomy and Neurophysiology 321	2	Woodshop 108	3
Theory of Physical Disabilities 332	4	Rehabilitation 432	2
Medical Lectures 324	2	Ceramics 303	3
Orthopedics 524	2	Weaving 300	3
Psychiatric Theory 230	3	Recreation for the Handicapped 334	2
Psychiatric Lectures 322	3	Therapeutic Techniques 310	2
O.T. in Medical Specialties 231	2	Group Processes in O.T. 431	2
Organization and Administration in O.T. 430	2	Growth, Development and Aging 325	3
O.T. General Shop 177	3	Physical Education	2
		Electives	12
			—
			60

# Paper Technology

## B.S. Degree

These curricula are intended to prepare students for work in the pulp and paper industry in the scientific, manufacturing, sales and executive areas. They are foundational in nature, and provide for actual work experience during the summers in paper mills. It is expected that the student will work in mills at least two of the three summers indicated. The plan operates cooperatively through the use of an advisory committee composed of fifteen members from industry and five members from Western Michigan University.

### PAPER TECHNOLOGY CURRICULUM

FIRST YEAR			
First Semester	S.H.	Second Semester	S.H.
Introduction to Pulp Manufacture 100	2	Introduction to Paper Manufacture 101	2
Trigonometry and College Algebra 122	5	Analytic Geometry and Calculus 123	5
General Chemistry 102	4	Qualitative Analysis 120	4
College Writing 116	3	College Writing 117	3
Man and Society 102	4	Man and Society 103	4
Physical Education (or R.O.T.C.)	1- 2	Physical Education (or R.O.T.C.)	1-2
	19-20		19-20

#### SUMMER

Mill Practice 110 ..... 2 Hours

SECOND YEAR			
First Semester	S.H.	Second Semester	S.H.
Pulp & Paper Evaluation 320	2	Pulp & Paper Evaluation 321	2
Calculus 220	5	Calculus 221	5
Organic Chemistry 360	4	Organic Chemistry 361	4
Quantitative Analysis 222	4	Physical and Chemical Structure of Wood 332	3
Economics 200	3	Economics 201	3
Physical Education (or R.O.T.C.)	1- 2	Physical Education (or R.O.T.C.)	1- 2
	19-20		18-19

#### SUMMER

Mill Practice 210 ..... 2 Hours

## THIRD YEAR

First Semester	S.H.	Second Semester	S.H.
Pulp Manufacture 240	3	Paper Manufacture 241	3
Physical Chemistry 531	5	Physical Chemistry 533	5
Public Speaking 104	3	Drawing 232	2
American National		Physics 113	5
Government 200	3	Chemistry Seminar	0
Physics 112	5	Electives	3
Chemistry Seminar	0		—
	—		18
	19		

## SUMMER

Mill Practice 310 ..... 2 Hours

## FOURTH YEAR

First Semester	S.H.	Second Semester	S.H.
Problem Analysis 570	2	Problem Analysis 571	2
Polymer Chemistry 530	2	Microbiology of Pulp & Paper 550	2
Converting 442	2	Principles & Practice of	
Principles of Chemical		Coated Paper Manufacture 540	2
Engineering 330	3	Principles of Chemical	
Humanities	3	Engineering 331	3
Chemistry Seminar	0	Humanities	3
Electives	2	Chemistry Seminar	0
	—	Electives	3
	14		—
			15

**PAPER SALES CURRICULUM****FIRST YEAR**

First Semester	S.H.	Second Semester	S.H.
Introduction to Pulp Tech. 100	2	Introduction to Paper Tech. 101	2
College Writing 116	3	College Writing 117	3
Man and Society 102	4	Man and Society 103	4
General Chemistry 102	4	Qualitative Analysis 120	4
Mathematics 120	3	Mathematics 121	3
Physical Education (or R.O.T.C.)	1-2*	Physical Education (or R.O.T.C.)	1-2*
	<hr/> 17-18		<hr/> 17-18

**SUMMER**

Mill Practice 110 ..... 2 Hours

**SECOND YEAR**

First Semester	S.H.	Second Semester	S.H.
Evaluation of Pulp & Paper 320	2	Evaluation of Pulp & Paper 321	2
Organic Chemistry 360	4	Organic Chemistry 361	4
Principles of Economics 200	3	Principles of Economics 201	3
General Psychology 200	3	Public Speaking 104	3
Physical Education (or R.O.T.C.)	1-2*	Physical Education (or R.O.T.C.)	1-2*
Electives**	3	Electives**	3
	<hr/> 16-17		<hr/> 16-17

**SUMMER**

Mill Practice 210 ..... 2 Hours

**THIRD YEAR**

First Semester	S.H.	Second Semester	S.H.
Quantitative Chemistry 222	4	American Government 200	3
Accounting 210	3	Accounting 211	3
Marketing 240	3	Electives**	5
Business Finance 320	3	Paper Manufacture 241	3
Pulp Manufacture 240	3	Physics 111	4
Physics 110	4		—
	<hr/> 20		<hr/> 18

\*Physical Education is 1 hour.

R.O.T.C. is 2 Hours.

\*\*Electives to be arranged with counselor.



**SUMMER**

Mill Practice 310 (if wanted) . . . . . 2 Hours

**FOURTH YEAR**

First Semester	S.H.	Second Semester	S.H.
Paper Converting 442	2	Principles and Practice of	
Polymer Chemistry 530	2	Coated Paper Manufacture	2
Salesmanship 370	3	Credit Management 540	3
Advertising 374	3	Psychological Aspects of	
Sales Management 376	3	Business 341	3
Marketing 574	3	Transportation 444	3
Electives	3	Humanities	3
	—	Electives	3
	19		—
			17

## II. TWO-YEAR CURRICULA

# Distributive Education

### PETROLEUM DISTRIBUTION

This curriculum is designed to prepare students in distribution methods and techniques used by the petroleum industry. Graduates will be prepared to sell, transport and otherwise manage the marketing and distribution of petroleum products to and through bulk plants and terminals to dealers and jobbers and other distributors, as well as to industrial and agricultural users.

The petroleum curriculum is a cooperative work-study program which combines school and work on an alternating basis. The student attends classes one semester and works on an assigned job in the petroleum industry the next semester. The students are assigned in pairs to cover one job or work area. When one student is attending classes, the other is at work on the job.

#### TWO YEAR CERTIFICATE

Course		S.H.
1. BASIC STUDIES		12
Communication .....	114-115	8
Physical Science .....	108	4
2. SPECIALIZED STUDIES		24
Introduction to Petroleum Industry .....	120	3
Petroleum Products Application .....	121	2
Selling Petroleum Products .....	123	3
Petroleum Prod. Handling .....	220	2
Petroleum Distribution Finance .....	227	2
Plant Survey .....	109	2
Coordinated Industry Practices .....	102-108	6
Coordinated Marketing Practices .....	202	4
3. ADDITIONAL REQUIREMENTS		14
Applied Chemistry .....	107	3
Economics .....	200-201	6
Business and Professional Speech .....	104	3
Physical Education .....		2
4. SUGGESTED ELECTIVES		12
Accounting .....	210-211	6
Service Station Operation .....	230	3
Others .....		3
TOTAL:		62

Students planning a four year program in petroleum distribution may do so, by enrolling in the General Degree curriculum. See page 182 for details.

**SUPER MARKET DISTRIBUTION**

This curriculum is designed to prepare students for management positions in the super market industry. Emphasis is placed on merchandising, operations and supervision. Graduates will be prepared to assume positions as department heads, assistant managers and managers in super markets.

The curriculum is a cooperative work-study program which combines school and work on an alternating basis. The students are assigned in pairs to cover one job or work area. When one student is attending classes, the other is at work on the job.

**TWO YEAR CERTIFICATE**

Course		S.H.
1. BASIC STUDIES		16
Communication .....	114-115	8
Man and Society .....	102-103	8
2. SPECIALIZED STUDIES		24
The Super Market Industry .....	130	3
Super Market Merchandising .....	132	3
Super Market Operations .....	232	3
Super Market Supervision .....	231	3
Plant Survey .....	109	2
Coordinated Industry Practices .....	102-108	6
Coordinated Marketing Practices .....	202	4
3. PHYSICAL EDUCATION		2
4. SUGGESTED ELECTIVES		20
Accounting .....	210-211	6
Economics .....	200-201	6
Business & Professional Speech .....	104	3
Family Foods .....	116	2
Others .....		1
TOTAL:		62

Students desiring to continue their education and graduate with a Bachelor of Science degree may do so with a major in Super Market Distribution. See page 182 for General Degree Requirements.

# Home Economics

## HOMEMAKING

For students who do not plan to get a degree.

A certificate is issued at the completion of this course.

First Year	S.H.	Second Year	S.H.
Biol. Sci. 107	4	Am. Nat'l Gov't. 202 or	
Communication 114, 115	8	St. and Loc. Gov't 204	3
Effective Living 150	2	Clothing 202	3
Elementary Design 161	2 or 3	Costume Design 204	2
Family Foods 116	2	Everyday Nutrition 212	2
Textiles 100	3	Home Furnishings 250	2
Physical Ed.	1	Home Nursing 252	2
Electives	7 or 8	Human Growth and Dev. 254	3
To be selected from history, business		Physical Ed.	1
education, speech, English, science,		Electives	12
and home economics.	30	To be selected from sociology, busi-	
		ness education, speech, English, and	
		home economics.	
			30

# Engineering and Technology

## AIRCRAFT AND AIRCRAFT ENGINE TECHNOLOGY

FAA Approved Technical School No. 3304

FAA Approved Airman Agency No. 3-08-1

The Aircraft Technology curriculum is intended for students who wish to qualify for the Federal Aviation Agency Airframe and Powerplant Technicians License. Every individual performing maintenance on aircraft must hold a FAA certificate authorizing such work. The importance of this certificate cannot be over-emphasized. The two-year curriculum may be applied toward meeting the requirements of the four-year Aviation Engineering Technology degree curriculum.

### FIRST YEAR

First Semester	S.H.	Second Semester	S.H.
Introduction to Aviation 116	3	Industrial Processes 171	3
Industrial Processes 170	3	Fuels and Lubricants 222	2
*Technical Computations 90	3	Airframes 113	2
Industrial Calculators 104	1	Powerplants 115	2
Airframes 110	3	Technical Drafting 232 or	2
Powerplant 112	3	Eng. Drawing 230	3
Physical Education	1	Industrial Relations 200	3
	—	Aircraft Welding 111	2
	17	Physical Education	1
			—
			17 or 18

### SECOND YEAR

First Semester	S.H.	Second Semester	S.H.
Physical Science 108	4	Physical Science 109	4
Communication 114	4	Communication 115	4
Technical Electricity 240	3	Airframes 213	2
Airframes 210	3	Powerplants 215	2
Powerplants 212	3	Jet & Rocket Powerplants 312	2
	—	Basic Electronics 241	3
	17	FAA Maintenance	
		Regulations 219	1
			—
			18

### SUMMER PROGRAM

NOTE: One summer session is required.	Aircraft Servicing 218	4
	**Pilot Training 118	2
		—
		6

\*Students with adequate background in Mathematics may elect Intermediate Algebra 120, or Trigonometry 121, or College Algebra & Trigonometry 122.

\*\*May be taken during the regular semester.

## AUTOMOTIVE TECHNOLOGY

The two-year Automotive Technology curriculum consists of practical work experience in inspecting, testing, servicing and repairing automobiles, and a study of related technical subject that will qualify a student to work as a Technician in Automotive and related industries. The two-year curriculum may be applied toward meeting the requirements of the four-year Automotive Engineering Technology degree curriculum.

## FIRST YEAR

First Semester	S.H.	Second Semester	S.H.
Automotive Electricity 126	2	Automotive Chassis &	
Basic Automotive Engine 124	3	Running Gear 125	2
Communication 114	4	Communication 115	4
Industrial Processes 170	3	Fuels and Lubricants 222	2
*Technical Computations 90	3	Industrial Calculators 104	1
or		Intermediate Alg. 120	3
**Intermediate Algebra 120	3	or	
or		Plane Trig. 121	3
***College Algebra &		or	
Trigonometry 122	5	Analytic Geometry &	
		Calculus 123	5
	15-17	Industrial Processes 171	3
			15-17

## SECOND YEAR

First Semester	S.H.	Second Semester	S.H.
Automotive Engine Analysis 224	3	Automotive Testing 325	2
Industrial Relations 200	3	Automatic Transmissions &	
Physical Education	1	Power Equipment 324	3
Physical Science 108	4	Physical Education	1
Technical Drawing 232	2	Physical Science 109	4
Elective—Technical	3	Technical Electricity 240	3
	—	Elective—Technical	3
	16		—
			16

\*For students with little or no high school mathematics.

\*\*Open to students having completed 1-unit of Algebra and 1-unit of Geometry in high school.

\*\*\*Open to students having completed 1½-units or more of Algebra and 1½-units of Geometry in high school.

Note: Students enrolled in Technical Computations 90 must also complete Mathematics 120 and 121, which constitute the minimum Mathematics requirement for graduation.

## DRAFTING AND DESIGN TECHNOLOGY

This curriculum is designed specifically to prepare men and women for positions in the field of Industrial Drafting & Design. All practical work experience in layout, detailing and design is in accordance with standard practices recommended by the American Society of Mechanical Engineers, the Society of Automotive Engineers and other recognized standardizing agencies. Related technical studies in industrial processes, production control, etc., are included in the program. If a student desires and work conditions permit, he may elect this curriculum on a cooperative basis, that is, alternating between school and industry on a semester basis. Three years are required to complete the curriculum under such a plan. Cooperative students participate in four work periods and are enrolled in Co-ordinated Industry 300. Upon completing the Drafting and Design Technology program, a student may enroll in the Engineering Technology Curriculum for a B.S. degree.

### FIRST YEAR

First Semester	S.H.	Second Semester	S.H.
Communication 114	4	Communication 115	4
Industrial Processes 170	3	Industrial Processes 171	3
Engineering Drawing 230	3	Descriptive Geometry 231	3
Industrial Calculators 104	1	Physical Education	1
Physical Education	1	Office Machines 280	2
*Technical Computations 90	3	Intermediate Algebra 120	3
or		or	
**Intermediate Algebra 120	3	Plane Trigonometry 121	3
or		or	
***College Algebra & Trigonometry 122	5	Analytic Geometry and Calculus 123	5
	<hr/> 15-17		<hr/> 16-18

### SECOND YEAR

First Semester	S.H.	Second Semester	S.H.
Physical Science 108	4	Physical Science 109	4
Industrial Relations 200	3	Production Control 306	3
Technical Electricity 240	3	Industrial Design 331	3
Machine Drawing & Design 330	3	Tool & Tie Design 234	2
Elective—Technical	3	Elective—Technical	3
	<hr/> 16		<hr/> 15

\*For students with little or no high school mathematics.

\*\*Open to students having completed 1-unit of Algebra and 1-unit of Geometry in high school.

\*\*\*Open to students having completed 1½-units or more of Algebra and 1½-units of Geometry in high school.

Note: Students enrolled in Technical Computations 90 must also complete Mathematics 120 and 121, which constitute the minimum Mathematics requirement for graduation.

**ELECTRONICS TECHNOLOGY**

This curriculum is offered to students who want to prepare themselves for gainful employment as electronics technicians. Training is given in the skills necessary to install, maintain, and operate electrical and electronic equipment, including radio and television. Information necessary for sales, classification, distribution, testing and production of components is presented. Students taking Electronic Technology are prepared for electrical and electronics positions in Industry, Radio and TV Maintenance, Business, and Government. Provisions can be made for qualifying for Federal Communication Commission Licenses. **Upon completing the two year Electronics curriculum a student may enroll in the Engineering Technology curriculum for a B.S. degree.**

**FIRST YEAR**

First Semester	S.H.	Second Semester	S.H.
Communication 114	4	Communication 115	4
Intermediate Algebra 120	3	Plane Trigonometry 121	3
or		or	
College Algebra & Trigonometry 122	5	Analytic Geometry & Calculus 123	5
Industrial Calculators 104	1	Basic Electronics 241	3
Engineering Drawing 230	3	Physical Education	1
Technical Electricity 240	3	Industrial Processes 170	3
Physical Education	1		
	<hr/>		<hr/>
	15-17		14-16

**SECOND YEAR**

First Semester	S.H.	Second Semester	S.H.
Physical Science 108	4	Physical Science 109	4
or		or	
General Chemistry 102		Physics 110 or 112	
Industrial Relations 200	3	Electronic Devices 343	3
Industrial Processes 171	3	Radio-TV & Electronic Practices 242	2
Applied Measurements 342	3	Electives—Technical	6
Industrial Electricity 346	3		
	<hr/>		<hr/>
	16		15



## PART III—*Description of Courses*

### VOCATIONAL DIVISION

#### 300 Coordinated Industry

3 hrs. Fall, Spring, Summer

A cooperative education program involving a minimum of eight weeks full-time planned and supervised work experience in industry during the summer or equivalent on a part-time basis during the semester. A written report of the student's activities will be required. May be elected four semesters for a maximum of twelve semester hours credit.

#### 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. Fall, Spring, Summer

A supervised business or industrial experience program involving full-time employment for a period of at least six weeks or equivalent. Must be planned in cooperation with the business or industrial establishment involved. Experience must be in the student's major field. Prerequisite: Consent of instructor.

## Agriculture

Lee O. Baker, Head

The Department of Agriculture recognizes the following responsibilities:

1. To provide opportunities for any student to learn more about the important part agriculture holds in the economy of the Nation. Basic Agriculture is planned to provide this basic information in Agriculture for all listed opportunities in the field of Agriculture.
2. To provide basic training for workers in services sponsored by government or farmer group organizations.
3. To prepare teachers of agriculture for our public secondary schools and to provide basic courses in agriculture for all teachers.
4. To provide basic training for students planning to enter employment in the operation of farm services.
5. To provide technical information in the production of farm products needed by those living on farms and depending on sales of farm products for financial support.

**100 Basic Agriculture****3 hrs. Fall, Spring**

Includes the fundamental purposes underlying the reasons for Agriculture in our National economy. Consideration is given to the necessary parts, as income, costs of operation, family support, part-time incomes, investments, land descriptions, proper uses and management. Open to all students, except those with a high school background in vocational agriculture.

**110 Animal Industry****3 hrs. Fall**

A study of Animal Husbandry, Dairying and Poultry Husbandry. The genetic developments of breeds, positions in farm organization, disease and management problems.

**111 Animal Industry****3 hrs. Spring**

A continuation of 110.

**220 Agronomy****3 hrs. Fall**

This course includes subject materials common for all farm-grown products, their relation to soil conditions, climate, and other problems in connection with successful and profitable production.

**221 Agronomy****3 hrs. Spring**

A continuation of 220.

**310 Feeding and Animal Nutrition****3 hrs. Fall**

Recent advances in feeding discoveries, new systems and economy practices will be studied. This material will be more extensive and detailed study than was possible in the previous courses in animal feeding.

**320 Soils and Fertilizers****3 hrs. Spring**

It is planned to provide basic information in the field of soil origin, composition, classification, fertility requirements and production management, including testing for soil deficiencies and recommended correction practices.

**322 Landscape Gardening****3 hrs. Spring**

The great increase in home building in both rural and urban areas has made it advisable to offer more specific information in home grounds planting, objectives and systems of home site beautification. Opportunity to become acquainted with nursery offerings in trees, shrubs and perennials is included.

**324 Land Use and Soil Conservation****3 hrs. Fall**

This course is aimed at establishing an understanding of the movement promoting better use of the various types of land, and the recommended practices for conserving the productivities of these lands.

**330 Management Problems in Agriculture****3 hrs. Fall**

Principles of production economics in agriculture, including diminishing returns, combination of enterprises, and comparative advantage, making

of management decisions, development of efficient farm business operations, and use and value of simple accounts.

**332 Agricultural Markets & Financing** 3 hrs. Fall

This course will deal with more specific organized marketing facilities for farm products, using the existing facilities in Southwest Michigan, covering grains, fruits, livestock and vegetable markets. How farming enterprises are financed and their relations to local sources of credit is included.

**334 Organization in Agriculture** 1 hr. Spring

This is a specialized course in which the wide variety of farm organizations are studied so that the purpose, personnel, and influence of the organizations can be better observed.

**530 Agriculture in Michigan** 2 hrs. Spring

A survey of Michigan agriculture production, the areas, volume and types of production, and the marketing systems in operation. Also relates Michigan agriculture to national and international agriculture. There will also be a survey of the different types of education in agriculture in Michigan.

## Distributive Education

Adrian Trimpe, Head

Wendall B. Fidler

A. F. Goldsmith

Raymond A. Dannenberg

William O. Haynes

The Department provides a variety of educational programs and services for individuals who are interested in the field of distribution in schools and business.

### WORK-STUDY PROGRAMS

The Department has two cooperative programs, one in Petroleum Distribution and the other in Super Market Distribution. These programs are jointly sponsored with the industries. The students in petroleum and food programs can earn a certificate in two years or complete a four-year program with a Bachelor of Science degree.

### COOPERATIVE OCCUPATIONAL EDUCATION

The Department has a degree program for individuals interested in preparing as a Coordinator and/or Related Subjects Teacher for Cooperative Occupational Education programs in the secondary schools. The curriculum may be found on page 46.

**SERVICES**

The Department provides secondary schools having cooperative occupational programs with consultative services and has available related instructional materials for classroom use.

The Department also assists schools and businesses in planning and conducting Adult Education Programs, Workshops, Conferences and Institutes.

**COORDINATED DISTRIBUTION PRACTICES****102 Coordinated Industry Practices 4 hrs. Fall, Spring**

The student will be employed as a trainee in the industry for a semester under the supervision of the University and the participating company. Written reports will be required of each student.

**108 Coordinated Industry Practices 2 hrs. Summer**

A continuation of 102, but the student will be assigned to a different type of work experience.

**109 Plant Survey 2 hrs. Post Summer Session**

Inspection trips are made to representative businesses and industrial establishments to observe such functions as production, transportation, storage, research and marketing. Company representatives will lecture to the class on the phases listed. Written reports are to be made of the visits.

**202 Coordinated Marketing Practices 4 hrs. Fall, Spring**

This is an advanced course in work experience under the work-study plan. It consists of a semester of employment under the supervision of the University and a participating company. Written reports will be required.

**FOOD—SUPER MARKET****130 The Super Market Industry 3 hrs. Fall, Summer**

An introductory course for those entering the field of super market distribution. Basic principles and practices of the program will be considered. A study of the super market, its history, evolution, and structure with emphasis on the growing importance of the store unit will be analyzed.

**132 Super Market Merchandising 3 hrs. Spring, Summer**

A course designed to acquaint the student with the various merchandising techniques peculiar to the super market. Receiving emphasis will be buying, display, promotion, turnover, pricing for profit, and increased departmental sales. The overall objective will be to develop a "merchandising character" in the students. Resource people from the industry will be utilized to support classroom activities.

**231 Super Market Supervision 3 hrs. Fall, Summer**

A course designed for providing techniques in supervising and developing people in the super market. Attention will be directed toward organization principles, labor relations, understanding people, communication, coach-

ing, and building a store team. Leadership concepts so necessary in the super market will be stressed. Periodic lectures from industry resource people will support classroom instruction.

**232 Super Market Operations** 3 hrs. Fall, Spring

Super Market Operations is a study of the principles and methods used in the operation of a super market with regard to organization, planning, control and general administration. The overall objective will be to develop an attitude and ideal in the students for efficient store operation. Resource people from the super market industry will appear in the classroom to support the instructional program.

## **PETROLEUM**

**120 Introduction to the Petroleum Industry** 3 hrs. Fall, Spring, Summer

A basic course in the study of the petroleum industry dealing with its history, exploration, drilling, production, refining, distribution and general economics of the industry. The course also includes the orientation necessary for the student to understand the cooperative work program and the student's responsibility to such a program.

**121 Petroleum Products Application** 2 hrs. Spring

Course deals with the various uses of the many categories of petroleum products as they are applied to the manufacturing, agriculture, transportation, and other industries, as well as for the individual home owner. Credit cannot also be earned in Ind. Tech. 222.

**123 Selling Petroleum Products** 3 hrs. Fall, Spring.

The principles of selling as applied to the petroleum industry. Class will be conducted on a laboratory basis with students planning sales campaigns based on selling petroleum products and associated TBA products at both wholesale and retail levels.

**220 Petroleum Distribution and Handling Techniques** 2 hrs. Fall, Spring

This course deals with crude oil and such things as its transportation, refining, product distribution, costs and methods of safe handling. It also includes marketing channels used by integrated petroleum companies. The nature and significance of markets including market research are also stressed along with the balance between supply and demand.

**227 Petroleum Distribution Finance** 2 hrs. Fall, Summer

The financial structure of petroleum retail outlets as it relates to proper capital investment, securing capital, taxes, interest, depreciation, and insurance. It also deals with the principles of retail credit and collections and retail installment selling.

**230 Service Station Operation** 3 hrs. Fall

This course deals with the responsibilities and activities of the petroleum company supervisor as they relate to retail establishments. Such items

as merchandising policies, advertising, inventory, governmental regulations, plant layout and equipment, safety and training of personnel are considered.

## COOPERATIVE OCCUPATIONAL

### 570 Organization and Operation of Distributive Education

2 hrs. Fall, Summer

Deals with the organization and operation of distributive education in relation to the total educational 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 in 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, Summer

This is a study of duties and responsibilities of the coordinator. The organization and establishment of training programs, supervision of trainees on the job, development of individual training programs, establishing working relationships between the school, business, and home; and participation in extra-curricular activities in the community. Especially adapted to prospective coordinators.

# Home Economics

Eunice E. Herald, Head  
Joan Cassilly

Gladys Rowe  
Marjorie Savage  
Opal Stamm

Betty Taylor  
Reva Volle

Western Michigan University prepares students to qualify as teachers of vocational Home Economics in Michigan under the provisions of the State plan for vocational education. Courses are planned in the Department for a major and a minor in home economics. Provision is also made for meeting the requirements for a vocational certificate in Michigan. Only persons holding this certificate can teach in the reimbursed homemaking departments in Michigan public schools.

Home Economics at the undergraduate level has for its primary objectives helping the individual student to achieve a rich and satisfying home, family and community life. It is concerned with the personal and group values that are desirable outcomes of successful living. It deals with the social, economic, aesthetic, managerial, health, and ethical aspects of family relations, child development, foods, clothing, and housing. Home Economics is an

education for personal development, for family and community living, and for several areas of professional specialization.

Home Economics Majors are required to complete Chemistry 100 or 102 and 105 and Biological Science 107 as part of the Basic Studies Program. American Government 200, or State and Local Government 204, Sociology 200 and Economics 200 or 502 are required in the Social Science area in addition to World Civilizations 100, 101 or Man and Society 102, 103.

Students who plan to teach Home Economics in Michigan schools must complete Home Economics Education 254, 340, and Education Courses 300, 470, 420, 450 or Vocational Education Course 520 in order to be eligible for a provisional certificate.

*Home Economics Major		Home Economics With Minors in Foods	
Textiles 100	3	Select 5-6 additional semester hours	
Foods 114	4	from:	
Effective Living 150	2	Diet and Disease 410	2
Elementary Design 161 (Art)	2	Advanced Nutrition 510	3
Clothing 202, 306	5	Institutional Management 512	3
Costume Design 204	2	Food Technology 514	2
Nutrition 210	3	Consumer Buying 516	2
Meal Planning 214	3	Experimental Foods 518	2
Quantity Foods 312	3	Demonstration Techniques 520	2
Home Furnishings 250	2		
Family Health 252	2	Home Economics With Minor in Clothing	
Human Growth 254	3	Select 5-6 additional semester hours	
Marriage and Family		from:	
Relationships 354	2	Advanced Textiles 302	2
Home Management 350, 352	5	Tailoring 304	3
Housing—Elective	2	Clothing 308	2
	—	Consumer Buying 516	2
	43	Demonstrations Techniques 520	2

\*Ten semester hours from this list may apply toward a minor in foods or clothing.

#### Home Economics Education Majors

Additional Course Work Required	
Special Methods 340	4
Introduction to Teaching 300	3
Education 420, 470, 450 or	
Voc. Edu. 520	14 or 15

The following courses are open to students from other curricula who wish a minor of 18 hours in Home Economics or use course work for elective credit: 100, 116, 150, 152, 200, 204, 212, 250, 252, 340, 350, 354, 500, 516, 550, 554.

**CLOTHING AND TEXTILES****100 Textiles** 3 hrs. Fall, Spring

A basic course. Textiles is taught from the consumer point of view. Some testing of fabrics is required.

**200 Clothing** 2 hrs. Fall, Spring

Gives experience in using commercial patterns and learning elementary construction techniques. Elective non-majors.

**202 Clothing** 3 hrs. Fall, Spring

Consists of making garments to develop a knowledge of construction techniques. Includes problems in pattern alteration. Prerequisite: 100.

**204 Costume Design** 2 hrs. Fall, Spring

This course is intended to develop more discriminating judgment in the selection of appropriate clothes for individuals. Prerequisite: Art 161.

**302 Advanced Textiles** 2 hrs. Fall

The study of the composition, construction, finishing, and care of textiles. Prerequisite: One clothing course, 100.

**304 Tailoring** 3 hrs. Spring

This course is planned to give experience in tailoring techniques, with emphasis on the making of coats and suits. Prerequisite: 202 or consent of instructor.

**306 Family Clothing** 2 hrs. Fall, Spring

Course is flexible in content to meet the needs of advanced students and those planning to teach. Includes study of clothing, budgeting, alteration of garments and construction of a child's garment. Prerequisites: 202, 204.

**308 Clothing** 2 hrs. Fall

Master pattern is draped in muslin on a dress form padded to the size of the individual. Experience is given in drafting and flat pattern making. Study is made of principles and techniques of fitting. Prerequisites: 202, 204, 306 or consent of instructor.

**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 1962-63)

**FOODS AND NUTRITION****114 Foods** 4 hrs. Fall, Spring

Gives a knowledge of basic principles underlying preparation of food. Laboratory experience in the preparation of all classes of food. Prerequisite or concurrent: Chemistry 100 or 102 and 103 or 105.



- 116 Family Foods** 2 hrs. Fall, Spring  
Emphasis on foods purchasing, menu planning, preparation and service of meals for the family. An elementary course for non-majors.
- 118 Nutrition** 2 hrs. Fall  
Principles of good nutrition for the individual, family groups, and community. Laboratory experience is given in the basic principles of cooking. For first semester nurses only.
- 210 Nutrition** 3 hrs. Fall  
A study of the essential nutrients and their function in the human body. Prerequisite: Chemistry 100 or 102 and 103 or 105.
- 212 Everyday Nutrition** 2 hrs. Fall, Spring  
This course includes problems related to signs of good and poor nutrition, for growing children and adults. A course for non-majors.
- 214 Meal Planning and Food Preservation** 3 hrs. Spring  
Marketing, meal preparation and table service. Emphasis on food preservation.
- 312 Quantity Foods** 3 hrs. Spring  
Quantity food preparation in a college residence hall kitchen and the school lunchroom. Prerequisites: 114, 210.
- 410 Diet and Disease** 2 hrs.  
Study of dietetic treatment of impaired digestive and metabolic condition. Planning of diets and reports of current research. Prerequisite: Organic Chemistry 360. (Not offered 1962-63)
- 510 Advanced Nutrition** 3 hrs. Fall  
Study of recent developments in nutrition through readings and experiments. Prerequisite: 214.
- 512 Institutional Management** 3 hrs.  
Study of institutional administration, job analysis, labor policies, personal problems, and cost control in different types of food-service institutions. Prerequisites: 214, 312. (Not offered 1962-63)
- 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. Prerequisite: 214.
- 516 Consumer Buying** 2 hrs. Summer  
Study of marketing problems and consumer credit. Students work on individual problems which concern the techniques of buying a specific type of consumer goods.

**518 Experimental Foods****2 hrs.**

Application of principles affecting food preparation. Development of experimental techniques. Prerequisites: Chemistry 105, 114, 214.

**520 Demonstration Techniques****2 hrs.**

A study of principles and techniques for demonstration in all areas of home economics. Practice will be included. Offered for homemaking teachers, demonstration agents, and home economists in business. (Not offered 1962-63)

## **HOME MANAGEMENT, CHILD DEVELOPMENT AND FAMILY RELATIONSHIPS**

**150 Effective Living****2 hrs. Fall, Spring**

An orientation course required of all freshmen in home economics. Personal problems in adjustment studied. Planning for marriage and the home of the future included. Freshmen in other departments welcome.

**152 Personality Development****2 hrs. Fall, Spring**

Social usage and personality development are considered. Elective non-majors by Freshmen.

**250 Home Furnishings****2 hrs. Fall, Spring**

Room arrangement, furniture, and furnishings are studied. Models of room arrangement are made. Prerequisite: An art course. Elective.

**252 Family Health****2 hrs. Fall, Spring**

The health of the family and simple procedures for the care of patients in the home are stressed. Consideration is given to community resources for the protection and care of health problems relating to home and school. Elective.

**254 Human Growth and Development****3 hrs. Fall, Spring**

This course involves study of the physical, social, emotional, and intellectual growth and development of children and adolescents.

**350 Home Management****2 hrs. Fall, Spring**

The study of the use of time, energy, money, and resources to achieve family goals. Prerequisite: A course in economics.

**352 Home Management Practice****3 hrs. Fall, Spring, Summer**

Students live in family size groups. They learn to manage on two economic levels. Prerequisite: 350.

**354 Marriage and Family Relationships****2 hrs. Fall, Spring**

A study of the contributions and problems of the family in modern society. Preparation for marriage, including consideration of marital and personality adjustments in family living. Prerequisite: Psychology 200 or Sociology 200. Elective.

**550 Family Living in the Schools****2 hrs. Summer**

Problems of organizing materials in Family Living for the purpose of teaching classes and working with groups in the total school program. Prerequisite: Soc. 200.

**552 The Homemaking Center and Equipment****2 hrs. Fall**

Consideration of fundamentals in planning living space in terms of the family's need with especial emphasis on built-ins and furnishings, fabric and color will be studied. Selected problems to be chosen by the individual. Prerequisite: 250 or consent of instructor.

**554 Housing****2 hrs. Spring**

A study of economic and social aspects of housing. Single, duplex, and multiple housing problems are considered. Prerequisite: 250 or consent of instructor.

**HOME ECONOMICS EDUCATION****340 Special Methods****4 hrs. Fall, Spring**

Course designed to acquaint students with the teaching field in home economics. Includes basic philosophy of home economics education, observations, unit planning, effective teaching materials as a basis for special methods and student teaching. Planning local programs of homemaking education in high school equipment and the organization of homemaking department, developing the home experience programs, and methods of teaching for junior and senior high schools and adult homemaking classes.

# Industrial Education

John L. Feirer, Head

John L. Bendix

Lawrence J. Brink

Lindsay G. Farnan

Rex Hall

Gilbert R. Hutchings

Gordon O. Johnson

Waldemar E. Klammer

John R. Lindbeck

Charles G. Risher

James L. Ulmer

Theo C. Zimmerman

**INDUSTRIAL EDUCATION COURSES**

The Industrial Education Department offers shop and professional courses for four purposes: (a) to educate teachers and supervisors of Industrial Arts who will teach general Industrial Arts in all levels of the public schools; (b) to educate teachers who will qualify to teach trade and industrial subjects in the secondary schools, or community colleges; (c) to educate students who wish a broad background in industrial subjects; and (d) to educate students in Printing Management.

**Industrial Arts Teaching**—A student who plans to qualify as an Industrial Arts teacher in both general and unit shops must take a minimum of 45 hours of technical work.

A group minor of twenty hours in two areas is required for an Industrial Arts Major.

For students not majoring in Industrial Education, one of the following minors can be selected:

1. A group minor consisting of the following courses: 100, 205, 120, 226, 130, 234, 160, 260, plus the professional course Teaching of Industrial Education.
2. A student may also take a 15 hour minor in any course sequence such as woods, metals, drawing, electricity, or graphic arts, plus the professional course Teaching of Industrial Education.

**Vocational Industrial Education Teaching**—A major in a trade specialty of 24 semester hours and a minor of 20 semester hours in Industrial Arts will be required.

**Industrial Education General Degree**—Students wishing to secure a broad general industrial background can major in Industrial Education. A total of 45 hours in the shop and drawing areas is required. The exact combination of courses will be determined by the needs of the student.

**Printing Management**—Students must pursue a major sequence of courses in Printing and Graphic Arts and a minor sequence in Business.

## **WOODWORK**

### **100 Basic Woodworking 2 hrs. Fall, Spring**

Survey course that provides experiences in the care, purchase, use of hand tools, and information about production and consumption of wood products. Wood classification, elementary wood finishing, and the operation of wood lathe, drill press, router, and scroll saw.

### **104 Rural Practical Arts 2 hrs. Fall, Spring**

A special course in general shop with emphasis on woodworking activities designed for prospective rural school teachers. This course is limited to students enrolled in the rural life and education department.

### **108. O.T. Special Education Shop 3 hrs. Fall, Spring**

A basic course in shop fundamentals, including the use of hand tools and machines, construction design, fastening devices, and finishing. This course is limited to students enrolled in Occupational Therapy.

### **204 Finishing 3 hrs. Spring**

The student will gain practical experience in the application of various finishes on both metal and wood. Related information on color theory and mixing will be included.

### **205 Machine Woodwork 3 hrs. Fall, Spring**

An introductory course on the use of machine woodworking equipment. The student will receive experience in setting-up, operating, and caring for the more commonly used machines such as circular saw, jointer, shaper, planer, etc. Parts for selected projects will be machined. Prerequisite: 100.

**304 General Woodwork** 3 hrs. Spring

Additional machine experience including advanced techniques in wood turning. Methods of upholstery including tools, materials, frames, and upholstery procedure. Prerequisite: 101 and 205.

**306 Advanced Woodworking** 3 hrs. Fall

Covers experiences in house construction and wood patternmaking. House construction will cover framing a house. Patternmaking will include building up patterns for school shop use. Prerequisites: 100 and 205.

**506 Furniture Construction** 3 hrs. Spring

Emphasizes the design and construction of fine furniture. Includes lamination of plywood. Each student required to design and carry to completion a finished piece of furniture. Prerequisites: 100 and 205.

**508 Building Construction Techniques** 3 hrs.

Examines modern construction methods in the area of cement, metal, electricity, wood, glazing, and other related areas as applied to home building. It also studies construction methods both in custom building and in prefabrication.

**DRAWING****120 Beginning Drawing** 2 hrs. Fall, Spring

A survey course in general drafting providing the student an opportunity to develop basic drafting skills. Many types of drafting are covered including sketching, engineering, architectural, and shop drafting.

**226 Advanced Drafting** 3 hrs. Fall, Spring

A continuation of principles emphasized in Drafting 120. Orthographic projection, dimensioning, pictorial drawing, sections, auxiliary views, architectural drawing, sheet metal drafting, electrical drafting, furniture drafting, and drawing reproduction are included.

**227 Freehand Drawing** 2 hrs. Fall

A course designed to improve freehand sketching and rendering skills. Involves principles of sketching, shading, shadows, and review of drawing fundamentals.

**326 Mechanical Drawing** 2 hrs. Fall, Spring

More advanced problems in mechanical drawing, detailing, design, theory application, ranging from simple geometrical problems through surface development, cams, gears, and some architectural drawing. Special emphasis on review of the fundamentals of drawing and discussion problems.

**524 Architectural Planning and Design** 2 hrs. Fall

Architectural details, plans, elevations, rendering, tracing, and blue-printing, and estimating of simple one- and two-story buildings. Outside reading for architectural appreciation.

**525 Architectural Planning and Design****2 hrs. Spring**

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

**METAL WORK****130 General Metals****3 hrs. Fall, Spring**

Includes hand tool processes and related information in the areas of forging, bench metal, sheet metal, and art metals to provide metal working experiences suited to junior and senior high school industrial arts classes.

**234 Machine Shop****3 hrs. Fall, Spring**

Includes the fundamentals of machine tool operations and foundry practices involving drilling, turning, shaping, grinding, and the casting of parts of a selected project to be assembled at the bench.

**235 Machine Shop****3 hrs. Spring**

An advanced course dealing with foundry practices and with machine tool operation in the casting, the finish machining, and the fabrication of machine parts. Prerequisite: General Metals 130 and Machine Shop 234A.

**334 Sheetmetal****2 hrs. Spring**

An introduction to the application of hand and machine processes. Cutting, forming, seaming, burring, crimping, notching, and wiring as applied to the making of sheetmetal projects.

**336 Metal Fabrication****2 hrs. Fall**

A course in gas and arc welding for beginners. Safety precaution, care and operation of welding equipment, selection of welding rod, methods of welding will be stressed.

**338 Advanced Metals****3 hrs. Spring**

Advanced hand tool and machine processes in the areas of forging, bench metal, sheetmetal, metal fabrication, foundry, art metal, and other areas of metal working used in the school shop situation.

**538 Problems in Metalworking****2 hrs. Summer**

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

**PRINTING AND GRAPHIC ARTS****150 Survey of Graphic Arts 2 hrs. Fall, Spring**

An introductory course in the field of graphic arts in which the student will have an opportunity to become familiar with the large area of graphic arts. Work is undertaken in hand composition, presswork, bindery, block cutting, mimeographing, silk screen, etc.

**152 Presswork 2 hrs. Fall, Spring**

This is an introductory course in presswork, and includes simple lockup, make-ready and feeding.

**154 Graphic Arts 2 hrs. Spring**

A continuation of 150. A thorough study of all graphic arts processes used in industry is undertaken. Letterpress, offset, flexographic and intaglio receive special emphasis. Advantages and best uses as well as disadvantages and limitations are considered for each of the methods of printing.

**156 O.T. Printing 3 hrs. Fall, Spring**

This course is intended to acquaint the student with the various tools and equipment of a graphic arts shop. Studies are undertaken in such areas as typography, presswork, silk screen, block cutting, bookbinding and etching. Limited to students enrolled in the Occupational Therapy curriculum.

**250 Typography I 3 hrs. Fall**

Work in the arrangement and use of various design elements in typical printed jobs and in advertisements.

**251 Typography II 3 hrs. Spring**

A continuation of 250 with the emphasis on the more complicated kinds of composition.

**254 Linotype Composition 3 hrs. Fall**

This course deals primarily with the operation of the linotype keyboard. Straight composition is emphasized. Consult instructor for laboratory schedule before enrolling.

**255 Linotype Composition 3 hrs. Spring**

This course considers the problems of job, advertisement, and newspaper composition. Consult instructor for laboratory schedule before enrolling.

**350 Imposition and Lockup 2 hrs. Fall**

The imposition and lockup of type forms for various kinds of presses and from the simple to large multiple page forms is studied in this course.

**352 Layout and Design** 3 hrs. Fall

Students will undertake the complete layout and design of such jobs as tickets, name cards, letterheads, programs, newspaper advertisements, newspaper pages, and covers. Principles of balance, proportion, harmony, art, color, copy-fitting, etc., as applied to such jobs will be studied.

**356 Printing Machinery Maintenance** 2 hrs. Fall

This course is designed to acquaint the student with the problems of care and maintenance of printing machinery including the linotype. Simple adjustments are made on the various machines.

**357 Printing Machinery Maintenance** 2 hrs. Spring

This course gives the student practical experience in caring for machinery in actual operation.

**450 Advanced Presswork** 2 hrs. Spring

Practical presswork and make-ready of various kinds of forms for both cylinder and jobbers is undertaken. Offset press problems and practice are included.

**452 Estimating** 2 hrs. Fall

A study of the methods used in estimating the price of printed matter before manufacture and in the final pricing of that matter after production.

**453 Printing Production Control** 2 hrs. Spring

A study of various systems used in the printing industry for planning and controlling the flow of work through the plant in order to maintain equalized work loads and meet delivery schedules.

**455 Bindery Operations** 2 hrs. Spring

Bindery and finishing operations are studied. Work in book-binding, folding machines, stitching, plastic binding, punching, perforating, etc., is taken up.

**ELECTRICAL****160 Introductory Electricity** 2 hrs. Fall, Spring

A survey course in the field of electricity. Special attention will be given to elementary wiring, construction of school shop electrical projects, and a general introduction into the field of electronics and electrical appliances.

**260 Advanced Electricity** 3 hrs. Fall, Spring

A study of the principles of electricity and their practical application. Work experiences in electric motors, transformers, heating devices and batteries are supplemented by a usable technical background. Techniques and practice of electric wiring are included. Prerequisite: Shop Mathematics.



**560 Basic Electricity and Electronics****2 hrs. Summer**

Designed for junior and senior high school shop and laboratory teachers of electricity and electronics. Emphasis will be placed on new methods and materials. Laboratory practice will be provided in applying new techniques and development of teaching projects in electricity and electronics. Industrial Arts and science teachers should find this workshop quite valuable in the light of our increasing technological development.

**GENERAL SHOP****170 Introduction to Industrial Education****2 hrs. Fall, Spring**

A course designed to familiarize industrial education students with the basic philosophy of industrial education and its functions in an education program. The many aspects of industrial education are covered including historical background, social implications, Federal and State legislation, teacher qualifications, certificate requirements, and special methods and applications. Introduces related subject matter areas such as drafting, graphic arts, power, wood and metal working, electricity, and craftwork, through field trips, discussions, visual aids, and speakers.

**174 Industrial Arts for Elementary Teachers****3 hrs. Fall, Spring**

This course is planned for prospective elementary school teachers and will include a study of Industrial Arts for grades one through six. Construction techniques in the fields of woods, metals, leather, and plastics will be included. An understanding of our industrial life in our modern society will be emphasized. Special Education students may take this course for four semester hours of credit.

**177 O.T. General Shop****3 hrs. Fall, Spring**

A course designed exclusively for individuals training for occupational therapy. This course will cover the fundamentals of drawing, sketching, plastics, cold metals, copper work, and elementary electricity.

**270 Art Metal****2 hrs. Spring**

An introductory course in the study of art metal. Methods of layout, cutting, forming, and assembly will be stressed. Practical application in the form of finished projects of an artistic nature will be emphasized.

**271 Jewelry****2 hrs. Spring**

A beginning course dealing with the design and construction of items of jewelry and enameling.

**272 Related Arts and Crafts****3 hrs. Fall, Spring**

A general course in arts and crafts including work in thin metals, plastics, leather, elementary wood, and other related craft activities. Extension only.

**273 Related Arts and Crafts 3 hrs. (Extension only)**

Advanced work in arts and crafts including advanced art metal, plastics, and other crafts not previously included.

**276 Industrial Arts Design 2 hrs. Fall, Spring**

A laboratory course dealing with the elements and principles of good design as applied to industrial arts projects. Course emphasis is upon developing design techniques, recording design ideas, and constructing project models.

**278 Leather, Plastics, and Archery 2 hrs. Spring**

A course for prospective Industrial Arts teachers in the major crafts of leather, plastics, and archery. Students will have an opportunity to construct projects and do activities suitable to leisure time work.

**370 General Shop 3 hrs.**

A comprehensive course covering a variety of media used in the industrial arts field with the activities centered around a design core. This course is planned for students who will teach in a general shop organization.

**372 Procedures and Methods in Industry 2 hrs. Fall, Spring**

A study of the methods of manufacture and distribution of industrial products. Students will visit industrial plants and write reports on the application of technology to the school shop.

**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. Written reports will be required. Course content will be adapted to individual needs.

**572 Arts and Crafts for Teachers 2 hrs. Summer, Spring**

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.

**POWER AND TRANSPORTATION****180 Power Mechanics 2 hrs.**

A study of basic power machines with principal emphasis on two and four cycle engines such as used on power mowers, and outboard motors.

**284 Transportation 3 hrs. Fall**

A survey course dealing with the design, use, and function of all types of power-driven equipment. The emphasis in this course will be placed on power mowers, outboard motors, and automobiles.

**285 Transportation****3 hrs. Spring**

Advanced work in automobile maintenance and servicing. Special emphasis will be given to the study of testing equipment used in auto mechanics.

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

A course dealing with the educational, social, economic and political implications of aviation in the modern world. A study will be made of basic aviation materials and activities that are appropriate for different grade levels. Consideration will be given to aviation literature and visual aids suitable for youngsters. Opportunities will be provided for participation in a variety of aviation experiences. This course is open to elementary and secondary education students.

**588 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.

**PROFESSIONAL COURSES IN INDUSTRIAL EDUCATION****344 Teaching of Industrial Education****3 hrs. Fall, Spring**

This course deals with the problems in teaching industrial subjects, the techniques employed in the analysis of instructional units, construction of tests and rating scales, and problems dealing with administration and work. The principal methods of instruction used in industrial subjects will be emphasized.

**345 Plan and Organization of a School Shop****2 hrs. Fall, Spring**

This is a course to help teachers plan and organize the school shop. Topics concerned include physical needs of the subject, selection of activities, shop layout, purchasing equipment, establishing a supply routine, planning personnel organization, and shop management.

**540 Industrial Arts for the Elementary School****2 hrs. 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. 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.

**548 History and Philosophy of Industrial Education****2 hrs.**

Industrial education in America, with special attention to European influences, experiments, industrial developments and theories. Emphasizes developments leading to modern practices in industrial arts and vocational-industrial education.

# Engineering and Technology

Joseph W. Giachino, Head  
E. Martin Basic  
Henry J. Beukema  
Donald Black  
Elmer Brune  
Herbert E. Ellinger

Roy Groulx  
G. Stewart Johnson  
Dale King  
Don W. Nantz  
Robert Ring  
William Schreiber  
Pat Schiffer

Frank Scott  
Clarence VanDeventer  
William Weeks  
William Wichers  
Glade Wilcox  
Lester Zinser

The Department of Engineering and Technology is concerned primarily with preparing personnel for industry. It offers the following types of programs:

**Four Year Curricula—B.S. Degree**

1. Automotive Engineering Technology
2. Aviation Engineering Technology
3. Engineering Technology—Mechanical-Electrical
4. Industrial Distribution
5. Industrial Engineering
6. Industrial Supervision

**Two Year Curricula—Certificate**

1. Aircraft and Aircraft Engine Technology
2. Automotive Technology
3. Drafting and Design Technology
4. Electronics Technology

A major can be earned only by being enrolled in one of the curricula offered by the department.

A minor may be secured upon the approval of the departmental advisor and by completing 15 to 20 semester hours of work, depending upon the area of specialization. No minor will be given in industrial supervision.

After completing a two-year program, a student may transfer into a degree technical program upon the recommendation of the counselor.

## **AUTOMOTIVE**

### **124 Basic Automotive Engines 3 hrs. Fall, Spring**

A study of the design, construction and operation of automotive engines. Theory is supplemented with actual laboratory work involving disassembly, visual and mechanical inspection of parts, assembly and operation.

### **125 Automotive Chassis and Running Gear 2 hrs. Fall, Spring**

A course dealing with the design, construction and service operations of automotive clutches, standard transmissions, drive shafts, rear axles, suspensions, wheel alignment and brakes.

### **126 Automotive Electricity 2 hrs. Fall**

A comprehensive study of the design, construction, operation and testing of automotive batteries, starters, generators, regulators, and accessory circuits. Practice is provided in operating standard electrical testing equipment such as generator test bench, regulator tester, growler, charger, voltmeter, and ammeter.

### **222 Fuels and Lubricants 2 hrs. Fall, Spring**

Fuel and lubricant requirements of modern gasoline power plants are studied and their performance factors analyzed under varying operating conditions. Actual laboratory tests will be conducted to ascertain such elements as octane rating, viscosity, volatility, flash point, carbon residue, additives and knock characteristics. Credit cannot also be earned in 121 Dist. Ed.

### **224 Automotive Engine Analysis 3 hrs. Fall**

Theory and practice in diagnosing and tuning modern automotive engines with analysis equipment such as motor analyzer, tune-up tester, oscilloscope, dynamometer and distributor tester. Prerequisite: 124, 126.

### **324 Automatic Transmission and Power Equipment 3 hrs. Spring**

A study of the principles and design of automatic transmissions, power steering, and power brakes. Laboratory experience is provided in diagnosing, testing and adjusting power equipment both on test bench and in actual road operating situations. Prerequisite: 125.

### **325 Automotive Testing 2 hrs. Spring**

Standard tests of automotive components are run on engine dynamometer, chassis dynamometer, transmission test bench, and wheel aligner; graphs of operational characteristics are prepared and results analyzed. Prerequisite 224.

**422 Automotive Service Management 2 hrs. Fall**

A study of the principles involved in managing automotive repair shops and procedures in maintaining proper customer service relations.

**424 Automotive Design Analysis 3 hrs. Fall**

Design elements of automotive components are studied from the standpoint of operational efficiency; comparative tests are made to note changes in operating characteristics and modification of units analyzed to achieve maximum performance. Technical reports of secured data are prepared. Prerequisite 325.

**AVIATION****110 Airframes 3 hrs. Fall, Spring**

This course deals with theory and practical application of aircraft repair procedures on fabric, wood and plastic components in accordance with FAA regulations.

**111 Aircraft Welding 2 hrs. Spring**

Theory and practices governing FAA aircraft welding techniques.

**112 Powerplants 3 hrs. Fall, Spring**

Theory and laboratory work dealing with disassembly, inspection and assembly of aircraft power plant.

**113 Airframes 2 hrs. Fall, Spring**

Theory and application of maintenance and repair procedures on metal covered airframes as required by FAA.

**115 Powerplants 2 hrs. Fall, Spring**

Theory and laboratory work involving inspection, operation, maintenance and repair of aircraft engine accessory systems such as carburetion, fuel injection, lubrication, and various vacuum and hydraulic power units.

**116 Introduction to Aviation 3 hrs. Fall**

An introductory course covering basic principles and terminology of airframes, powerplants, jet engines, theory of flight, and FAA publications.

**118 Pilot Training 2 hrs. Fall, Spring, Summer**

A course leading to a private pilot flight certificate. Instruction consists of three phases:

Section A: Flight training—40 hours.

Section B: Ground school—Study of flight rules, navigation, meteorology and mechanics as required for FAA examination.

Section C: Link training—5 hours of simulated instrument flying in a Link.

This course meets the requirements of the Army Flight Training program offered to advanced course ROTC students.

**119 Commercial Pilot Program 2 hrs. Fall, Spring, Summer**

This unit is planned for students who have a private pilot's license. The ground school aspect of this unit is intensive and will prepare the student for his FAA written examination.

**210 Airframes 3 hrs. Fall, Spring**

A study of hydraulics and electrical systems of aircraft; maintenance and repair procedures as stipulated by FAA regulations.

**212 Powerplants 3 hrs. Fall, Spring**

Theory and laboratory work covering overhauling procedures, testing and operation of aircraft engines and propellers in accordance with FAA regulations.

**213 Airframes 2 hrs. Fall, Spring**

Theory and practical work involving weight and balance of aircraft, rigging and inspection procedures as required by FAA.

**215 Powerplants 2 hrs. Fall, Spring**

A study of FAA powerplants records and regulations, periodic inspections, trouble diagnoses and field maintenance.

**218 Aircraft Servicing 4 hrs. Summer**

The primary objective of this course is to provide the student with an opportunity to conduct periodic inspections, routine and preventive maintenance, minor repairs on flying aircraft and a complete review of all regulations and FAA publications. The student will also have the opportunity to learn servicing of aircraft and the management of a small airport. Required for all students who plan to qualify for the FAA Airframes and Powerplant Mechanics Certificate.

**219 FAA Maintenance Regulations 1 hr. Spring**

A course designed to prepare students for the FAA written and practical-performance examination.

**310 Passenger and Freight Traffic 3 hrs. Fall**

A study of the practices governing regulations of air freight and passenger traffic; determination of rates and tariffs, reservations and ticketing procedures and Federal policies concerning passenger and freight traffic.

**312 Jet and Rocket Power Plants 2 hrs. Spring**

A course involving a study of gas turbine and jet powerplants including turbo-jets, turbo-props and rocket motors.

**410 Airline Operations 2 hrs. Spring**

A course dealing with the operational phases of scheduled airlines. Special emphasis is placed on such elements as dispatching, airport and terminal requirements, maintenance schedules and economics of flight operation.

**412 Airline Administration****2 hrs. Fall**

This course covers the history of commercial air transportation in the United States; the basic Federal laws and international agreements governing the operation of commercial airlines; labor and management relations in airline industries. Study is also made of such administrative functions as operational budgets, CAB uniform accounting system and Federal subsidies.

**DRAFTING****230 Engineering Drawing****3 hrs. Fall, Spring**

The essentials of drafting—lettering, instrument usage, applied geometry, freehand sketching, orthographic projections, auxiliaries and sections, dimensioning practice, detail and assembly drawing, conventions and standard drafting practices. Pictorial drawing and presentation of engineering data through the media of charts and graphs is also included. Reproductions of drawings are made on modern whiteprinting equipment. Prerequisite: 232 or equivalent.

**231 Descriptive Geometry****3 hrs. Fall, Spring**

The development of clear and accurate space concepts through the medium of a comprehensive study of points, lines, planes and solids in all possible relative positions, measurements of distance and angles, intersections, true sizes and shapes of plane areas and development of curved surfaces. Emphasis is placed on analytical procedures and the importance of accuracy and systematic notation in graphical solutions.

**232 Technical Drawing****2 hrs. Fall, Spring**

A condensed course covering the basic principles and techniques of engineering drafting and its relationship to the industrial manufacturing processes.

**234 Tool and Die Design****2 hrs. Spring**

This course includes practical work assignments in the layout and design of jigs, fixtures, dies and other production tools related to the machine tool field.

**330 Machine Drawing and Design****3 hrs. Fall, Spring**

This course is an intensive treatment of the elements of machine design. Specific problems are undertaken in the design of gears, cams, linkages, springs, etc., as well as the fabrication of other machine components. Emphasis is placed on the use of standard and purchased parts in manufacturer's and suppliers' catalogs. Standard engineering department practices are followed throughout. The use and maintenance of modern print-making equipment is also included.



**331 Industrial Design** 3 hrs. Spring

A course in design and development of manufactured products through a study of basic elements of industrial design. Models, lock-ups, prototypes, etc., will be constructed of students' designs.

**430 Drafting for Production** 3 hrs. Spring

A study of drafting for industrial production and the design and development of the necessary tooling for mass-produced products. Illustrative techniques involving drawings for catalogs, sales and service manuals, etc., will also be included.

**ELECTRONICS****240 Technical Electricity** 3 hrs. Fall, Spring

An introductory course covering electrical theory and its application in measurement, transmission and control of loads.

**241 Basic Electronics** 3 hrs. Fall, Spring

This course is planned to provide the student with an over-view of electronic theory, covering the principles of vacuum tubes, gas tubes, and semi-conductors and their application to communication, industry, measurement and physiological study. Prerequisite 240.

**242 Radio, T.V. and Electronic Practices** 2 hrs. Spring

Laboratory problems in diagnosing malfunctions in radio and T.V. sets; construction of electronic models and preparation of technical literature.

**342 Applied Measurements** 3 hrs. Fall

An introductory course in electrical and electronic measurements. It provides the student with essential theoretical and practical experience in the measurements of electrical and electronic quantities. Prerequisite 241.

**343 Electronic Devices** 3 hrs. Spring

A course designed to provide a comprehensive background in electronic theory and electronic devices for advanced study in such fields as electronic control, communication and measurement. Prerequisite 342.

**345 Industrial Electronics** 3 hrs. Spring

A study of the design, maintenance and characteristics of electronic assemblies applicable to industrial control and automation. Prerequisite 343.

**346 Industrial Electricity** 3 hrs. Fall

Covers the application of electrical power to industrial usage and operating characteristics of AC and DC machines and controls. Prerequisite 240.

**443 Communication Electronics** 3 hrs. Spring

A course dealing with the study of electronics as applied to such fields as radio, television, telemetry, and other transmission and receiving devices. Prerequisite 343.

**449 Instrumentation****3 hrs. Fall**

This course covers electrical and electronic instrumentation including sensing, recording, indicating, and control devices. The measurement of non-electrical phenomena and their application to instrumentation for the automation of process control and flow production is stressed. Prerequisite 342.

**MECHANICAL****155 Basic Metallurgy****3 hrs. Fall, Spring**

The student is given the opportunity to become acquainted with the properties of metals, working of metals into various forms and shapes, thermal treatments, phase diagrams, and methods of securing desirable physical properties.

**152 Industrial Machine Shop****3 hrs. Fall, Spring**

This course in machine shop practice is designed to analyze and give laboratory experiences in layout procedures, common measuring techniques, standard inspection methods, and machine tool processes. Machining operations will involve the use of the following pieces of equipment: lathe, horizontal milling machine, vertical milling machine, surface grinder, cylindrical grinder, pedestal grinder, tool grinder, shaper sensitive drill press, radial drill press, cut off saw, and contour saw.

**160 Heat Transfer****3 hrs. Fall, Spring**

This course is intended to acquaint the student with the various applications of the principle of heat transfer as it is applied in modern manufacturing processes and methods. Special emphasis is given to applications of heat transfer principles in the fields of refrigeration, air conditioning and heating.

**252 Manufacturing Process****3 hrs. Fall, Spring**

Practical problems are assigned using production equipment in the machining and finishing of various metals. Cutting force, tool life, power, chip formation, cutting fluids, tool shapes, speeds, and feeds are analyzed. Precision layout procedures, precision measuring techniques, and precision inspection methods are correlated with production operations on the turret lathe, automatic screw machine, chucking grinder, boring mill, and lapping machine.

**254 Molding and Coremaking****3 hrs. Fall, Spring**

A course of study designed to give the student laboratory experience and a knowledge of the processes, methods, tools, machines and materials used in molding and coremaking applications. The course includes the testing of materials used in molding and coremaking by the gray iron, steel, malleable iron, and non-ferrous foundries.

**258 Industrial Welding****2 hrs. Fall, Spring**

This course involves study of the techniques and processes used to fabricate metals by welding. Laboratory experiences will include oxyacetylene, electric-arc and inert gas-shielded-arc equipment.

**352 Pressworking of Metals****3 hrs. Fall**

Standard pressworking methods are analyzed in the construction and use of dies for blanking, shaving, bending, forming, and stamping metals in standard power presses and brakes.

**356 Advanced Metallurgy****3 hrs. Spring**

An advanced study of the effects of alloying elements upon the microstructure and mechanical properties of metals, principles of alloying and melting, equilibrium and non-equilibrium phase changes, deformation of metals, surface hardening, and power metallurgy.

**360 Air Conditioning****3 hrs. Spring**

Theory and application of all the elements governing the conditioning of air for healthful living, air purification, humidity control, temperature control, filtration and servicing of various types of air conditioning and heating systems.

**RELATED ENGINEERING AND TECHNICAL****90 Technical Computations****3 hrs. Fall**

A refresher course for students having a limited background in mathematics. Deals with basic algebraic, geometric and trigonometric computations. Credit is granted only for two-year technical programs.

**104 Industrial Calculators****1 hr. Fall, Spring**

A course designed to give the student instruction in the use of the slide rule, and an opportunity to acquire proficiency in the application of its various scales.

**170 Industrial Processes****3 hrs. Fall, Spring**

This course is designed to give students laboratory experiences and a knowledge of the tools, machines and processes used to join and fabricate such metals as steel, galvanized iron, stainless steel, aluminum and plastics. Joining processes include oxyacetylene, arc, inert-gas-shielded arc, spot welding, soldering and riveting.

**171 Industrial Processes****3 hrs. Fall, Spring**

Theory and laboratory experiences dealing with the processes used to machine, shape, cast and finish metals. Machining processes include turning, shaping, milling, grinding, drilling, reaming and threading. Metal casting involves molding and coremaking techniques and laboratory testing methods.

**270 Metal Processing****2 hrs. Fall, Spring**

An introductory study of the principles and practices relating to the properties, processing and application of ferrous and non-ferrous metals, woods, cements, and plastics. The micro-structure and physical properties of materials are analyzed. The effects of heat-treating, welding and working of materials are tested and their suitability for fabricating purposes studied. Prerequisite: Engineering Materials 210.

**370 Strength of Materials****2 hrs. Fall, Spring**

This course deals with compression, tension, shear, torsion, and bending forces in structural members, including distribution of stress, deflections, buckling, and fatigue on engineering materials.

**372 Testing of Materials****2 hrs. Fall, Spring**

A course involving operating principles of testing equipment, determination of mechanical properties of materials, designing and planning testing procedures, interpretation of test results and report writing.

**374 Fluid Dynamics****2 hrs. Fall, Spring**

A comprehensive course covering the practical application of fluids in motion. This course illustrates the relationship between fundamental principles and modern industrial hydraulic equipment.

**376 Thermodynamics****3 hrs. Fall**

A comprehensive course dealing with the fundamental laws of Thermodynamics, including gas and vapor processes, both non-flow and steady-flow, and thermodynamic cycles. Study is made of pressure-volume, temperature-entropy, temperature-enthalpy relationships, steam tables, psychrometric charts, and atmospheric air.

**378 Statics****3 hrs. Fall, Spring**

Mathematical and graphic techniques for ascertaining the magnitude of forces acting on structural bodies under static loads. Included will be concepts of vectors; moments and couples; resultants and equilibrium of general force systems; free body analysis; and a study of beams, friction, and elementary structure.

**474 Dynamics****3 hrs. Spring**

A course dealing with the kinematics of rectilinear and curvilinear motion. Included will be a study of rigid bodies in plane motion and about a fixed axis as well as a study of relative motion and moments of inertia.

**INDUSTRIAL SUPERVISION****200 Industrial Relations 3 hrs. Fall, Spring**

This course deals with the principles of employee-employer relations. It includes a study of the basic provisions of the Workmen's Compensation, Social Security, and Labor-Management Relations Acts. Particular attention is given to the human relations aspects of industry.

**300 Fundamentals of Industrial Supervision 2 hrs. Fall, Spring**

A basic course in the study of the foreman's duties, responsibilities, and employer-employee relationship in modern industrial practice.

**302 Plant Safety 2 hrs. Fall, Spring**

The course emphasizes the importance of industrial safety in the general atmosphere of industry. The cost of accidents, fundamentals of accident prevention, the elements of an effective safety program, accident investigation, first aid and personal protective equipment are all parts of the many aspects to be studied.

**304 Motion Study 3 hrs. Fall, Spring**

A study of the methods used to analyze a piece of work for the purpose of eliminating all unnecessary motions and building up a sequence of the most useful motions for maximum efficiency. Prerequisite: 171 or 152.

**305 Time Study 3 hrs. Fall, Spring**

This course deals with the procedures to be followed in accurately determining the time required by a qualified person working at a normal pace to do a piece of work. Prerequisite: 171 or 152.

**306 Production Control 3 hrs. Fall, Spring**

The methods of controlling and coordinating the factors of production, including materials, time and labor. Emphasis is placed on industrial organization, installation, and types of systems used in industrial production control. Special attention is paid to such control measures as tool control, engineering specifications, inventory control, cost factors, dispatching procedure and forecasting techniques.

**308 Quality Control 3 hrs. Fall, Spring**

A program dealing with the fundamental systems for controlling the quality of material in desired limits. The principles and techniques of administration are discussed as well as a basic introduction to the statistics involved. Standard practices in quality control measures including frequency distributions, control charts, sampling procedures and continuing analysis are all reviewed. Prerequisite: Bus. 244 or Math. 260.

**400 Modern Industrial Practices 6 hrs. Summer**

Students will observe and analyze actual supervisory and managerial functions in industrial and commercial establishments. Conference procedures will be used with consultants participating in exploring all facets of supervisory and managerial practices and procedures.

**404 Materials Handling****3 hrs. Fall, Spring**

This course deals with the principles involved in the preparation, placement and positioning of materials, supplies and products (in any state) to facilitate their movement or storage. It embraces an analysis of different methods and equipment by which they may be moved or stored and the cost considerations attendant upon them.

**406 Conference Leadership****3 hrs. Fall, Spring**

Designed to prepare the student entering industry with the basic methods of planning and presenting an industrial conference. Audio-visual aids (charts, graphs and films) will be reviewed as to importance and ways of presentation. Techniques of leadership with opportunity for practical application of these techniques will be provided.

**500 Practical Labor-Management Relations****3 hrs. Fall, Spring**

A course dealing with existing relationships between government agencies, labor organizations and management. Particular emphasis will be placed on collective bargaining procedures. Prerequisite: 200.

**501 Plant Layout****2 hrs. Spring**

A study of the relationship between plant layout and process arrangement. The importance of layout is emphasized as a primary tool with which to effect efficient production. Consideration is given to such factors as plant location, type of factory buildings, layout of equipment, auxiliary departments and building services.

# Military Science

Colonel Albert H. Jackman, Head  
Major Richard J. Woolshlager  
Captain David E. Wade  
Captain Robert E. Ritz  
Captain Richard R. Hubbard

M/Sgt Joseph H. Hawkey  
M/Sgt Theodore Giuchici  
SFC Ralph T. McGuire  
SFC Floyd E. Prim  
SFC Louis E. Wade

SP5 Charles G. Rice

The Department offers two curricula. Option I stresses courses that provide a broad base on which the future citizen can develop an understanding of the role of the United States in World Affairs or from which he may later make a career in civilian or governmental activities, especially beyond the limits of continental United States. Option II provides an opportunity for students who wish to combine study under some other school or curriculum with those courses required to obtain a commission in the Organized Reserves or the Regular Army. A group minor in Military Science may also be obtained. (p. 63).

This Department is a General Military Science Reserve Officers Training Corps Unit, which provides training in the Senior Division ROTC, United States Army, through the ROTC program. Graduates may be commissioned Second Lieutenants in a branch of the Regular Army or United States Army Reserve. Enrollment in the ROTC program at Western Michigan University is on a voluntary basis. However, students who enroll in the Basic Course will be required to complete the two-year Basic Course as a requirement for graduation. Transfer students of less than Junior standing who started Army or Air Force ROTC training in another institution will be required to register for the appropriate class of the Basic Course and complete the Basic Course as a requirement for graduation.

The head of the Department is an officer of the United States Army. He is assisted in his duties by other officers and enlisted men of the Army on active duty. The personnel assigned provide the instruction to the student cadets and the administration of the ROTC program at the university.

The ROTC offers basic and advanced courses. Upon completion of both the Basic and Advanced Courses, the prescribed summer camp training, and a college degree, students may apply for commissions as Second Lieutenants in the United States Army Reserve. Flight training is available in the Advanced ROTC Program on a very competitive basis. (See Page 112.) Distinguished Military Students are eligible, upon completion of the prescribed courses, summer camp and college degree, to apply for appointment as Second Lieutenants in the Regular Army.

Students who are enrolled in the ROTC program and maintain satisfactory academic standards may apply for deferment from military service for the purpose of completing college.

Uniforms are provided by the Government to all students who take ROTC work. Additional emoluments for advanced course students are described under the heading of Advanced Course.

A shoe deposit of \$3.25 is required of all students upon entering the Basic Course. This deposit is returned after completion of the first year of the program. An ROTC Activity fee of \$1.50 per year is charged for the support of ROTC activities such as rifle team, band, drill meets, military social events, and for providing suitable achievements awards.

## BASIC COURSE

The first two years of military science comprise the Basic Course which is designed to furnish a background of basic military subjects necessary to pursue the Advanced Course. The requirements for enrollment in the Basic Course are as follows: the student must be a citizen of the United States, over 14 and under 23 years of age, physically qualified for military service, regularly enrolled at Western Michigan University, and of good moral character. Students who have had three years of Junior ROTC work (High School ROTC) or six months or more of active military service may substitute such Junior ROTC training or active military service for the first year of the basic college ROTC course, upon the approval of the Professor of Military Science. Students who are thus excused from taking the first year of the basic ROTC course will normally be allowed to enter into the second year of the basic ROTC program at the beginning of their sophomore year. The records of students transferring from other institutions with less than two years basic ROTC credit will be reviewed by the Professor of Military Science with a view to placing such students in the appropriate ROTC class. Basic Course classes meet for two hours of classroom work and one hour of drill weekly. Although enrollment in ROTC is voluntary, students who enroll in the Basic ROTC Course are required to complete the course.

### MS 100 Military Science

2 hrs.

Includes instruction in Organization of the Army and ROTC; Individual Weapons and Marksmanship; U. S. Army and National Security; and School of the Soldier and Exercise of Command.

### MS 101 Military Science

2 hrs.

Includes American Military History; School of the Soldier and Exercise of Command.

### MS 200 Military Science

2 hrs.

Includes instruction in Map and Aerial Photograph reading, Combat Examples of the Application of the Principles of War; School of the Soldier and Exercise of Command.

### MS 201 Military Science

2 hrs.

Basic Unit Tactics; and School of the Soldier and Exercise of Command.



## ADVANCED COURSE

The selection of students for enrollment in the Advanced Course is on a quality basis. Special attention is given to maintenance of high standards of conduct and academic achievement both before and after enrollment in the Advanced Course. The entire Advanced Course is concentrated on the development of individual leadership and a sense of responsibility for duty as an officer of the Army of the United States. For admittance to the Advanced Course, a student must have completed the Basic Course, be selected by the Professor of Military Science and the President of the university, not be over 25 years of age at time of enrollment, and must execute a contract with the Government to finish the course, attend a six-week summer camp, and accept a reserve commission if tendered. When this contract is signed completion of the Advance Course becomes a requirement for graduation. Students who have had one or more years active service with one of the Armed Forces, and students who are transferring from another institution with credit for the Basic Course, may be authorized to register for the Advanced Course in phase with their college academic standing. Advanced Course classes meet for two or three hours of classroom work and one hour of drill weekly. (See below). Students accepted for the Advanced Course receive payment of approximately \$27 each month in lieu of subsistence issue. Students attending summer camp are messed and quartered at the expense of the Government, paid at the rate of approximately \$78 monthly while in camp, and are given a travel allowance of five cents per mile from the university to the summer camp and return.

A new program of flight instruction in connection with the ROTC is of special interest to the advanced course student. Under this plan the Army will pay for flight training of selected seniors who enroll in Aviation Technology course No. 118. (See page 98.) Completion of this training qualifies the student for application of the award of a FAA pilot's license. It further qualifies the advanced course student upon receiving his commission for advanced Army flight training.

### **MS 300 Military Science**

**3 hrs.**

Instruction in Leadership; Organization, Function, and Mission of the Arms and Services; Military Teaching Methods; First Aid and Military Sanitation; Rifle Marksmanship; School of the Soldier and Exercise of Command.

### **MS 301 Military Science**

**2 hrs.**

Instruction in Small Unit Tactics and Communication; and School of the Soldier and Exercise of Command.

### **MS Summer Camp**

Between MS 301 and MS 400 a summer training camp must be attended for a period of six weeks. Transportation to and from camp will be provided and students will be fed, clothed, housed and paid while at camp.

Instruction at camp consists of demonstrations of and participation in various phases of military activities to include field training.

**MS 400 Military Science****2 hrs.**

Instruction in Operations, Command and Staff, Estimate of the Situation, and Combat Orders; Military Intelligence, the Military Team, Training Management; Logistics and Troop Movements; School of the Soldier and Exercise of Command.

**MS 401 Military Science****3 hrs.**

Instruction in Logistics, Supply and Evacuation and Motor Transportation; Military Administration and Personnel Management; Military Justice; Service Orientation to include the Role of the United States in World Affairs; Leadership; Officer Indoctrination; and School of the Soldier and Exercise of Command.

# Occupational Therapy

Rosalia Kiss, Head  
Lois Hamlin

Alice Lewis

Jane Thomas  
Dean Tyndall

The Department offers courses in the following curricula: B.S. degree, and a certificate course for college graduates. These curricula are approved by the American Medical Association, and graduates are qualified to take the American Occupational Therapy Association examination for registration. In order to earn a B.S. degree in occupational therapy, a student must complete a major in occupational therapy and a minor in biology. A mixed science minor is sometimes substituted for a minor in biology.

**110 Needlecraft****3 hrs. Fall, Spring**

Designed to cover the basic needle arts such as embroidery and hemstitching. Also includes fundamentals of knitting and crocheting; basic procedures in rug making; simple construction from patterns; and allied work with cords and threads.

**130 Occupational Therapy Orientation****1 hr. Fall**

A course designed to acquaint the beginning student with the profession. Field trips to occupational therapy departments will be a part of the requirement.

**200 Elementary Design for O.T. Students****3 hrs. Fall, Spring**

A course to develop creativeness in color and design through a variety of media and techniques.

**202 Minor Crafts****3 hrs. Fall, Spring**

A course giving the techniques and equipment used in reedcraft, including basketry and chair caning, and leather craft, including tooling and

carving. Special emphasis will be placed on teaching methods in occupational therapy treatment.

**230 Psychiatric Theory 3 hrs. Fall, Spring**

A study of the philosophy and application of occupational therapy in the psychiatric field. Includes the observation of occupational therapy during 24-hour preclinical experience. Prerequisite: Psychology 200, 322.

**231 Occupational Therapy in Medical Specialities 2 hrs. Fall, Spring**

A study of the application of occupational therapy to the pediatric, geriatric, general medicine and surgery, tuberculosis and other conditions.

**300 Weaving 3 hrs. Fall, Spring**

Designed to give a working knowledge of hand looms. Includes discussion of looms, functional adaptations for special treatments, reading and drafting patterns, warping and threading looms, and types of weaving.

**303 Ceramics 3 hrs. Fall, Spring**

A course in the design of functional plastic form in clay. Emphasis is placed on ceramic processes, glazing and kiln management.

**310 Therapeutic Techniques 2 hrs. Fall, Spring**

A laboratory course in the modalities used by occupational therapist in the treatment of the patient with orthopedic and neurological conditions. This course is to be taken in the same semester with Theory of Physical Disabilities 332.

**321 Neuroanatomy and Neurophysiology 2 hrs. Fall**

A study of structure and function of the nervous system prerequisite for the understanding of neurological conditions, and of certain occupational therapy techniques. Prerequisite: Anatomy 216, Physiology 217.

**324 Medical Lectures 2 hrs. Fall**

A series of lectures on medical conditions treated by the occupational therapist in the field. Prerequisite: Anatomy 216, Physiology 217.

**325 Growth, Development and Aging 3 hrs. Fall, Spring**

A study of physical, mental, emotional and social patterns of growth, development, and aging. Aspects to be given special emphasis for the occupational therapy student will be motor development, physiology of aging, growth deterrents and functional pathology in any of the above aspects. Prerequisite: Anatomy 216, Physiology 217.

**332 Theory of Physical Disabilities 4 hrs. Fall, Spring**

Study of motor disabilities related to neurologic, and orthopedic conditions with emphasis of methods of treatment used by occupational therapists. Included are preclinical experience and the observance of clinics in the surrounding area. Prerequisite: O.T. 321, 520.

**334 Recreation for the Handicapped** 2 hrs. Fall, Spring

Course covers planning recreational activities for the handicapped, including musical and dramatic programs, and games.

**340 Clinical Practice** 3 hrs. Fall, Spring, Summer

Each student is required by the American Medical Association to complete a minimum of nine months of clinical practice. The areas in which the student practices are psychiatric, tuberculosis, general, pediatric, and physical disabilities. Prerequisite: 230 and 231.

**341 Clinical Practice** 5 hrs. Fall, Spring, Summer**430 Organization and Administration in Occupational Therapy**

2 hrs. Fall, Spring

A study of the organization and administration of occupational therapy departments for more effective treatment of patients, and the relationship of occupational therapy to the institutional setting. Prerequisite: Occupational Therapy 230, 231.

**432 Rehabilitation** 2 hrs. Fall, Spring

A course covering the philosophy, development and current practices of medical and vocational rehabilitation, including methods of pre-vocational exploration. Pertinent field trips will be a part of the requirement. Prerequisite: 230, 231.

**434 Group Processes in Occupational Therapy** 2 hrs. Fall, Spring

This course is designed to develop understanding of the conscious use of one's own personality as a therapeutic tool and to acquaint the student with group processes used in occupational therapy treatment situations. Relevant current literature will be surveyed. Prerequisite: Occupational Therapy 230, 231.

**502 Advanced Weaving** 2 hrs. Spring

Studies in the more complex forms of fabric structure and design.

**520 Kinesiology** 3 hrs. Fall, Spring

A basic study of the muscles of the body, classified as to joint motion. Each muscle studied according to origin, insertion and action. This study accompanied by a review of the skeletal and nervous systems, basic terminology and kinesiology. Prerequisite: Anatomy 216, Physiology 217.

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

A study of the musculo-skeletal system and the integrative mechanisms. For teachers of the orthopedically handicapped.

**524 Orthopedics** 2 hrs. Spring

A series of lectures on neurological and orthopedic conditions. Prerequisites: for Occupational Therapy students: Anatomy 216, and Physiology 217; for Special Education students: O.T. 523 or equivalent.

**550 Occupational Therapy Modalities****2 hrs. Fall, Spring**

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.

# PAPER TECHNOLOGY

Russell H. Savage, Head  
Robert A. Diehm

John R. Fanselow  
John H. Schulz

The Department offers two curricula. The curriculum of Paper Technology stresses preparation for scientific and manufacturing area. The Paper Sales curriculum prepares students for sales positions in the paper industry.

A major in Paper Technology may be earned only by meeting all requirements of the curriculum. Students majoring in Paper Technology are required to take 26 hours of chemistry, and to work in pulp and paper mills at least two out of three summers.

A minor in Paper Technology consists of sixteen semester hours and must include courses 100, 101, 240, 241, 110, 320, and 321.

A major in Paper Sales may be earned by meeting all requirements only of that particular curriculum.

**100 Introduction to Pulp Manufacture****2 hrs. Fall**

The course stresses the basic processes used in the manufacture of pulp and prepares the student for summer mill practice. Prerequisite: High school chemistry.

**101 Introduction to Paper Manufacture****2 hrs. Spring**

A continuation of course 100. The fundamentals of papermaking are studied. Prerequisite: 100.

**110 Mill Practice****2 hrs.**

In order to gain practical experience, students of Paper Technology are required to work in a mill for ten weeks during the summer recess. Prerequisite: 101.

**210 Mill Practice****2 hrs.**

A continuation of paper mill work to give the student diversified practical experience. Open only to majors in Paper Technology and Paper Sales.

**240 Pulp Manufacture****3 hrs. Fall**

A study of the fundamentals of the process and of principles of design and operation of the equipment used in the manufacture of pulp. Prerequisite: 101 and 110; Organic Chemistry 360.

**241 Paper Manufacture** 3 hrs. Spring

A study of the fundamentals of product design and of principles of design and functions of the equipment used in the manufacture of paper and paperboard. Prerequisite: 241.

**310 Mill Practice** 2 hrs.

Course 310 is optional for students who receive credit for courses 110 and 210.

**320 Evaluation of Pulp and Paper** 2 hrs. Fall

A lecture and laboratory course treating the evaluation of chemical and physical characteristics of pulp and paper. Prerequisite: 341; Quantitative Analysis 222.

**321 Evaluation of Pulp and Paper** 2 hrs. Spring

This course consists of laboratory work and lectures pertaining to the evaluation of chemical characteristics of pulp and paper. Prerequisites: 320, 341.

**330 Principles of Chemical Engineering** 3 hrs. Fall

A basic course in chemical engineering unit operations, emphasizing material balances, fluid dynamics, and heat transfer. When possible, examples of these operations are taken from the paper industry. Prerequisite: General Chemistry 102; Physics 112, 113.

**331 Principles of Chemical Engineering** 3 hrs. Spring

A continuation of course 330. Unit operations considered include evaporation, absorption, drying, and humidification. Prerequisite: Principles of Chemical Engineering 330.

**333 Chemical and Physical Structure of Wood** 3 hrs. Spring

A study of the chemistry of cellulose, hemicelluloses, extractives, and lignin. The structure of wood fibers is included both in lecture and laboratory sessions. Prerequisite: Organic Chemistry 360, Organic Chemistry 361. (concurrent)

**442 Converting of Paper** 2 hrs. Fall

A study of converting operations. Prerequisite: 241.

**530 Polymer Chemistry** 2 hrs. Fall

A study of the structure, chemistry, physics and properties of polymeric materials. Prerequisite: Organic Chemistry 360, 361.

**540 Principles and Practice of Coated Paper Manufacture** 2 hrs.

A lecture and laboratory course in formulation, preparation, and application of paper coatings. Prerequisite: 241.

**550 Microbiology of Pulp and Paper****2 hrs.**

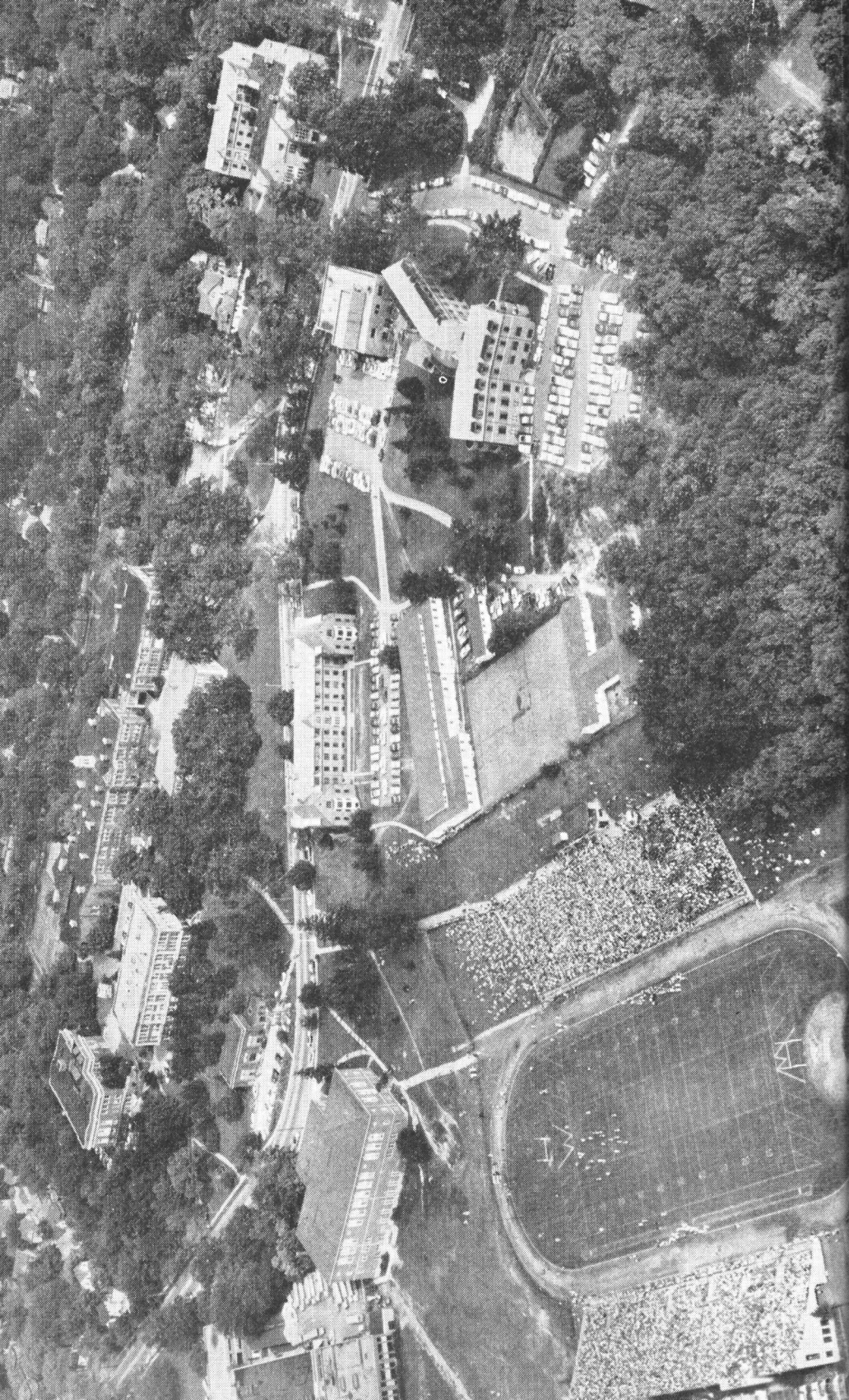
A lecture course on morphological and biochemical activities of micro-organisms in the pulp and paper mill. Methods of controlling micro-organisms in the paper industry are studied. Prerequisite: 241.

**570 Problem Analysis****2 hrs.**

Laboratory development work in problems pertaining to pulp and paper. Prerequisite: Senior major in Paper Technology.

**571 Problem Analysis****2 hrs.**

A continuation of course 570.





# *School of Business*

**ARNOLD E. SCHNEIDER,**  
**Dean**

**Departments:**

**Accounting**

**Business Education**

**General Business**

◀ The East Campus has been the scene of Western classes since 1905. The Schools of Business and Education are centered here.

## OBJECTIVES OF THE SCHOOL OF BUSINESS

The function of the School of Business is to prepare young men and women for responsible positions in business and industry. This preparation embraces three major areas:

1. A foundation of liberal arts and sciences in full recognition that as a future leader in the business and industrial world, the student will need a sound understanding of his relationships to social, economic, political and cultural trends.

2. A thorough grounding in the fundamentals by which our free enterprise economic system operates. These fundamentals are met through such core subjects as accounting, business statistics, business law, finance, marketing, management and business communication.

3. A opportunity for further study in certain specialized areas of business operations.

Opportunity is given students to visit business firms, to listen to outstanding speakers from the business world, and to participate in organizations related to business and industry. Western's Placement Office is visited by almost all of the major firms that are engaged in recruiting activities.

The curriculum for the Bachelor of Business Administration degree is so constructed as to make it possible to achieve the above objectives in four basic phases:

1. Basic studies requirements.
2. Core curriculum in business subjects.
3. Field of concentration in business.
4. Electives to meet specific interests and needs of students.

The School of Business offers three main programs:

1. Business Administration—Bachelor of Business Administration Degree.
2. Business Teacher Education—B.S., B.A. or B.B.A. Degree with a State Secondary Provisional Certificate.
3. Two-year Curricula leading to a certificate:
  - a. Cooperative program in Secretarial Training
  - b. Cooperative program in Retailing
  - c. Technical Business Program

Graduate work leading to the Master of Business Administration degree is also offered in cooperation with the School of Graduate Studies.

# I. DEGREE CURRICULA

## BUSINESS ADMINISTRATION

### Bachelor of Business Administration Degree

Students must complete the requirements of the core curriculum in the School of Business as well as a major area of concentration as shown under "Majors in Business Administration." Students must complete at least 48 hours in the fields of Business and Economics of which a minimum of nine hours must be taken in Economics.

Students in the Business Administration curriculum must also meet the general requirements of the University for the degree.

### REQUIRED CORE CURRICULUM

First Year	S.H.	Second Year	S.H.
Communication 114, 115 or College Writing 116, 117	8-6	Humanities 220, 221 or 222, 223 Business and Professional Speech 104 or General Speech 100	6 3
Man and Society 102, 103 or World Civil. 100, 101	8	Economics 200, 201	6
Physical Sci. 108, 109 or Biol. Sci. 107 and Physical Geog. 105	8	Accounting Prin. 210, 211 Marketing 240	6 3
*Mathematics	3	Business Corres. 242	3
Physical Education	1	Business Statistics 244 or Mathematics 260	3
Electives	3-5	Physical Education	1
	31		31
Third Year	S.H.	Fourth Year	S.H.
General Psychology 200	3	Management Problems 550	3
Business Finance 320	3	Physical Education	1
American Nat'l. Govt. 202	3	Major and Minor Requirements and Electives	27
Business Law 340, 341	6		—
Management Principles 354	3		31
Physical Education	1		
Major and Minor Requirements and Electives	12	If possible, elect two or more from the following:	
	—	Economic Geography 244	3
	31	Economic History of U.S. 216	3
		Psych. Aspect of Bus. 341	3
		Applied Psychology 204	3
		Prin. of Sociology 200	3

\*See major adviser.

## MAJOR AREAS OF CONCENTRATION IN BUSINESS ADMINISTRATION

### Accounting Department

1. Accounting 210, 211; Intermediate Accounting 310, 311; Cost 512; Tax 514; Audit. 516; Accounting Theory and Problems 518. Students planning to major in Accounting are urged to take 210, 211 in their freshman year. Adviser: Wetnight.

### Business Education Department

1. Teaching of Business Subjects: See suggested majors listed under Business Teacher Certification Program. Advisers: Lindquist, McBeth.
2. Secretarial Administration: Transcription 184, Typewriting Production Techniques 185, Secretarial Science 187; Office Machines 280, 281; Office Organization 252; Records Management 188; Personnel Administration 350; Management Report Writing 552. (Required courses in the Business Administration Curriculum may be waived in order to meet the needs of the Secretarial Administration program). Adviser: McBeth.

### General Business Department

1. Finance:

- a. General Finance: Business Finance 320, Insurance Principles 224, Investments 326, Credit Management 324, Security Analysis 520. The major can be completed by selecting courses under the guidance of the adviser from among the following: Real Estate Fundamentals 322, Financial Management 524, Managerial Economics 500, Money and Credit 320-321. Adviser: Grossnickle.

- b. Insurance: Insurance Principles 224; *five* courses selected from the following: Life Insurance 422, Property Insurance 424, Casualty Insurance 426, Health Insurance 428, Advanced Life and Health Insurance 526, Problems in Multiple-Line Insurance 528; and six hours of business courses selected by the adviser and student. Adviser: Burdick.

2. General Business: Upon the approval of the adviser elect a logical sequence of *advanced* courses in the School of Business in addition to the business core which meets the student's vocational interests and needs. Advisers: All majors: Niemi; minors: Sokolowski and Morrison.

3. Marketing:

- a. Salesmanship: Marketing 240; Salesmanship 370; Advertising 374; Sales Management 376; Marketing Problems 574; Marketing Research 576; and six hours of business electives designated by the adviser. Adviser: Trader.

b. **Advertising:** Marketing 240; Salesmanship 370; Advertising 374; Advertising Copy, Layout and Typography 572; Marketing Problems 574; Marketing Research 576; and six hours of business electives designated by the adviser. Adviser: Trader.

c. **Retailing:** Retail Salesmanship 176, Merchandise Information-Non-Textiles 178, Merchandise Information-Textiles 179, Marketing 240, Retail Advertising 274, Principles of Retailing 275, Retail Buying Techniques 278, and five hours of business courses selected by the adviser. Adviser: Sciullo.

d. **Purchasing:** Credit Management 324, Purchasing 358, Advertising 374, Purchasing Problems 558, Marketing Problems 574, and nine hours of business electives designated by the adviser. Adviser: Sokolowski.

#### 4. Management:

A. Courses required of all management majors, regardless of concentration:

		S.H.
1. <b>Sociology</b>	Industrial Sociology	575 2
2. <b>Economics</b>	Managerial Economics	500 3
3. <b>Management</b>	Management Report Writing	552 2

B. Optional Concentrations:

1. Personnel Administration:

a. <b>Management</b>	Personnel Administration	350 3
b. <b>Management</b>	Wage and Salary Administration	352 3
c. <b>Management</b>	Human Relations in Management	551 3

or

	Training and Education of Personnel	454 3
d. <b>Economics</b>	Collective Bargaining	512 3
e. <b>Psychology</b>	Psychological Testing	380 3

Also one additional course from the following: Psychology 340, Introduction to Industrial Psychology; Psychology 542, Occupational Analysis and Classification; Psychology 560, Vocational Psychology; Economics 510-511, Labor Problems.

2. Industrial Management: S.H.

a. <b>Industrial Technology</b>	Production Control	306 3
b. <b>Accounting</b>	Cost Accounting	512 3
c. <b>Management</b>	Industrial Management Problems	356 3
d. <b>Management</b>	Integrated Data Processing	452 3

and two additional courses from the following: Personnel Administration 350; Motion Study 304; Time Study 305; Quality Control 308; Plant Layout 501.

3. Office Management: S.H.
- |                      |                            |         |   |
|----------------------|----------------------------|---------|---|
| a. <b>Management</b> | Office Management          | 556     | 3 |
| b. <b>Management</b> | Integrated Data Processing | 452     | 3 |
| c. <b>Accounting</b> | Cost Accounting            | 512     | 3 |
| d. <b>Economics</b>  | Money and Credit           | 320-321 | 4 |
- and two additional courses recommended by advisor.
4. Integrated Data Processing S.H.
- |                       |                                    |     |   |
|-----------------------|------------------------------------|-----|---|
| a. <b>Management</b>  | Integrated Data Processing         | 452 | 3 |
| b. <b>Management</b>  | Office Management                  | 556 | 3 |
| c. <b>Management</b>  | Introduction to Management Science | 554 | 3 |
| d. <b>Accounting</b>  | Cost Accounting                    | 512 | 3 |
| e. <b>Mathematics</b> | College Algebra and Trigonometry   | 122 | 5 |
- Advisers: Hartenstein, Niemi, Booker.

### Related Majors

1. **Economics:** Elect 24 hours in the Economics Department. Adviser: Bowers.

2. **Public Administration Curriculum:** (Option B)\*

- a. Business Administration Major      b. Political Science Minor

Core Requirement	S.H.	Required	S.H.
Accounting 210, 211	6	Nat. Govt. & Admin. 202	3
Bus. Correspondence 242	3	St. & Local Govt. 204	3
Marketing 240	3	Intro. to Pub. Admin. 330	3
Business Statistics 244	3	Pub. Pers. Admin. 334	2
Business Law 340, 341	6	Pub. Opinion & Pres. Groups 212	2
Business Finance 320	3	Administrative Law 322	2
Management Principles 354	3	Prob. of Pub. Admin. 332	2
Management Problems 550	3		—
Prin. of Econ. & 3 hours			17
Economics electives	9	Other recommended Political Science	
Plus 12 s.h. from courses		courses:	
listed below	12		
	—	International Relations 350	
	51	Municipal Government 500	
Government Acctg. 314		Comparative Government 340	
Integrated Data Processing 452		Political Parties 310	
Management Report Writing 552		Legislative Processes 316	
Office Management 556			
Personnel Administration 350			
Purchasing Principles 358			

\*For Option A, see Political Science Curriculum Adviser.

## BUSINESS TEACHER CERTIFICATION PROGRAM

A State Secondary Provisional Certificate for teaching of business subjects in grades 7 to 12 is granted to students who complete the secondary curriculum requirements with a major in business and a minor, which may also be in business. A major and/or minor in the School of Business may be selected from the following fields:

1. Secretarial and related business subjects.
2. Accounting and related business subjects.
3. Salesmanship, retailing and related business subjects.
4. General business and related subjects.

The following program of courses in education is required for certification:

Human Growth and Development 250

Introduction to Directed Teaching 300

Directed Teaching, Laboratory in Education, and

General Education Problems 470, 420, 450

Teaching of Shorthand and Typewriting 346 **or**

Teaching of Bookkeeping and Basic Business Courses 347

Modern Economics 502 or equivalent must be elected.

The undergraduate program in business teacher education may lead to the Bachelor of Business Administration, Bachelor of Arts, or Bachelor of Science degree. Counselors: McBeth, Lindquist.

## II. TWO-YEAR CURRICULA

### TECHNICAL BUSINESS

The two-year business curricula have been specifically designed to provide the student with an effective training for the many beginning occupations in business and industry. There are two major areas of study: the cooperative work-and-study programs now found in the Retailing and Secretarial programs, and the regular University classroom programs. Although the enrollment in the cooperative curricula is limited, the student is urged to qualify for these fields whenever possible.

High school graduates are eligible for admission to the Technical Business Curricula provided they have been recommended by their high school principals. Students who wish to qualify for the cooperative program must meet certain standards as established. Courses taken either in the cooperative or university classroom program may be applied toward degree requirements provided regular college entrance requirements are met.

All graduates of the Two-Year Business Curricula receive a certificate indicating the field of specialization they have completed.

#### 1. Cooperative Program in Secretarial Training

Counselor: Null

The work-study program in Secretarial Training is a two-year curriculum which combines classroom instruction on a half-day basis with employment experience during the student's sophomore year.

Students enrolled in this program have opportunity to elect courses which fit their needs, schedules, abilities, and work programs.

#### Secretarial Curriculum

First Year	S.H.	Second Year	S.H.
Communication 114, 115, or College Writing 116, 117	6-8	Secretarial Accounting 212, 213 or Principles of	
Ind. and Bus. World 140	3	Accounting 210, 211	6
Transcription 184	3	Office Machines 280, 281	4
Typewriting Production Techniques 185	2	Records Management 188	2
Secretarial Science 187	5	Coord. Bus. Experience 282, 283	4
Personality Development 152	2	Electives**	14
Physical Education	1		—
Electives**	6-8		30
	—		
	31		

\*Students who have not had shorthand or typewriting in high school should register for shorthand 180 and typewriting 182. Students who have had one year of shorthand and one year of typewriting in high school should register for shorthand 181 and typewriting 183.

\*\*Students interested in employment in legal, medical or educational offices should consult their counselor to select electives to qualify them for placement in their field of interest.



**2. Cooperative Program in Retailing****Counselor: Sciuolo**

The work-study program in retailing embraces a two-year curriculum which combines classroom instruction in the morning and employment in the local stores during afternoons and Saturdays of the Sophomore year.

Students in this curriculum will have the opportunity, in addition to taking the specialized courses in retailing, to elect such other college courses as will fit their needs and abilities.

**Retailing Curriculum:**

First Year	S.H.	Second Year	S.H.
Retail Salesmanship 176	3	Coordinated Retail Experience	
Merchandise Information 178, 179	4	270, 271	4
Business Math. 90 or Equiv.	2	Principles of Retailing 275	3
Man and Society 102, 103		Retail Advertising 274	3
or World Civil. 100, 101	8	Retail Buying Techniques 278	3
Communication 114, 115		Electives	18
or College Writing 116, 117	6 or 8		—
Physical Education	1		31
Electives	5-9		
	—		
	31		

**3. Technical Business Curriculum****Counselor: Healey**

First Year	S.H.	Second Year	S.H.
Communication 114, 115 or		Man and Society 102, 103 or	
College Writing 116, 117	6-8	Prin. of Economics 200, 201	6-8
Ind. and Bus. World 140	3	Bus. Statistics 244	3
Bus. Corres. 242	3	Business Finance 320	3
Prin. of Acctg. 210, 211	6	Small Bus. Mgmt. 250 or	
Physical Education	1	Mgmt. Elective	3
Electives	10-12	Business Law 340	3
	—	Physical Education	1
	31	Electives	10-12
			—
			31

**Fields of Specialization in Technical Business Curriculum**

1. Clerical Accounting: Select from Accounting 310, 311; Office Machines 280, 281; Business Law 340, 341; Office Organization 252; or other business courses on consent of class instructor; proficiency in type-writing or Typewriting 182, 183.
2. General Business: Select courses in keeping with the student's vocational interests with consent of counselor.

3. Secretarial Training: Transcription 184, Typewriting Production Techniques 185, Secretarial Science 187; Office Machines 280, 281; Records Management 188; Office Organization 252; General Psychology 200.
4. Salesmanship: Salesmanship 370; Advertising 374; Small Bus. Management 250; Sales Management 376; Credit Management 324.
5. General Clerical: Office Machines 280, 281; Typewriting 182, 183; Records Management 188; Office Organization 252; Accounting 210, 211.
6. Small Business Management: Accounting 210, 211; Small Bus. Management 250; Advertising 374; Salesmanship 370; Credit Management 324; Real Estate Fundamentals 322.

### III. DESCRIPTION OF COURSES

## Accounting

Robert B. Wetnight, Head  
William C. Morris

Frederick Everett

George Kirby  
Willis C. Stevenson

The department of accounting prepares its majors for positions as accountants in industrial, governmental and public accounting enterprises. Twenty-four hours of accounting plus the completion of the core curriculum in Business Administration is required of all majors.

Students preparing for positions in industry wishing to minor in accounting are required to take 15 hours. Of these 15 hours, Accounting 210, 211 and 310 are required. The remaining 6 hours should be selected with the student's professional objective in mind.

#### **210 Principles of Accounting** 3 hrs. Fall, Spring

An introductory course in accounting which includes the recording and reporting of business transactions, and the measuring, planning and controlling of business income, assets, and equities. Prerequisite: Sophomore standing or consent of instructor. Accounting majors are advised to start 210 as freshmen, if possible.

#### **211 Principles of Accounting** 3 hrs. Fall, Spring

A continuation of course 210. Prerequisite: 210.

#### **212 Secretarial Accounting** 3 hrs. Fall

The basic principles of accounting are presented from the viewpoint of the secretary. The accounts of private individuals, professional men, institutions, and small business firms are studied.

#### **213 Secretarial Accounting** 3 hrs. Spring

A continuation of course 212 in which practical applications will be applied in a large number of work situations: Prerequisite: 212.

#### **310 Intermediate Accounting** 3 hrs. Fall, Spring

A study of the valuation of current assets, investments, plant and equipment and liabilities as well as their effect on business net income. Current problems in financial statement presentation. Prerequisite: 211.

#### **311 Intermediate Accounting** 3 hrs. Spring

A continuation of Accounting 310, including the following topics: partnerships, corporations, special sales, and consolidations. Prerequisite: 310.

#### **314 Governmental Accounting** 2 hrs. Spring

The study of the accounting principles and practices of federal, state, county and city governmental agencies as well as general institutional agencies. Prerequisite: Accounting 210, 211.

**510 Advanced Accounting 3 hrs. Fall**

Designed specifically for the study of the balance sheet accounts. Prerequisite: 210, 211. Not open to students who have had 310.

**511 Advanced Accounting 3 hrs. Spring**

A study of accounts for special sales, consolidations, and miscellaneous accounting matters. Prerequisite: 310 or 510.

**512 Cost Accounting 3 hrs. Fall, Spring**

The relation of cost accounting to management for control; general principles involved in constructing a cost system; distribution of cost-materials, labor, and burden; cost records; operating reports; standard costs and budgetary control. Prerequisite: 310 or consent of instructor.

**514 Income Tax Accounting 3 hrs. Fall, Spring**

A study of the federal income tax laws, as they apply to individuals, partnerships, and corporations. Prerequisite: 310 or consent of instructor.

**516 Auditing 3 hrs. Fall**

The theory and practice of making audits of business enterprises. Prerequisite: Senior standing, accounting major.

**518 Accounting Theory and Problems 3 hrs. Fall, 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: Senior standing, accounting major.

## Business Education

George K. Cooper, Head

Agnes Anderson

Elizabeth C. Keeler

Edna F. Kirby

Lester R. Lindquist

Sally Lindsay

John H. McBeth

Thomas W. Null

Roseann Schneider

The department of business education embraces the areas of preparation for business teaching, office supervision, secretarial and specialized stenographic and clerical work. The two-year program in the stenographic and secretarial areas leading to a certificate includes a coordinated work experience program, which permits learning from business and industrial office situations.

**186 Shorthand 3 hrs. Fall, Spring**

A study of the theory and principals of Gregg shorthand. Typewriting 182 or its equivalent is a requirement for course credit. Open to students with less than one year of high school shorthand credit.

**181 Shorthand** 3 hrs. Fall, Spring

A continuation of 180. Emphasis on developing speed in taking dictation in Gregg Shorthand and an introduction to transcription procedures. Typewriting 183 must be elected concurrently unless equivalent course has been taken at the collegiate level. Prerequisites: 180 and 182.

**182 Elementary Typewriting** 2 hrs. Fall, Spring

The mastery of the keyboard and the proper techniques of typewriting are developed in this course. Open to students with less than one year of high school typewriting credit.

**183 Intermediate Typewriting** 2 hrs. Fall, Spring

Special stress is placed upon perfecting the techniques necessary for accuracy and speed in typewriting. An introduction to office production problems at rates acceptable for initial employment. Prerequisite: 182 or its high school equivalent.

**184 Transcription** 3 hrs. Fall, Spring

To develop skills in transcription of business letters, memoranda, and other communicative media from dictation and to further develop shorthand skills. Must be elected concurrently with 185. Prerequisite: 181 or equivalent.

**185 Typewriting Production Techniques** 2 hrs. Fall, Spring

To develop skills in production of communicative materials for business office use and to further develop typewriting skills. Must be elected concurrently with 184. Prerequisite: 183 or equivalent.

**187 Secretarial Science** 5 hrs. Fall, Spring

A continuation of the development of speed and accuracy in shorthand, typewriting, and transcription. Prerequisites: 184 and 185.

**188 Records Management** 2 hrs. Fall, Spring

The study of efficient methods and procedures used in the processing, filing, controlling and disposition of the records of business.

**280 Office Machines** 2 hrs. Fall, Spring

This course provides the student with the operating knowledge of office machines that are commonly used in the modern business office.

**281 Office Machines** 2 hrs. Fall, Spring

A continuation of 280. This course is intended primarily for the student preparing for the various office occupations.

**282 Coordinated Business Experience** 2 hrs. Fall

A work-experience course limited to those students who are in the Co-operative Secretarial Curriculum and are currently enrolled in 184 and 185.

**283 Coordinated Business Experience** 2 hrs. Spring

A continuation of course 282 open to students currently enrolled in 187.

**346 Teaching of Shorthand and Typewriting** 2 hrs. Spring

A course in the methods of teaching business subjects with emphasis on shorthand, typewriting, and other stenographic skills. It is recommended that this course either precede or accompany directed teaching in this area.

**347 Teaching of Bookkeeping and Basic Business Courses** 2 hrs. Fall

A course in methods for the prospective teacher of bookkeeping, business law, economics, business English, and clerical business skills. It is recommended that this course either precede or accompany directed teaching in this area.

## General Business

Arnold E. Schneider, Head  
Charles A. Blagdon  
Gene S. Booker  
R. Hugh Brown  
William L. Burdick

Richard E. Embertson  
Edwin E. Grossnickle  
Frances S. Hardin  
Fred V. Hartenstein  
John B. Healey  
K. Chris Kogiku

William F. Morrison  
Leo Niemi  
Henry A. Sciullo  
Emil J. Sokolowski  
Robert B. Trader

The General Business Department includes the following areas in the School of Business: Finance, General Business, Management and Marketing.

### FINANCE

**222 Retail Credit and Collections** 3 hrs.

A practical and detailed study of the meaning and importance of credit. Among the areas covered are: the extent of retail credit; sources of credit information; legal aspects, policies, and procedures; and collection problems.

**224 Insurance Principles** 3 hrs. Fall, Spring

A comprehensive course covering principles and practices in all fields of Insurance. Emphasis is placed on the major forms of coverage available and their proper usage. Industry operations, insurance law, regulation and risk are also studied. (Prerequisite: Sophomore standing or consent of instructor.)

**320 Business Finance** 3 hrs. Fall, Spring

Business financing, methods of securing and managing capital, distribution of net income.

**322 Real Estate Fundamentals** 3 hrs. Spring

A survey of the principles of real estate as they affect personal and business operations. Real estate as an occupational field, value and land use, and related topics.

**324 Credit Management****3 hrs. Spring**

An introduction to the principles of credit, credit control, and credit management from the viewpoint of manufacturing, wholesale and retail firms. Effective use of credit as a financial and sales device and certain definite aspects of credit such as policies and procedures, collection and legal aspects are studied.

**326 Investments****3 hrs. Fall**

Study of the terminology, principles, and problems of investments.

**420 Current Business Trends****3 hrs.**

A study of sources and information which aid in the description, analysis, and prediction of current business trends.

**422 Life Insurance****3 hrs.**

The course covers in detail economic aspects, marketing, underwriting, rating and finance, life insurance law, types of policies and policy analysis. Basic programming and group life insurance are also studied. (Prerequisite: 224 Insurance Principles.)

**424 Property Insurance****3 hrs.**

The course covers the fields of Fire, Marine and Automobile Insurance. Detailed study is made of marketing, underwriting, loss adjustment, insurance law and finance. Contracts in the three lines are analyzed, as well as multiple line policies. (Prerequisite: 224 Insurance Principles.)

**426 Casualty Insurance and Bonding****3 hrs.**

General Liability, Workmen's Compensation, Theft Insurance and Bonding are covered. Detailed consideration is given to underwriting, marketing, loss adjustment, finance and insurance law, as well as policy analysis in the four lines. (Prerequisite: 224 Insurance Principles.)

**428 Health Insurance****2 hrs.**

The topics of individual and group health insurance are both covered in detail. Consideration is given to economic aspects, marketing, underwriting, claim adjustment, legal aspects, rating, finance and policy analysis. (Prerequisite: 224 Insurance Principles.)

**520 Security Analysis****3 hrs. Spring**

Analysis of securities, market values, and investment programs. Interpretation of financial reports, factors, and conditions. Prerequisite: 420 Current Business Trends.

**524 Financial Management****3 hrs. Fall, Spring**

Study of the principles and problems underlying the making of financial policy by the senior financial officers of going concerns. Prerequisites: core subjects for B.B.A.

**526 Advanced Life and Health Insurance 3 hrs.**

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

**528 Problems in Multiple-Line Insurance 3 hrs.**

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

**GENERAL BUSINESS****140 Industrial and Business World 3 hrs. Fall, Spring**

This is an introductory course which, through a very broad approach, attempts to acquaint the student with existing principles and problems of business and industry. Such topics as types of American businesses, current business problems, current business trends, long-term financing, short-term financing, insurance, physical location and lay-out, production problems are included. Not open to B.B.A. students.

**242 Business Correspondence 3 hrs. Fall, Spring**

Provision is made in this course for an analysis of and practice in writing various types of business letters and reports. A study is made of the principles of effective expression in all letters of business correspondence.

**244 Business Statistics 3 hrs. Fall, Spring**

An introduction to basic applied business statistics. A study of various statistical and financial ratios as guides to efficient business management and the interpretation of financial data.

**246 Survey of Office Machines 2 hrs. Fall, Spring**

A survey of operating principles and fundamentals and applied usages of the business machines commonly found in industry and business.

**340 Business Law 3 hrs. Fall, Spring**

A study of basic principles applicable to business including legal rights and remedies, contracts, and agency, and employer and employee relations.

**341 Business Law 3 hrs. Fall, Spring**

Continuation of Business Law 340 with emphasis on negotiable instruments, sales, and property.

**342 Law of Personal Property 2 hrs.**

The study of the law including sales, bailments and transportation.



**542 Law of Real Property****2 hrs.**

The study of Real Property including property rights, mortgages, leases and land contracts.

**544 Law of Business Organizations****3 hrs.**

Study of law of Business Organizations including partnerships, corporations and trust organizations.

**MANAGEMENT****250 Small Business Management****3 hrs. Fall, Spring**

A study of the fundamental principles involved in the operation of a small business enterprise. The structure, functions, and basic operating principles will be discussed and developed.

**252 Office Organization****3 hrs. Fall, Spring**

Personnel policies and how they affect office workers; handling and procurement of office equipment and supplies; charting of paperwork flow and methods of paperwork simplification. Professionalization of office work and role of supervisory worker. Designed for those entering professional secretarial work.

**350 Personnel Administration****3 hrs. Fall, Spring**

The personnel office in modern business and industry. The duties and work of the personnel staff, personnel office, records and reports, interviewing, counseling, adjustment of complaints, job analysis, job classification, in-service training, and upgrading of employees.

**352 Wage and Salary Administration****3 hrs. Fall, Spring**

Job analysis and job evaluation; methods of wage and salary payment; incentive system; community wage and salary surveys; employee merit rating.

**354 Management Principles****3 hrs. Fall, Spring**

A consideration of management as a basic process applicable to all enterprises, with major emphasis on the basic management functions of planning, organizing, actuating, and controlling.

**356 Industrial Management Problems****3 hrs. Fall**

Case studies of advanced industrial management problems. Industrial Management majors will take this in lieu of Management Problems 550 as offered.

**452 Integrated (Electronic) Data Processing****3 hrs. Spring**

A survey of mechanical and electronic data processing methods with particular emphasis on the application of the electronic system and with special reference to administrative problems experienced in introducing computer systems.

**454 Training and Education of Personnel 3 hrs. Spring**

Surveying the new profession of industrial trainer; job analysis for training; preparation of job breakdowns and training outlines; on-the-job training of workers; supervisory training; educational program and executive development; training aids and training methods.

**458 Employee Publications and Services 3 hrs. Fall**

Editing the employee publication; functions of employee communication media and recreational services; public relations aspects of employee and community relations.

**550 Management Problems 3 hrs. 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, Spring**

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

**552 Management Report Writing 3 hrs. Fall, Spring**

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

**554 Introduction to Management Science 3 hrs. Spring**

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

**556 Office Management 3 hrs. Fall, Spring**

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

**MARKETING****174 Selling Fashion Merchandise 2 hrs. Fall**

A specialized course in the application of salesmanship to fashion merchandise. A study of color and design in fashions, fashion history, fashion functions, influences of changes, and the world's key designers and fashion centers.

**175 Color and Design in Retailing 2 hrs. Spring**

Analysis and evaluation of color and design in merchandise. Research, psychology, theory, harmony, and selection of color are emphasized.

**176 Retail Salesmanship 3 hrs. Spring**

Analyzes successful retail selling. Case problems in salesmanship are frequently discussed and each student is required to give a sales demonstration. Considers various steps in a sale and accompanying customer reactions.

**178 Merchandise Information—Non-Textiles 2 hrs. Spring**

An organized study of non-textile merchandise especially aimed at correlating retail experience with classroom work. Merchandise manuals are studied and developed.

**179 Merchandise Information — Textiles 2 hrs. Spring**

A study of fabrics and textile merchandise. The course includes identification and analysis of fibers, sources of fibers, processes of creating and finishing cloth, and fabric suitability and salability as related to specific merchandise.

**240 Marketing 3 hrs. Fall, Spring**

Functions, institutions, and problems of marketing examined from the viewpoint of their effect on distribution of goods. Prerequisites: Principles of Economics 200, 201, which may be taken either before or in conjunction with this course.

**270 Coordinated Retail Experience 2 hrs. Fall**

A course through which classroom instruction and on-the-job training are coordinated. The requirement for credit will be (1) one semester of approved work experience of at least 200 clock hours, (2) a report from the employer, and (3) a term report by the student. Prerequisite: Retailing curriculum.

**271 Coordinated Retail Experience 2 hrs. Spring**

A continuation of 270. Prerequisite: Retailing curriculum.

**272 Interior and Window Display 2 hrs. Fall**

A study of window and store display with emphasis on color, design, and lettering. Attention is given to sources of display materials, services, and ideas.

**274 Retail Advertising 3 hrs. Fall**

Stresses newspaper, radio, television, and direct-mail advertising as it applies to the small and medium sized store. Consideration is also given to the promotion calendar and techniques for tying in store displays with various advertising media.

**275 Principles of Retailing 3 hrs. Fall, Spring**

Designed to give the student an over-all view of the field of retailing. Covers such topics as: a history of retailing; types of retail institutions; store location, layout, fixtures, and equipment; store organization; store record-keeping; customer services; personnel management; systems, and store protection.

**276 Selling Home Furnishings** 2 hrs. Spring

A study of period styles, materials, construction, and arrangement of furniture as a selling factor. The proper use of accessories, such as lamps, wall decorations, plastics, etc. is emphasized.

**278 Retail Buying Techniques** 3 hrs. Fall, Spring

Deals with the work of the store buyer; where, when, and how to buy. Terms, prices, invoices, legal aspects, and other arrangements with vendors are studied.

**358 Purchasing Principles** 3 hrs. Fall, Spring

Organization and operation of the purchasing department, basic materials, substitutes, imitations, sources of supply, catalogs, terms, discounts, and public relations.

**370 Salesmanship** 3 hrs. Fall, Spring

An introduction to the principles of selling. Includes study of selling in our present economy, analysis of the steps in a sales demonstration, and a classroom sales demonstration.

**374 Advertising** 3 hrs. Fall, Spring

An analysis of the principles and practices used in various types of advertising such as newspaper, radio, and direct mail advertising. Attention is devoted to preparing copy and analyzing current advertising practices.

**376 Sales Management** 3 hrs. Fall, Spring

A study from the viewpoint of management dealing with the organization and operation of the sales division within business enterprises. Includes work in the areas of sales structures, selection, training, compensation, territories, conventions, and sales promotion. Prerequisite: Salesmanship 370, or approval of instructor.

**558 Purchasing Problems** 3 hrs. Fall, Spring

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

**570 Advanced Salesmanship** 3 hrs. Fall

Background of basic principles and analysis of selling techniques applied principally to specialty fields.

**572 Advertising Copy, Layout and Typography** 3 hrs. Fall

Study of the theory and practice in the writing, preparation and typographical composition of advertising including the writing of radio and television commercials. Prerequisite: Adv. 374.

**574 Problems in Marketing****3 hrs. Fall, Spring**

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

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

Designed to 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: 240 Marketing, Junior or Senior status, or approval of instructor.



# *School of Education*

**JAMES H. GRIGGS,**  
**Dean**

**Roland S. Strolle,**  
**Assistant Dean**

## **Departments:**

### **Education**

**Physical Education for Men**

**Physical Education for Women**

**Directed Teaching**

**Campus School**

**Paw Paw School**

**Educational Service Library**

◀ The Health Services building is the focal point for health functions on the campus and for Western's world-famed Speech Correction clinic.

The School of Education consists of the following departments: Education, Physical Education for Men, Physical Education for Women, Directed Teaching, Campus School, Paw Paw Schools, and the Educational Service Library.

In general, the School of Education performs four functions:

- (1) Supervises the selection, admission and retention of students in advanced teacher education curricula;
- (2) Offers professional education courses designed to develop competent, efficient performance in the classroom and within a school system;
- (3) Offers advanced specialized courses in selected major and minor fields in departments within the school;
- (4) Offers service courses to students in other schools within the university.

## I. CURRICULA FOR TEACHERS

The program for prospective teachers consists of three parts: (1) general education, designed to develop those understandings and competencies which make for effective living and good citizenship, offered largely in the School of Liberal Arts and Sciences; (2) advanced specialized study, with major and minor interests in the fields of the student's choice, offered in all schools; and (3) professional education courses offered in the School of Education.

In general, prospective teachers choose to work for the State Elementary Provisional Certificate, valid for grades kindergarten through eight, or the State Secondary Provisional Certificate, valid for grades seven through twelve.

Students majoring in art, music, librarianship, speech correction, or physical education for women may choose either the State Elementary Provisional Certificate or the State Secondary Provisional Certificate. Either certificate will authorize the candidate to teach his special subject in both the elementary and secondary grades when the candidate qualifies in both fields.

Those preferring to teach in smaller communities may elect the Rural Elementary curriculum which leads to the State Elementary Provisional Certificate.



**ELEMENTARY CURRICULUM**

A.B. or B.S. Degree

State Elementary Provisional Certificate

(For the preparation of Teachers of Kindergarten and Grades 1-8)

A. Course Requirements	S.H.
1. Language and Literature	9-11
Communication 114, 115 <i>or</i>	8
College Writing 116, 117	6
Literature for Children 282	3
2. Science and Mathematics	12
Biological Science 107*	4
Physical Geography 105*	4
Physical Science 108*, 109*	4
(Arithmetic for Teachers 101 is strongly recommended)	
*If the student demonstrates proficiency in any of these subjects by comprehensive examination, he may elect other courses from the division upon the recommendation of his counselor.	
3. Social Science	11
World Civilizations 100, 101 <i>or</i>	
Man and Society 102, 103	8
American Government 202, 204 <i>or</i> 200	3
4. Humanities 220, 221*, <i>or</i> 222, 223*	6
*Temporary equivalents for these courses may be permitted with the consent of the counselor.	
5. Education	24
Human Growth and Development 250	3
Teaching of Reading 312	3
Introduction to Directed Teaching 300	3
Directed Teaching, Laboratory in Education, and General Education Problems 470, 410, 450	15
6. Fine and Practical Arts	12
(Include one course in Art, one teaching course in Music, and one course in Practical Arts.)**	
7. Physical Education	4
Must include Phys. Ed. for Classroom Teacher 340	
8. Additional General Education Courses	8-10
Eight hours additional work (ten if the student takes College Writing 116, 117) must be elected from non-professional Liberal Arts courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any non-professional courses in the Divisions of Language and Literature, Social Science, and Science and Mathematics.	
9. Electives	36

\*\*Students with a minor in librarianship may substitute 6 s.h. of library science courses for the practical arts requirement.

*School of Education*

- B. Three minors of not less than 15 hours each, or one major of not less than 24 hours and one minor of not less than 15 hours are required. The equivalent of at least two minors must be in subjects or subject fields taught in the elementary grades. Certain courses in some departments may not be counted toward majors or minors (See course descriptions).
- C. The candidate must satisfy the requirements of the A.B. or B.S. degree.

**RURAL ELEMENTARY CURRICULUM**

## A.B. or B.S. Degree

## State Elementary Provisional Certificate

Major attention is given to preparation for teaching in schools located in rural communities (open country, villages and towns—population 2,500 or less.)

Students preparing to teach in rural elementary schools choose majors and minors, under guidance of the counselor, with thought given to the variety of demands made upon the teacher in the small schools. Those preparing to serve rural people in other professional fields, ministers, librarians, recreational leaders, etc., will find considerable basic work in the curricula of Rural Life and Education.

A. Course Requirements	S.H.
1. Language and Literature .....	12-14
Communication 114, 115 <i>or</i> .....	8
College Writing 116, 117 .....	6
Literature for Children 282 .....	3
2. Science and Mathematics .....	14
Physical Geography 105 .....	4
*Biological Science 107 .....	4
*Physical Science 108 .....	4
Health Education 242 .....	2
3. **Humanities 220, 221 or 222, 223 or equivalents .....	6
(Temporary equivalents may be permitted with consent of counselor)	
4. Social Science .....	19
**World Civilizations 100, 101 <i>or</i> .....	
Man and Society 102, 103 (or equivalent) .....	8
Political Science 200, 202 <i>or</i> 204 .....	3
Rural Sociology 220 .....	3
Rural Economics 230 .....	3
Rural Life Seminar 424 <i>or</i> 425 .....	2

*Rural Elementary Curriculum*

5. Education .....	32
Curriculum 101 .....	3
Intro. to Directed Teaching 202 <i>or</i> 300 .....	3
Directed Teaching 203, 472 ( <i>or</i> 470) .....	8
Human Growth and Development 250 .....	3
Rural School Administration 305 .....	3
Teaching of Reading 312 .....	3
Rural School Supervision 408 <i>or</i> 409 } <i>or</i> Problems of Community Schools 411 }	2
Laboratory in Education 410 .....	4
General Education Problems 450 .....	3
6. Fine Arts and Practical Arts .....	12
Art .....	3
Music .....	3
Practical Arts .....	2
7. Physical Education .....	4
Physical Education for the Classroom Teacher .....	1
8. Additional General Education Courses .....	8
Eight semester hours of additional work (ten if the student takes College Writing 115, 117) must be elected from non-professional courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any such courses in the Divisions of Language and Literature, Social Science, and Science and Mathematics.	
B. The academic training may include a major of not less than 24 s.h. in Rural Life and Education and one minor in a subject field taught in the elementary grades, or a minor of not less than 15 s.h. in Rural Life and Education and two minors in subjects taught in the elementary grades, or three subject minors, two of which are in the subject fields taught in the elementary grades.	
C. The candidate must satisfy requirements for the A.B. or B.S. degree.	

\*Temporary equivalents may be permitted with consent of counselor if proficiency is demonstrated.

\*\*The Non-Western World 104 may be substituted for 4 s.h. of Basic Social Science courses.

\*\*\*Electives and major or minor fields are chosen in consultation with counselor.

## SECONDARY CURRICULUM

A.B. or B.S. Degree

State Secondary Provisional Certificate

(For the preparation of Teachers of Grades 7-12)

- |  |        |
|--|--------|
| A. Course Requirements   | S.H.   |
| 1. Language and Literature   | 6-8    |
| Communication 114, 115 <i>or</i>   | 8      |
| College Writing 116, 117   | 6      |
| 2. Science   | 8      |
| Biological Science 107*  | 4      |
| Physical Geography 105*  | 4      |
| Physical Science 108, 109*   | 4 or 8 |
| *If the student demonstrates proficiency in any of these subjects by comprehensive examination, he may elect other courses from the division upon the recommendation of his counselor.   |        |
| 3. Social Science  | 11     |
| World Civilizations 100, 101 <i>or</i>   |        |
| Man and Society 102, 103   | 8      |
| American Government 202, 204, <i>or</i> 200  | 3      |
| 4. Humanities 220, 221* <i>or</i> 222, 223*  | 6      |
| *Temporary equivalents for these courses may be permitted with the consent of the counselor.   |        |
| 5. Education   | 21     |
| Human Growth and Development 250   | 3      |
| Introduction to Directed Teaching 300  | 3      |
| Directed Teaching, Laboratory in Education, and General Education Problems 470, 420, 450   | 15     |
| 6. Physical Education  | 4      |
| 7. Additional General Education Courses  | 8-10   |
| Eight hours additional work (ten if the student takes College Writing 116, 117) must be elected from non-professional Liberal Arts courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any non-professional courses in the Divisions of Language and Literature, Social Science, and Science and Mathematics. |        |
| 8. Electives   | 62     |
| B. One Major of not less than 24 hours and one minor of not less than 18 hours in subjects or subject fields that are taught in secondary schools in Michigan are required. Certain courses in some departments may not be counted toward majors or minors (See course descriptions).  |        |
| C. The candidate must satisfy the requirements of the A.B. or B.S. degree.   |        |
| D. The candidate for the State Secondary Provisional Certificate must present a methods course in a major or minor field.  |        |

For an outline of major and minor requirements, see listings of the respective departments and divisions.

## LIBRARIANSHIP CURRICULUM

A.B. or B.S. Degree

State Elementary or Secondary Provisional Certificate

Elect a Subject Major in Addition to Library Science Minor

(For Teacher-Librarians)

First Year	S.H.	Second Year	S.H.
Basic Studies		Humanities 220 or equivalent	3
College Writing 116, 117	6	General Psychology 200	3
World Civilizations 100, 101	8	Children's Literature 282	3
Science	8	Human Growth and Development	
Modern Foreign Language	8	250	3
Introd. to Librarianship 100, 101	2	American Government 200	3
Physical Education	2	Organization of Library	
	—	Materials 230	2
	34	Physical Education	2
		Electives and departmental	
		major requirements	12
			—
			31
Third Year	S.H.	Fourth Year	S.H.
Reference Service 512	3	Introd. to Directed Teaching 300	3
Selection of Books and Related		Technical Processes, Instructional	
Materials 510	3	Centers Materials 531	4
Electives and departmental		Field Assignment Seminar 520	2
major requirements	26	**Storytelling 546	2
	—	**Elementary School Library	
	32	Materials 516	2
		*Reading Interests of Young	
		Adults 542	2
		Directed Teaching	8
		Lab. in Education 410 or 420	4
		Gen. Ed. Problems 450	3
		Electives and departmental	
		major requirements	2-4
			—
			30-32

\*\*Required only for teacher-librarian candidates in the elementary curriculum.

\*Required only for teacher-librarian candidates in the secondary curriculum.

Note: A portion of the Directed Teaching period is spent in a selected school library.

**MUSIC CURRICULUM**

B.M. Degree with a major in Public School Music, State Elementary or  
Secondary Provisional Certificate

First Year	S.H.	Second Year	S.H.
Applied Music*	4	Applied Music*	4
Communication 114, 115		Humanities 220 or 221	
or		or	
College Writing 116, 117	8 or 6	Humanities 222 or 223	
Physical Science 108 and/or 109		or	
or		Approved Alternate	4(3)
Biological Science 107		String Class 128, 129	2
or		Sophomore Theory 260, 261	8
World Civil. 100 and/or 101		Advanced Piano Class 220, 221	2
or		Woodwind Class 126, 127	2
Man & Society 102 and/or 103	8	Elementary Acoustics 102	2
Freshman Theory 160, 161	8	Elementary Music Methods 240	3
Voice Class 122, 123	2	Percussion Class 130	1
Piano Class 120, 121	2	Large Ensemble	2
Large Ensemble	2	Physical Education	2
Physical Education	2	Elective (non-music)	4
	<hr/> 36 or 34		<hr/> 36 or 35

Third Year	S.H.	Fourth Year	S.H.
Applied Music*	4	Applied Music*	4
Brass Class 124, 125	2	Directed Teaching 470	8
Choral and Inst. Conducting		Lab. in Education 410 or 420	4
330, 331	2	Genl. Ed. Prob. 450	3
Junior H. S. Methods 340	3	Elective (Non-Music)	3
Senior H. S. Methods 341	3	Large Ensemble	2
Hist. and Lit. of Music 370, 371	8		—
Human Growth and Devel. 250	3		24
Intro. to Dir. Teach. 300	3		
Music Arranging 366	2		
Political Science 200	3		
Large Ensemble	2		
	<hr/> 35		

Plus the following courses which carry no credit:

Music Education Band (1 year)	English Dict. and Song Lit. 131
Music Education Orchestra (1 year)	(1 Sem.)
Major Performance Literature	French Dict. and Song Lit. 231
(1 year)	(1 Sem.)
Italian Dict. and Song Lit. 132	German Dict. and Song Lit. 232
(1 Sem.)	(1 Sem.)

\*General Supervisors divide their study between voice and an instrument.  
Instrumental Supervisors concentrate their study on an instrument.  
Vocal Supervisors concentrate their study on voice.

**ELEMENTARY EDUCATION CURRICULUM—MUSIC MAJOR**

B.S. Degree: Major-Music; Minor-Non-Music of student's choice: i.e. English History, Art, Social Science, etc.

(Grants certification to teach an elementary grade room and elementary music.)

First Year	S.H.	Second Year	S.H.
Freshman Theory 160-161	8	El. Music Practicum 234-235	6
*Piano Class or Priv. Piano	2	Piano Class or Priv. Piano	2
*Voice Class or Priv. Voice	2	Private Voice	2
Communication 114-115	8	Music Appreciation 170-171	4
Basic Social Science	8	Human Growth & Develop. 250	3
Physical Education	1	Physical Geography 105	4
***Elective	2	Biological Science 107	4
Ensemble	1	American Gov't. 202, 204 or 200	3
	—	***Elective	2
	32	Ensemble	1
			—
			32
Third Year	S.H.	Fourth Year	S.H.
Graderoom Music Lit. 374	3	**Directed Teaching	4
El. Music Meth. & Mat'ls. 240	3	(Elem. Classroom)	
Priv. Piano or Voice	2	**Directed Teaching	4
Choral Conducting 330	1	(Elem. Music)	
Intro. to Dir. Teaching 300	3	Lab. in Education 410	4
Teaching of Reading 312	3	General Ed. Problems 450	3
Children's Literature 282	3	Humanities 220, 221 or 222, 223	6
Practical Arts Course	3	Ensembles	2
Physical Science 108	4	Art Course	3
Physical Education 340	1	***Electives	6
Physical Education	1		—
Ensemble	1		32
***Elective	4		
	—		
	32	TOTAL HOURS	128

\*To be decided by staff members according to student's needs and qualifications.

\*\*Division of Directed Teaching into two semesters is optional.

\*\*\*These electives should be used first to complete the non-music minor. The following courses are strongly recommended:

Introduction to Educ. 100 (Freshmen)  
 Arithmetic for Teachers 150 (Any semester)  
 Nurs. and Kind. Education 414 (Senior)

## SPECIAL EDUCATION CURRICULUM— DEAF AND HARD OF HEARING

B.S. Degree

State Elementary Provisional Certificate

(For the preparation of teachers of deaf and hard of hearing children)

A. Course Requirements	S.H.
1. Language and Literature .....	12-14
Communication 114, 115 <i>or</i> .....	8
College Writing 116, 117 .....	6
Literature for Children 282 .....	3
Problems of the Deaf and Hard of Hearing 254 .....	3
2. Science .....	18
Biological Science 107* .....	4
Physical Geography 105* <i>or</i> Physical Science 108* .....	4
Healthful Living 111 <i>or</i> Health Education 242 .....	2
General Psychology 200 .....	3
Abnormal Psychology 322 .....	3
Mental Testing 481 .....	2
3. Social Science .....	11
World Civilizations 100, 101 <i>or</i> .....	
Man and Society 102, 103 .....	8
American Government 202, 204 <i>or</i> 200 .....	3
4. Humanities .....	6
Humanities 220, 221* <i>or</i> .....	
Humanities 222, 223* .....	6
5. Education .....	38
Human Growth and Development 250 .....	3
Teaching of Reading 312 .....	3
Introduction to Directed Teaching 300 .....	3
Introduction to Special Education 331 <i>or</i> .....	2
Education of Exceptional Children 530 .....	2
Mental Hygiene of Childhood and Adolescence 585 .....	2
Methods and Materials for the Deaf 531 .....	2
Speech for the Deaf 536 .....	2
Language for the Deaf 537 .....	2
Introduction to Lip Reading 535 .....	2
Basic Audiometry 434 .....	2
Anatomy and Pathology of the Aural Mechanism 538 .....	2
Directed Teaching, Laboratory in Education, and General Education Problems 470, 410, 450 .....	15

\*If the student demonstrates proficiency in any of these subjects by comprehensive examination, he may elect other courses from the division upon the recommendation of his counselor.



- |   |      |
|---|------|
| 6. Fine and Practical Arts .....  | 12   |
| Industrial Arts for Elementary Teachers 174 .....   | 4    |
| Electives (must include at least one course in Music and<br>one course in Art) .....  | 8    |
| 7. Physical Education .....   | 4    |
| 8. Additional General Education Courses .....   | 8-10 |
| Eight hours additional work (ten if the student takes College Writing 116, 117) must be elected from non-professional courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any such courses in the Divisions of Language and Literature, Social Science, and Science and Mathematics. |      |
| 9. Electives .....  | 11   |
- B. The academic training shall include a major in Special Education (deaf and hard of hearing) and one minor in a subject or subject field taught in the elementary grades. Courses included in the major in Special Education must be elected under guidance and must include those subjects, groups, and hours required for approval by the Department of Public Instruction, American Association of Instructors of the Deaf, and the American Speech and Hearing Association.
- C. The candidate must satisfy the requirements of the B.S. degree.
- \*Temporary equivalents for these courses may be permitted with the consent of the counselor.

## SPECIAL EDUCATION CURRICULUM— MENTALLY HANDICAPPED

### B.S. Degree

#### State Elementary Provisional Certificate

(For the preparation of teachers of mentally handicapped children)

A. Course Requirements	S.H.
1. Language and Literature .....	9-11
Communication 114, 115 <i>or</i> .....	8
College Writing 116, 117 .....	6
Literature for Children 282 .....	3
2. Science .....	22
Biological Science 107* .....	4
Physical Geography 105* .....	4
Physical Science 108* .....	4
Healthful Living 111 (or Health Education 242) .....	2
General Psychology 200 .....	3
Abnormal Psychology 322 .....	3
Mental Testing 481 .....	2

\*If the student demonstrates proficiency in any of these subjects by comprehensive examination, he may elect other courses from the division upon the recommendation of his counselor.

*School of Education*

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|--|-------|
| 3. Social Science .....  | 11    |
| World Civilizations 100, 101 <i>or</i> .....   |       |
| Man and Society 102, 103 .....   | 8     |
| American Government 202, 204 <i>or</i> 200 .....   | 3     |
| 4. Humanities .....  | 6     |
| Humanities 220, 221** <i>or</i> .....  | 6     |
| Humanities 222, 223** .....  | 6     |
| 5. Education .....   | 37-38 |
| Human Growth and Development 250 .....   | 3     |
| Introduction to Special Education 331 <i>or</i> .....  | 2     |
| Education of Exceptional Children 530 .....  | 2     |
| Teaching of Reading 312 .....  | 3     |
| Mental Deficiency 532 .....  | 2     |
| Introduction to Mental Hygiene 381 <i>or</i> .....   | 3     |
| Mental Hygiene of Childhood and Adolescence 585 .....  | 2     |
| Education and Control, Mentally Handicapped 533 .....  | 3     |
| Methods and Materials, Mentally Handicapped 534 .....  | 2     |
| Administration Special Classes, Mentally Handicapped 540 .....   | 2     |
| Introduction to Directed Teaching 300 .....  | 3     |
| Directed Teaching, Laboratory in Education and<br>General Education Problems 470, 410, 450 .....   | 15    |
| 6. Fine and Practical Arts .....   | 12    |
| Industrial Arts for Elementary Teachers 174 .....  | 4     |
| Electives (must include at least one course in Music and<br>one course in Art) .....   | 8     |
| 7. Physical Education .....  | 4     |
| 8. Additional General Education Courses .....  | 8-10  |
| Eight hours additional work (ten if the student takes Col-<br>lege Writing 116, 117) must be elected from non-profes-<br>sional courses marked by an asterisk in the Division of<br>Basic Studies and the Departments of Art and Music, or<br>from any such courses in the Divisions of Language and<br>Literature, Social Science, and Science and Mathematics. |       |
| 9. Electives .....   | 12-13 |
- B. The academic training shall include a major in Special Education (Men-  
tally handicapped) and one minor in a subject or subject field taught in  
the elementary grades. Courses included in the major in Special Edu-  
cation must be elected under guidance, and must include those subjects,  
groups and hours required by the Department of Public Instruction for  
approval.
- C. The candidate must satisfy the requirements of the B.S. degree.

\*\*Temporary equivalents for these courses may be permitted with the con-  
sent of the counselor.

# SPECIAL EDUCATION CURRICULUM— CRIPPLED AND HOMEBOUND CHILDREN

B.S. Degree

State Elementary Provisional Certificate

(For the preparation of teachers of crippled and homebound children)

A. Course Requirements		S.H.
1. Language and Literature		9-11
Communication 114, 115 <i>or</i>	8	
College Writing 116, 117	6	
Literature for Children 282	3	
2. Science		22
Biology 100	4	
Biology 213	4	
Physical Geography 105*	4	
Healthful Living 111	2	
General Psychology 200	3	
Abnormal Psychology 322	3	
Mental Testing 481	2	
3. Social Science		11
World Civilizations 100, 101 <i>or</i>		
Man and Society 102, 103	8	
American Government 200, 202, <i>or</i> 204	3	
4. Humanities		6
Humanities 220, 221* <i>or</i>	6	
Humanities 222, 223*	6	
5. Education		35
Human Growth and Development 250	3	
Introduction to Special Education 331 <i>or</i>	2	
Education of Exceptional Children 530	2	
Teaching of Reading 312	3	
Mental Deficiency 532	2	
Introduction to Mental Hygiene 381 <i>or</i>	3	
Mental Hygiene of Childhood Adolescence 585	2	
Therapeutic Care of Crippled Children 542	2	
Education of Crippled Children 543	2	
Introduction to Directed Teaching 300	3	
Directed Teaching, Laboratory in Education, and General		
Educational Problems 470, 410, 450	15	
6. Fine and Practical Arts		14
Industrial Arts for Elementary Teachers 174	4	
Orthopedics 524	2	
Electives (must include one course in Music and one course		
in Art)	8	

\*If the student demonstrates proficiency in this subject he may elect other courses from the division upon the recommendation of his counselor.

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| 7. Physical Education .....  | 4    |
| 8. Additional General Education Courses .....  | 8-10 |
| Eight hours additional work (ten if the student takes College Writing 116, 117) must be elected from non-professional courses marked with an asterisk in the Division of Basic Studies and the Department of Art and Music, or from such courses in the Division of Language and Literature, Social Science and Science and Mathematics. |      |
| 9. Electives .....   | 5    |
- B. The academic training shall include a major in Special Education (Crippled and Homebound) and one minor in a subject or subject field taught in the elementary grades. Courses included in the major in Special Education must be elected under guidance, and must include those subjects, groups and hours required by the Department of Public Instruction for approval.
- C. The candidate must satisfy the requirements of the B.S. Degree.
- \*Temporary equivalents for these courses may be permitted with the consent of the counselor.

## **SPECIAL EDUCATION CURRICULUM— SPEECH CORRECTION**

### **B.S. Degree**

#### **State Elementary or Secondary Provisional Certificate (For the preparation of teachers of speech correction)**

<b>A. Course Requirements</b>	<b>S.H.</b>
1. Language and Literature .....	33-35
Communication 114, 115 <i>or</i> .....	8
College Writing 116, 117 .....	6
Speech for Teachers 102 .....	3
Problems of Deaf and Hard of Hearing 254 .....	3
Introduction to Speech Correction 250 .....	3
Principles of Speech Correction 252 .....	3
Phonetics 350 .....	3
Basic Voice and Speech Science 550 .....	3
Stuttering and Allied Disorders 552 .....	3
Applied Speech Correction 554 .....	3
Organic Speech Disorders 558 .....	3
2. Science .....	16-17
Biological Science 107* .....	4
Physical Science 108* .....	4
General Psychology 200 .....	3
Abnormal Psychology 322 .....	3
Mental Testing 481 <i>or</i> .....	2
Laboratory in Psychological Testing 380 .....	3

- |  |       |
|--|-------|
| 3. Social Science .....  | 11    |
| World Civilizations 100, 101 <i>or</i> .....   |       |
| Man and Society 102, 103 .....   | 8     |
| American Government 202, 204 <i>or</i> 200 .....   | 3     |
| 4. Humanities .....  | 6     |
| Humanities 220, 221* <i>or</i> .....   | 6     |
| Humanities 222, 223* .....   | 6     |
| 5. Education .....   | 25-26 |
| Human Growth and Development 250 .....   | 3     |
| Introduction to Special Education 331 <i>or</i> .....  | 2     |
| Education of Exceptional Children 530 .....  | 2     |
| Introduction to Mental Hygiene <i>or</i> .....   | 3     |
| Mental Hygiene of Childhood and Adolescence 585 .....  | 2     |
| Introduction to Directed Teaching 300 .....  | 3     |
| Directed Teaching, Laboratory in Education, and<br>General Education Problems 470, 410 <i>or</i> 420, 450 .....  | 15    |
| 6. Physical Education .....  | 4     |
| 7. Additional General Education Courses .....  | 8-10  |
| Eight hours additional work (ten if the student takes College Writing 116, 117) must be elected from non-professional courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any such courses in the Division of Language and Literature, Social Science, and Science and Mathematics. |       |
| 8. Electives .....   | 17-19 |
| Suggested electives: Anatomy 216, Public Speaking 130, Social Psychology 220, Principles of Social Case Work 360, Teaching of Reading 312, Basic Audiometry 434 <i>or</i> Introduction to Lip Reading 535, Cultural Anthropology 330, Learning and Memory 510.   |       |
- B. The academic training shall include a major in Speech correction and one minor. Courses included in the major in Special Education must be selected under guidance, and must include those subjects required by the Department of Public Instruction for approval.
- C. The candidate must satisfy the requirements of the B.A. or B.S. degree.

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\*If the student demonstrates proficiency in any of these subjects by comprehensive examination, he may elect other courses from the division upon the recommendation of his counselor.

## SPECIAL EDUCATION CURRICULUM— EMOTIONALLY DISTURBED

B.S Degree

State Elementary Provisional Certificate

A. Course Requirements	S.H.
1. Language and Literature .....	9-11
Communication 114, 115 <i>or</i> .....	8
College Writing 116, 117 .....	6
Literature for Children 282 .....	3
2. Science .....	22
Biological Science 107* .....	4
Human Geography 105* .....	4
Physical Science 108* .....	4
Healthful Living 111 (or Health Education 242) .....	2
General Psychology 200 .....	3
Abnormal Psychology 322 .....	3
Psychological Testing 380 .....	2
3. Social Science .....	11
World Civilizations 100, 101 <i>or</i> .....	
Man and Society 102, 103 .....	8
American Government 202, 204, <i>or</i> 200 .....	3
4. Humanities .....	6
Humanities 220, 221** <i>or</i> .....	6
Humanities 222, 223** .....	6
5. Education .....	38-39
Human Growth and Development 250 .....	3
Introduction to Special Education 331 <i>or</i> .....	2
Education of Exceptional Children 530 .....	2
Teaching of Reading 312 .....	3
Introduction of Mental Hygiene 381 <i>or</i> .....	3
Mental Hygiene of Childhood and Adolescence 585 .....	2
Introduction to Directed Teaching 300 .....	3
Directed Teaching 470 .....	4
Directed Teaching 472 .....	8
Laboratory in Education 410 .....	4
General Educational Problems 450 .....	3
Psychopathology of Childhood 588 .....	2
Education of Emotionally Disturbed Children 589 .....	4
6. Fine and Practical Arts .....	12
Industrial Arts for Elementary Teachers 174 .....	4
Electives (must include at least one course in music and one course in art) .....	8

\*If the student demonstrates proficiency in any of these subjects by comprehensive examination, he may elect other courses from the division upon the recommendation of his counselor.

\*\*Temporary equivalents for these courses may be permitted with the consent of the counselor.

7. Physical Education .....	4
8. Additional General Education Courses .....	8-10
Eight hours additional work (ten if the student takes College Writing 116, 117) must be elected from non-professional courses marked with an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from such courses in the Division of Language and Literature, Social Science and Science and Mathematics.	
9. Electives .....	11-12
B. The academic training shall include a major in Special Education (Emotionally Disturbed) and one minor in a subject or subject field taught in the elementary grades. Courses included in the major in Special Education must be elected under guidance, and must include those subjects, groups and hours required by the Department of Public Instruction for approval.	
C. The candidate must satisfy the requirements of the B.S. Degree.	
D. Final approval of a certificate to teach emotionally disturbed children will be granted at the completion of one year of successful teaching in this field.	
E. During the first three years the student must complete a minimum of 150 hours of observing and working with normal and maladjusted children.	
F. The courses taken during the senior year will be as follows:	
First Semester	
Directed Teaching 470 (regular class) .....	4 s.h.
Laboratory in Education 410 .....	4 s.h.
Psychopathology of Childhood 588 .....	2 s.h.
Other courses .....	5 s.h.
Total .....	15 s.h.
Second Semester	
Directed Teaching 472 (emot. dis.) .....	8 s.h.
Education of Emot. Dist. Children 589 .....	4 s.h.
General Educational Problems 450 .....	3 s.h.
Total .....	15 s.h.

# Education

Roland S. Strolle, Head

A. L. Sebaly, Director of Student Teaching

Kristen Juul, Director of Special Education

James O. Ansel, Director of Rural Life and Education

David Adams

Hubert G. Archer

Lawrence Blaha

Donald Blasch

Gerald Bodine

Harold W. Boles

Roy C. Bryan

John A. Buelke

Raymond C. Carlson

Homer L. J. Carter

Clara R. Chiara

George K. Cooper

James A. Davenport

Alvin J. Davis

Donald A. Davis

Robert P. Eddy

Joseph J. Eisenbach

Jane G. Elliott

John L. Feirer

Orie I. Frederick

Mitchell J. Gary

Louis A. Govatos

James H. Griggs

Elizabeth Johnson

William H. Kanzler

Eunice E. Kraft

Neil Lamper

Carl Lindstrom

Lyle McAuley

Dorothy McCuskey

Dorothy L. McGinnis

Marie McMahan

George G. Mallinson

Arthur J. Manske

Harvey Overton

Edward Perkins

Lois Robinson

Esther D. Schroeder

Carl B. Snow

Sarah J. Stroud

Stanley Suterko

Sara R. Swickard

Isadore R. Turansky

Donald C. Weaver

Roberta Westra

Jack J. Wickert

Courses are designed to meet the professional needs of the student preparing to teach. All students pursuing a curriculum for a secondary provisional certificate and a degree are required to take as a minimum 21 hours of professional work in education; 24 hours for the elementary provisional certificate. The following courses, or their equivalent, are required: Human Growth and Development 250, three hours; The Teaching of Reading 312, three hours for elementary teachers; Introduction to Directed Teaching 300, three hours; and Directed Teaching, Laboratory in Education, and General Educational Problems 470, 410 or 420, 450, fifteen hours. A grade of "C" or better must be earned in each course.

Applicants for the secondary provisional certificate are not permitted to major in Education.

Elective courses are available in the following fields: elementary education, secondary education, rural life and education, special education, methods of teaching, foundations of education, guidance, mental hygiene, and related areas. Certain special-methods courses are available in other departments of the university.

Students take Directed Teaching 470 and Laboratory in Education 410 or 420, twelve hours, during one semester, and General Educational Problems 450, three hours, during either semester of the senior year. Students with advanced credit in education or with irregularities in their professional work should confer with the departmental adviser at the earliest possible date.



**100 Introduction to Education****2 hrs. Fall, Spring****Freshman Course open to selected students.**

This course is designed to provide an early introduction to the profession of teaching and to the educational services present in communities of the state and nation. Field trips, observations, audio-visual materials, resource persons, tests and personal inventories are used to acquaint students with the purposes and functions of education in American society, and to help students make intelligent choices of areas of specialization within the profession. Course meets three hours a week for two hours credit.

**REQUIRED WORK IN EDUCATION****(For Provisional Certificate)****SOPHOMORE OR JUNIOR YEAR****250 Human Growth and Development****3 hrs. Fall, Spring**

Class meets four periods a week for three hours credit. Course deals with physical, social, emotional, and intellectual growth and development of children and adolescents.

**JUNIOR YEAR****300 Introduction to Directed Teaching****3 hrs. Fall, Spring**

This course is designed to prepare students for the responsibilities of classroom instruction. Emphasis is placed on: purposes of the school; selection and organization of learning experiences; instructional methods and materials; patterns of curriculum organization; classroom management; non-instructional duties of the teacher in school and community. Certain sections are reserved for elementary and secondary curricula only.

**SENIOR YEAR****470, 410 or 420, 450 Integrated Professional Education 15 hrs. Fall, Spring**

For all seniors whose programs will permit them to devote one semester entirely to professional education. A unified course for seniors which is based on needs and problems of students while doing their directed teaching. Prerequisite: 250 and 300, or equivalent; and twice as many honor points as hours of credit.

**470 Directed Teaching****8 hrs. Fall, Spring**

Students devote a half day for one semester to Directed Teaching, at which time they have experience in both the curricular and extra-curricular program of the training school in which they teach. All students expecting to do Directed Teaching should enroll in the Student Teaching Office well in advance of the semester in which the Directed Teaching is to be done.

- 410, 420 Laboratory in Education** 4 hrs. Fall, Spring  
(Elementary students enroll in 410; secondary in 420)

Students work individually and in groups on the kinds of problems faced in directed teaching situations in classroom, school, and community. Other problems to be faced later as full-time teachers are considered. Suggestions and guidance are afforded by staff members and by resource persons. The laboratory is divided into elementary and secondary sections.

- 450 General Educational Problems** 3 hrs. Fall, Spring

Course content includes such matters as social, political, and economic influences on education; historical and philosophical backgrounds of present-day education; changes and trends in education; and current problems in education.

## OPTIONAL COURSES IN DIRECTED TEACHING

- 471 Directed Teaching** 4 hrs. Fall, Spring

Only for seniors who have completed most of their professional course work prior to the senior year. Similar to description for 470. Students should enroll at the Student Teaching Office for Directed Teaching 471, 472, or 473 well in advance of the semester in which the Directed Teaching is to be done. Prerequisite: twice as many honor points as hours of credit acquired.

- 472 Directed Teaching** 4-8 hrs. Fall, Spring

Only for seniors who have previously fulfilled a part of their requirement in directed teaching. Similar to description for 471. This course is also offered in extension.

- 473 Directed Teaching** 4 hrs. Fall, Spring

This elective course is planned primarily for those students who wish to extend their teaching over a wide range of grades or subjects, and for students who, in the opinion of the head of the department and the Director of Student Teaching, need more experience in teaching. Prerequisite: 472 or 470.

## GENERAL COURSES

- 502 Curriculum Workshop** 2-4 hrs. Fall, Spring

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.

**504 Workshop in Human Relations****2-4 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 processes, communication, and home-school-community relations. Resource persons in Psychology, Sociology, Speech, Business, and Education will participate in the workshop. Not offered in 1962-63.

**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 in 1962-63.

**508 Parent Education****2 hrs. 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.

**ELEMENTARY EDUCATION****310 Stories for Childhood****2 hrs. Fall**

A study of stories and poems suitable to childhood. Classroom practice in story telling.

**311 Reading Workshop****3 hrs.**

The basic purpose of the workshop will be to study typical classroom reading problems. Tools useful in identifying problems, materials available, and techniques for the teaching of reading will be examined and experimented with in the classroom. Special consideration will be given to a case study of one severe reading problem.

**312 The Teaching of Reading (Elementary)****3 hrs. Fall, Spring**

A summary of the results of the scientific studies made in the field of reading, with suggestions as to the bearing of these studies upon the materials and methods of teaching.

**313 Problems in Elementary Education****3 hrs.**

This course is designed to deal with problems of immediate concern to beginning teachers—discipline, group activity, teacher-pupil planning, and other problems dealing with teaching in the elementary school. Not offered in 1962-63.

**414 Nursery-Kindergarten Education****2 hrs. Spring**

This course will acquaint the students with the history and present-day status of the Nursery School and Kindergarten education. Consideration

will be given to the organization, equipment, curriculum, and approved teaching procedures.

**415 Early Elementary Education 3 hrs.**

A study of curriculum practices in the early elementary grades. Students will have an opportunity to work with large centers of interest, be introduced to newer courses of study, and afforded the opportunity of actual participation. Not offered in 1962-63.

**416 Later Elementary Education 3 hrs.**

A study of the characteristics and needs of pupils in the later-elementary grades and of the materials and methods of instruction. Not offered in 1962-63.

**510 The Elementary Curriculum—I 2 hrs. Fall**

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

**511 The Elementary Curriculum—II 2 hrs.**

A continuation of 510. Emphasis will be placed on developing and organizing research materials for actual use in school systems represented by those taking the course. Not offered in 1962-63.

## **SECONDARY EDUCATION**

**322 The Teaching of Reading (Secondary) 3 hrs. Fall, Spring**

A summary of the results of the scientific studies made in the field of reading, with suggestions as to the bearing of these studies upon the materials and methods of teaching.

**421 Secondary School Curriculum 2 hrs.**

A study of the principles underlying the revision and reorganization of junior and senior high school curricula and a survey of current practices in adapting the high school offering to modern social conditions and adolescent needs. Not offered in 1962-63.

**520 The Junior High School 2 hrs. Spring**

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

**SPECIAL EDUCATION**

Dr. Kristen Juul, Director

**331 Introduction to Special Education 2 hrs.**

A beginning course in the field of special education, dealing with the education of gifted, subnormal, neurotic, delinquent, speech-defective, blind, deaf, and crippled children. Prerequisite: 250. Not offered in 1962-63.

**434 Basic Audiometry 2 hrs. Spring**

Theory and practice of hearing testing with emphasis on the development of audiometric techniques. Interpretation of audiograms with respect to clinical and educational recommendations.

**530 Education of Exceptional Children 2 hrs. 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.**

The course deals with curricula, curricular materials, and special methods to be employed in teaching deaf and hard of hearing children. Not offered in 1962-63.

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

A course in the psychology and pathology of mental deficiency including causation, diagnosis, classification, prognosis and therapy at all levels. Prerequisite: 250 or equivalent.

**533 Education and Control, Mentally Handicapped 3 hrs. Fall**

The course deals with the roles of the courts, institutions, schools and other agencies in control, education and custody of the mentally handicapped. Prerequisite: 250 or equivalent.

**534 Methods and Materials, Mentally Handicapped 2 hrs. Fall, Spring**

Principles of learning and instructional practices applicable to mentally handicapped children. Special attention is given to problems of the mentally retarded child with elementary curricular materials.

**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 in 1962-63.

**536 Speech for the Deaf 2 hrs.**

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. Not offered in 1962-63.

**537 Language for the Deaf****2 hrs.**

The development and application of the principles of the English language and presentation to the deaf children. Attention will be given to the Language Principle Method, the Barry Five Slate System, Straight Language for the Deaf, and Wings Symbols. Not offered in 1962-63.

**538 Anatomy and Pathology of the Aural Mechanism****2 hrs. Spring**

A survey of anatomical and physiological subject matter bearing on the speech field of hearing; functional tests of hearing; and discussions of the pathological conditions of the ear and labyrinth.

**539 Clinical Audiometry and Audiology****6 hrs. Spring**

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 tests 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.

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

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. Lecture, demonstrations, clinics by physicians, physical and occupational therapists. Open to graduates and qualified undergraduates.

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

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 brain-injured children. Open to graduates and qualified undergraduates.

**METHODS OF TEACHING****344 Teaching of Industrial Education****3 hrs. Fall, Spring**

This course deals with the problems in teaching industrial arts subjects, the techniques employed in the analysis of instructional units, construction of tests and rating scales, and problems dealing with administration and work. The principal methods of instruction used in industrial arts subjects.

**345 Plan and Organization of a School Shop****2 hrs. Fall, Spring**

This is a course to help teachers plan and organize the school shop. Topics concerned include physical needs of the subject, selection of activities, shop layout, purchasing equipment, establishing a supply routine, planning personnel organization, and shop management.

**346 Teaching of Shorthand and Typewriting 2 hrs. Spring**

A course in the methods of teaching business subjects with emphasis on shorthand, typewriting, and other stenographic skills. It is recommended that this course either precede or accompany directed teaching in this area.

**347 Teaching of Bookkeeping and Basic Business Courses 2 hrs. Fall, Spring**

A course in methods for the prospective teacher of bookkeeping, business law, economics, business English, and clerical business skills. It is recommended that this course either precede or accompany directed teaching in this area.

**348 Introduction to Audio-Visual Education 3 hrs.**

Survey of various types of Audio-Visual Aids; functions in the learning process; practice in selecting and evaluating materials; equipment instruction in laboratory periods with proficiency in operation required; and techniques of good utilization of Audio-Visual materials. Not offered in 1962-63.

**442 Teaching of Latin 2 hrs. Fall**

The problems of the first two years of high-school Latin are considered. Observations of teaching, reports, and discussions will form a part of the work. This course is a prerequisite to directed teaching in Latin.

**540 Administration of Special Classes, Mentally Handicapped 2 hrs. Spring**

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

**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: 151, 153, 217, 232, 233, 251.

**544 Methods in Physical Education 2 hrs. Fall**

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.

**545 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.

**546 Driver and Safety Education 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. 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. Spring**

This workshop or course provides for 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, mimeographs techniques, etc.

**FOUNDATIONS OF EDUCATION****350 Character Education****2 hrs.**

The objectives of character education are studied and catalogued. The influences of the curriculum, the cardinal principles of education and social agencies, in relation to heredity and environment, are observed. A bibliography of methods and materials is collected. Not offered in 1962-63.

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

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 in 1962-63.

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

For graduate students and teachers of experience. Analyzes and interprets the changes in education taking place in this and other countries.

**ADMINISTRATION AND SUPERVISION****460 Organization and Administration of Physical Education—Men****3 hrs. Fall, Spring**

The planning of physical-education programs for city, village, and rural schools; the organization of health lessons, games, tests, meets, tournaments, and seasonal play; principles of supervision; construction and equipment of buildings, grounds, swimming pools, athletic fields, stadia.

**561 Administration and Organization of Physical Education—Women****2 hrs. Fall**

This course presents the problems 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 544.



**GUIDANCE, MENTAL HYGIENE, AND INDIVIDUAL SERVICES****381 Introduction to Mental Hygiene****3 hrs.**

A course in the mental hygiene of childhood and adolescence. Among the topics considered are: adjustment to home and school; failure, frustration, and aggression; role of the emotions in education; adolescence and its problems; sex development; juvenile delinquency; the mental hygiene of courting, mating, and marital relations; the mental hygiene of religion. Not offered in 1962-63.

**482 Clinical Problems in Reading****2 hrs. Fall, Spring**

This course provides practical experience in Reading Laboratories sponsored by the Psycho-Educational Clinic. Diagnosis and treatment of reading problems at either the elementary level or secondary level are emphasized. The course deals with physical, mental, and emotional factors affecting reading performance. Open to advanced students with permission of instructor.

**Education 580 Principles and Philosophy of Guidance 2 hrs. Fall, Spring**

Basic introductory course for all elementary and secondary teachers. A thorough investigation of the democratic philosophical concepts underlying guidance service programs; a survey of the history and principles of guidance; an overview of guidance services.

**Education 581 Individual Appraisal****2 hrs. Fall, Spring**

A development of competencies in the use of questionnaires, school records, evaluations, autobiographies, anecdotal records, sociometrics, rating scales, case studies and conferences, parent-teacher conferences, placement follow-up and community resources.

**Education 582 Occupational and Educational Information****2 hrs. Fall, Spring**

Discussions of theories of occupational and educational choice stressing knowledge of sources, use, evaluation and techniques of imparting occupational and educational information including college choice, loans, fellowships, scholarships and grants in education.

**583 Guidance Workshop****2 hrs. Spring**

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.

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

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

**587 Educational Therapy in Reading 2 hrs. Spring**

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.

**588 Psychopathology of Childhood 2 hrs. Spring**

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

**589 Education of Emotionally Disturbed Children 4 hrs. Fall, Spring**

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

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

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

**591 Braille and other Communication Methods 2 hrs. Fall, Spring**

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

**592 Education of the Blind and Partially Sighted 2 hrs. Fall**

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

**RURAL LIFE AND EDUCATION**

Dr. James O. Ansel, Director

**101 Curriculum 3 hrs. Fall**

A study of the objectives of education as related to rural children and rural needs, and teaching practices leading toward these objectives. Students have a wide range of experience in observation and in the examination and development of materials suitable for rural schools.

**202 Introduction to Directed Teaching (Rural) 3 hrs. Spring**

A study of the general principles underlying good teaching and management in the various types of rural schools. Group and individual observation and participation opportunities on and off campus are provided.

**203 Directed Teaching 4 or 5 hrs. Fall, Spring**

Directed teaching is done in designated rural schools of various types in the counties of the service area of the university. Selected students may meet requirements in six-week periods of directed off-campus community participation and teaching.

**305 Rural School Administration 3 hrs.**

The community school; school district reorganization; support and control of education; the functions of the board of education, county superintendent, and state department of public instruction; school buildings, equipment and supplies; professional ethics; professional organizations; the PTA, public relations and interpretation; school law; and similar topics are studied in the course. Not offered in 1962-63.

**408 Rural School Supervision (Seminar) 2 hrs. Fall**

Planned for supervisors, principals and superintendents. Discussion and individual reports on curriculum, teaching, in-service education, orienting the new teacher, and other problems of supervision for any type of rural school are included. Prerequisite: consent of instructor.

**409 Rural School Supervision (Seminar) 2 hrs. Spring**

Continuation of 408. Study of individual and group problems pertaining to supervisory and related administrative demands in rural schools. Field work is encouraged. Prerequisite: consent of instructor.

**411 Special Problems of Community Schools (Seminar) 2 hrs. Spring**

Planned for teachers, principals and superintendents, supplementing Rural School Administration 305. Topics considered are the aims and functions of the school as related to the rural community, surveys, location and planning of buildings, finance, transportation, selection of teachers, salary and tenure, extra-curricular activities, the PTA adult education etc. Field work is encouraged. Prerequisite: consent of instructor.

**RURAL SOCIAL SCIENCE****220 Rural Sociology****3 hrs. Spring**

Study of life in the rural environment—local, regional and worldwide, including cultural factors; population trends; impact of industrialization; family, village, community; social institutions, agencies and organizations; educational, recreational, cultural, religious, health and governmental facilities. Current magazines and pamphlets supplement the textbooks.

**230 Rural Economics****3 hrs. Fall**

Fundamental economic principles are considered in terms of rural conditions—local, national and international. Economic interpretation is given topics found in the elementary and secondary school curricula—conservation, taxes, insurance, consumer education, cooperatives, agricultural extension services, etc.

**424 Rural Life (Seminar)****2 hrs. Fall**

Critical study of recent books in rural social life, with emphasis upon training for leadership. Supplementary references include research studies. Special problems are selected for study by each student. Prerequisite: consent of instructor.

**425 Rural Life (Seminar)****2 hrs. Spring**

Consideration is given individual problems related to social aspects of school and community life, members of the class devising forms and schedules for a study, and analyzing research studies and techniques involving planning for various services and agencies. Field work is encouraged. Prerequisite: consent of instructor.

# Physical Education for Men

Mitchell J. Gary, Head  
Donald E. Boven  
Bill M. Chambers  
Patrick J. Clysdale  
George Dales  
Gary Delforge  
Edward A. Gabel

John W. Gill  
Joseph T. Hoy  
Jack D. Jones  
C. Thomas Kisselle  
Charles H. Maher  
Robert L. Parks  
Richard Raklovits

Harold L. Ray  
William Rowekamp  
Merle J. Schlosser  
Thomas C. Slaughter  
Raymond F. Sorensen  
Fred L. Stevens  
Roy J. Wietz

## THE GENERAL PHYSICAL EDUCATION REQUIREMENT

All men must participate in general physical education beginning with the first semester of residence, until a minimum of four hours is completed. Classes meet three hours weekly for one semester hour of credit. Four hours only of general physical education credit will be accepted toward the minimum requirement for a baccalaureate degree.

Students are classified for physical education activities on the basis of a medical examination required by the University Health Service. No student is excused from fulfilling the requirements because of a physical disability. The needs of all students with physical defects can be cared for in the adapted program on an individual basis.

The purpose of the program is to provide physical fitness and recreational activities which will meet the mental, physical, social and leisure time needs of all students.

During the first year the program is designed to emphasize the fundamentals of the various team sports in season, swimming, calisthenics and body building activities. Individual and dual sports emphasizing carry-over values for adult life are stressed during the second year. These courses are arranged in progression.

All students are required to enroll in Course 115—Swimming, during one semester of their first year on campus. These courses are offered each semester during the forenoon only between 7:45 a.m. and 12:00 Noon.

A student must complete 115 and one other course in the 100 group before enrolling in the 200 group. One semester of Bowling 215 may be elected at the 200 level.

A course may not be repeated for additional credit.

A member of an athletic squad may receive credit for general physical education by participation on an athletic squad provided he officially enrolls in a general physical education class in the 120 group designated by the sport in which he plans to participate and attends all practices regularly during the sport season concerned. Credit will not be granted if he is dropped or withdraws from the athletic squad.

The above arrangement does not excuse the athlete who is neither a major nor minor in physical education from enrollment in and completion of Swimming 115, which is required of all men students. Non-professional students may elect a course in the 120 group three times for credit toward graduation but must complete Swimming 115. Professional students will complete Swimming 330 and thus may elect a course in the 120 group four times.

Veterans of military service are subject to the same requirements in general physical education as non-veterans.

Majors or minors specializing in physical education are not required to complete the general physical education requirement but they may elect general physical education courses.

The general physical education requirement may be waived for students forty years of age or older.

Each transfer student must complete 4 semester hours credit in general physical education. He must enroll for and participate in general physical education during the first semester of residence at Western Michigan University and thereafter each semester until the requirement is completed or until graduation, whichever occurs first. This requirement is in effect regardless of whether or not general physical education was required at the previous institution.

Participation in Band may be substituted for physical education credit

except that a minimum of one semester hour of credit must be earned by actual participation in general physical education course 115 by each student who is participating in band. Substitution of band participation for physical education credit during the second semester is possible only if the student has participated in the *marching* band during the first semester.

Each male student shall enroll either in general physical education or ROTC beginning with the first semester of residence. During the first four semesters in which he is enrolled in basic ROTC he is excused from general physical education. If he completes the basic ROTC program, the requirement in general physical education for graduation is waived.

Students who withdraw or are dropped from the ROTC program before satisfactory completion of the first two years must meet all of the requirements in general physical education. Any participation less than satisfactory completion of the two-year program in ROTC may not be substituted for a part of the general physical education requirement.

Students in Occupational Therapy and in Medical Technology will complete 2 hours credit in Physical Education classes during their stay on campus and 2 hours credit will be given them for activities in the affiliated program off-campus.

Students enrolled in the terminal and in the two-year pre-professional curricula must participate in general physical education *beginning with the first semester of residence*, until the requirement is completed.

*Students with irregular programs or with physical disabilities* should consult the person in charge of general physical education to determine what recommendation may be made for satisfactory completion of the general physical education requirement.

## COURSES IN GENERAL PHYSICAL EDUCATION

- 104 General Physical Education 1 hour
- 104 Adapted Physical Education 1 hour
- 105 General Physical Education 1 hour
- 105 Adapted Physical Education 1 hour
- 106 General Physical Education (Badminton and Handball) 1 hour  
(Summer only)
- 106 Adapted Physical Education 1 hour (Summer only)
- 107 General Physical Education (Swimming) 1 hour (Summer only)
- 108 General Physical Education (Tennis) 1 hour (Summer only)
- 115 General Physical Education (Swimming) 1 hour
- 120 General Physical Education (Football) 1 hour  
(Squad members only)

*Physical Education for Men*

- 121 General Physical Education (Cross Country) 1 hour  
(Squad members only)
- 122 General Physical Education (Basketball) 1 hour  
(Squad members only)
- 123 General Physical Education (Swimming) 1 hour  
(Squad members only)
- 124 General Physical Education (Wrestling) 1 hour  
(Squad members only)
- 125 General Physical Education (Baseball) 1 hour  
(Squad members only)
- 126 General Physical Education (Track) 1 hour  
(Squad members only)
- 127 General Physical Education (Golf) 1 hour  
(Squad members only)
- 128 General Physical Education (Tennis) 1 hour  
(Squad members only)
- 124 Social Dance (Co-Educational) 1 hour Women's Department
- 125 Square Dance (Co-Educational) 1 hour Women's Department
- 204 General Physical Education 1 hour
- 204 Adapted Physical Education 1 hour
- 205 General Physical Education 1 hour
- 205 Adapted Physical Education 1 hour
- 206 General Physical Education (Golf) 1 hour (Summer only)
- 215 General Physical Education (Bowling) 1 hour (Additional Fee)

**COURSES FOR SPECIALIZING STUDENTS**

Required courses for the twenty-four hour major in physical education are 140, 150, 230, 231, 232, 233, 240, 330, 370, 380, 440. Strongly recommended electives are 244, 270, 342, 351, 352.

Required courses for the minor in physical education are 140, 230, 231, 232, 233, 240, 330, 370, Ed. 460. Strongly recommended electives are 244, 270, 342, 351, 352, 440.

Education 460 is required of those who plan to do directed teaching in physical education.

Biology 100, Healthful Living 111, Anatomy-Physiology 213 are required for physical education majors. These courses satisfy the biological science requirements in basic studies.

**140 Individual and Team Sports 2 hrs. Fall, Spring**

This covers material used in physical education classes for elementary and high school. Fundamentals, organization, and rules of soccer, speedball, tennis, wrestling, volleyball and archery are emphasized.

**150 History and Principles of Physical Education 3 hrs. Fall, Spring**

This course is concerned with the understanding and interpretation of the principles and objectives of the modern physical education program. Contributions of historical programs related to the development of the present-day programs are studied and evaluated.

**230 Fundamentals and Technique of Football 2 hrs. Fall, Spring**

Fundamentals of football coaching, with special emphasis on blocking, tackling, passing, kicking, and line and backfield maneuvers. Building an offense, principles of defense formations, scouting and rules.

**231 Fundamentals and Technique of Basketball 2 hrs. Fall, Spring**

This covers the theory and practice of basketball coaching. Foundation skills are stressed, with a study of offensive and defensive systems. A personal textbook involving all material is created.

**232 Fundamentals and Technique of Baseball 2 hrs. Fall, Spring**

Theory and practice in base running, fielding, batting, and pitching; detailed study of each position; offensive and defensive team play; officiating; scoring; study of rules.

**233 Fundamentals and Technique of Track and Field 2 hrs. Fall, Spring**

The accepted forms for starting, sprinting, hurdling, distance running, and for field events. Factors affecting speed, endurance, and fatigue. The selection and preparation of contestants. Managing of meets.

**240 Gymnastic Techniques 2 hrs. Fall, Spring**

Fundamentals and routines of tumbling, side horse, parallel bars, rings, horizontal bar, and trampoline. Prerequisite: 140.

**244 Sports Officiating 2 hrs. Fall**

This course considers rules and officiating techniques with emphasis on football, basketball, baseball and track. The student will be required to officiate in organized athletic contests and must qualify for certification as an official under the MHSAA regulations.

**270 Camping and Scouting 3 hrs. Spring**

History, principles, and aims of the Boy Scout movement. Tests are passed and techniques mastered. General camping material is presented and tested in evening and overnight hikes. Good background for potential scoutmasters.



**330 Swimming 1 hr. Fall, Spring**

This course for physical education majors and minors is basic. Instruction is given to beginners with emphasis on the various strokes. Competent swimmers may participate in qualification tests for Senior Life Saving.

**342 Adapted Physical Education 2 hrs. Fall**

This course is designed to study conditions which indicate need for adapting the physical education program to meet special needs of the individual. Consideration is given to principles and practices in the application of exercises and activities for specific conditions.

**351 Psychology of Coaching 2 hrs. Fall, Spring**

Considers principles of psychology and their application to athletics and athletic coaching. Phases considered are: Preparation for coaching; practice sessions; presenting material effectively; planning the season's campaign; personality and will power.

**352 Tests and Measurements in Physical Education 2 hrs. Spring**

The theory of measurement in physical education, the selection and administration of appropriate tests, and the interpretation of their results by fundamental statistical procedures.

**370 Playground and Community Recreation 3 hrs. Fall, Spring**

Nature and function of play; age periods and adaptations of activities; social environment; needs and objectives; playground development; construction, management and supervision. Study of outstanding programs in operation. A survey of recreational material.

**380 First Aid and Athletic Training 3 hrs. Fall, Spring**

Knowledge and skill in meeting emergencies. The use of massage, strappings, and training room techniques from the coach's point of view. Prerequisites: Anatomy 216 and Physiology 217 or Anatomy and Physiology 213.

**430 Advanced Swimming 1 hr. Spring, Summer**

This course is designed for students who wish to qualify for the Red Cross Senior Life Saving and Instructor's Certificates. The certificate will qualify the student for waterfront administration. Prerequisite: Approval by instructor.

**440 Principles and Techniques of Gymnastic Teaching 2 hrs. Fall, Spring**

The materials and skills covered in 140 and 240 are now presented from the angle of the prospective teacher. Notebook. Leadership emphasized. Prerequisite: 240.

**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.

**HEALTH EDUCATION**

A minor is offered in health education which includes six semester hours of required courses with additional hours from the elective courses listed below to complete a minimum of fifteen semester hours—18 if on secondary.

Required Course	S.H.	Elective Courses	S.H.
General Biology 100	4	Healthful Living 111	2
or		Anatomy and Physiology 213	4
Biological Science 107		Psychology of Personality 220	3
Health Education 242 or 243	2	Anatomy & Physiology 216, 217	8
	—	Community Hygiene 212	3
	6	Psychology of Adolescence 270	3
		Everyday Nutrition 212	2
		Introduction to Mental Hygiene	
		381	3
		Modern Marriage 240	2
		Methods & Materials for School	
		Health Education 514	2

# Physical Education for Women

Candace Roell, Head  
Helen Brown  
Ruth Davis

Eleanor Douglass  
Jean Friedel  
Margaret Large

Margie Jeanne Miner  
Mary Lou Stewart  
Marcella Woods

Each student must complete four semester hours of physical education. Persons forty years of age or older are not bound by this requirement. Such a waiver applies only to general physical education, and not to specific curricular requirements, nor to the total hours required for graduation.

The maximum amount of physical education credit to be earned in one semester is 1 semester hour. Transfer students who may need to increase the hours should consult with the department chairman. Physical fitness of the student for participating in the physical education program is determined by medical examination. No student is excused from fulfilling the requirement because of physical handicap, but program adjustments are arranged to take care of individual needs. Body Mechanics 100 is a require-

ment for those students with postural defects for whom it is recommended. Uniforms, which are required for activity classes, should be purchased at the Campus Store.

Transfer students who are in residence at Western Michigan University for less than five semesters may have the requirement for general physical education waived only for the semester during which they are participating in student teaching, provided they complete one semester hour of credit in physical education during each of the other semesters they are in attendance at Western Michigan University or satisfy the total requirement of four semester hours.

Physical Education majors are required to take the following subjects in Biological Science: Biology 100, Anatomy-Physiology 213, and Healthful Living 111. These courses meet the Basic Studies requirements in Biological Science as well as the Physical Education requirements in that field.

In the area of Physical Education the major requirement includes courses 150, 180, 181, 245, 247, 276, 280, 281, 350, 351, 360, 380, 381, 480, 561, and in Education, 544, and 561.

Health Education 242 or 243 is required of all physical education majors, but it may be counted toward the major in physical education or toward the minor in health education. A twenty-four hour major planned for students who do not intend to teach in this field only, may be arranged with the head of the Department.

Requirements for a Physical Education minor are either Elementary School Physical Education 245, or Secondary School Physical Education 247; six hours of physical education activity courses to be approved by the department advisor and additional academic courses to make a total of fifteen hours—18 if on secondary—selected from the following: 150, 242, 243, 276, 360, 544, and 561.

## HEALTH EDUCATION

A minor is offered in health education which includes six semester hours of required courses with additional hours from the elective courses listed below to complete a minimum of fifteen semester hours—18 if on secondary.

Required Courses	S.H.	Elective Courses	S.H.
General Biology 100	4	Healthful Living 111	2
or		Anatomy & Physiology 213	4
Biological Science 107		Psychology of Personality 207	3
Health Education 242 or 243	2	Anatomy & Physiology 216, 217	8
	—	Community Hygiene 212	3
	6	Psychology of Adolescence 270	3
		Everyday Nutrition 212	2
		Introduction to Mental Hygiene	
		381	3
		Modern Marriage 240	2
		Materials for School Health	
		Education 514	2

**GENERAL PHYSICAL EDUCATION COURSES****99 Posture Counseling**

The student is given a posture examination and counselled regarding her body mechanics before enrolling in any physical education class. Re-checks are given at intervals determined by student needs. No hours of credit are given, but this course must be satisfactorily completed in order to fulfill the physical education requirement.

**100 Body Mechanics** 1 hr. Fall, Spring

A course of remedial exercise for students who do not pass the postural examination, or wish additional counseling.

Credit will be given in this course for one repetition only.

**102 Adapted Physical Education** 1 hour

Sports and recreational activities for students with physical limitations.

**104 General Physical Education** 1 hr. Fall, Spring

The aim of this course is to give the student an understanding of the values of participation in physical activities, and to aid her in determining her physical abilities and needs. Discussion and activity periods.

**106 Individual and Team Sports** 1 hr. Fall, Spring**109 Horsemanship** 1 hr. Fall, Spring

Credit will not be given for more than 1 hour of Horsemanship. Additional fee.

**111 Swimming, Beginning** 1 hr. Fall, Spring**112 Swimming, Intermediate and Diving** 1 hr. Fall, Spring

Credit will not be given for more than 2 swimming courses.

**115 Folk Dance and Recreational Games** 1 hr. Fall, Spring**117 Tennis and Basketball** 1 hr. Fall, Spring**119 Outdoor Team Sports and Badminton** 1 hr. Fall, Spring**121 Folk Dance** 1 hr. Fall, Spring**123 Modern Dance, Beginning** 1 hr. Fall, Spring

Individual and group study of expression through rhythmical movement.

**124 Social Dance** 1 hr. Fall, Spring**125 Square Dance** 1 hr. Fall, Spring**126 Tap Dancing** 1 hr. Fall, Spring**129 Golf and Volleyball** 1 hr. Fall, Spring**131 Basketball and Volleyball** 1 hr. Fall, Spring**201 Tennis** 1 hr. Fall, Spring

*Physical Education for Women*

203 Golf 1 hr. Fall, Spring

Practice of form for the various shots, with some work on the course.

205 Archery 1 hr. Fall, Spring

207 Badminton 1 hr. Fall, Spring

212 Swimming, Advanced and Synchronized 1 hr. Fall, Spring

215 Bowling (Additional Fee) 1 hr. Fall, Spring

213 Swimming, Life Saving and Instructor's Test 1 hr. Fall, Spring

223 Modern Dance, Intermediate 1 hr. Fall, Spring

Prerequisite: 123 Modern Dance or consent of instructor.

241 Physical Education and Recreation for Teachers 2 hrs.

This course is open only to teachers. Topics included in the course are: program planning, making of games, equipment, accident prevention, simple first aid and body mechanics. Practice in games, stunts, rhythms, and recreational activities will be included. Offered by extension only.

340 Physical Education for the Classroom Teacher 1 hr. Fall, Spring

A study of the physical, mental, and social nature of children in the elementary school and of activities suited to their needs.

Courses Giving Academic Credit: (These credits may be used as academic electives, but not to satisfy any part of the general physical education requirement.)

\*150 First Aid 2 hrs. Fall, Spring

\*242 Health Education for Elementary Schools 2 hrs. Fall, Spring

\*243 Health Education for Secondary Schools 2 hrs. Fall, Spring

## **COURSES INTENDED PRIMARILY FOR PHYSICAL EDUCATION MAJORS AND MINORS\*\***

150 First Aid 2 hrs. Fall, Spring

The standard course in first-aid techniques leading to the Red Cross certificate.

180 Physical Education Theory and Practice 2 hrs. Fall

Soccer-speedball, swimming, basketball, body mechanics, orientation to physical education.

181 Physical Education, Theory and Practice 2 hrs. Spring

Social dance, modern dance fundamentals and composition, volleyball, rhythmic form and analysis, tap and square dance.

**242 Health Education in Elementary Schools** 2 hrs. Fall, Spring

In this course the fundamental scientific principles of healthful living are developed through a study of school health problems. An effort is made to make prospective teachers aware of modern methods and materials useful in helping school children solve their health problems.

**243 Health Education in Secondary Schools** 2 hrs. Fall, Spring

This course is similar to course 242, with emphasis on health problems of the secondary school.

**245 Elementary School Physical Education** 4 hrs. Spring

Concerned with the play interest, needs, and characteristics of children at the elementary-school level. An analysis of activities in terms of these needs.

**247 Secondary School Physical Education** 3 hrs. Fall

A study of the physical education program of high school girls with opportunities for participation in teaching. Testing and evaluation, G.A.A., cheer-leading, track and field activities.

**270 Camping Education** 3 hrs. Spring, Summer

This course consists of: the history and scope of camping, camping in education, camp standards, problems and personnel. Practice will be provided in skill and techniques for camp counselling.

**276 Community Recreation, Scouting, and Camp Fire** 2 hrs. Fall

The study of the organization and administration of community play.

**280 Physical Education Theory and Practice** 2 hrs. Fall

Creative rhythms in elementary education, field hockey, folk dance in secondary education, volleyball-basketball officiating.

**281 Physical Education Theory and Practice** 2 hrs. Spring

Stunts, tumbling, trampoline, life saving, tennis, floor games and synchronized swimming.

**350 Applied Anatomy** 2 hrs. Fall

Analysis of the mechanics of bodily movement. A study is made of the location and action of the large muscles in developmental activities and exercises. Prerequisite: Anatomy-Physiology 213.

**351 Corrective and Adapted Physical Education** 3 hrs. Spring

The study of preventive as well as prescribed exercises for remedial defects in case of curvature and physical abnormalities. Laboratory practice will be included. Prerequisite: Anatomy-Physiology 213, Applied Anatomy 350.

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\*These courses count as electives with academic credit—They may not be used toward completion of the 4 hour general Physical Education requirement.

\*\*Students who are not majoring or minoring in Physical Education may elect courses from this group with consent of the departmental advisor.

**360 History and Principles of Physical Education 3 hrs. Fall**

A brief historical survey of physical education. In addition, a study is made of the principles of physical education and of the types of programs that develop through their application.

**380 Physical Education Theory and Practice 2 hrs. Fall**

Junior participation—soccer-speedball officiating, and synchronized swimming.

**381 Physical Education Theory and Practice 2 hrs. Spring**

Junior participation—badminton, archery, bowling, and golf.

**480 Physical Education Theory and Practice 2 hrs. Fall**

Advanced work in sports and dance with opportunities for teaching and officiating or directed teaching.

**481 Physical Education Theory and Practice 2 hrs. Spring**

Advanced work in sports and dance with opportunities for teaching and officiating or directed teaching.

**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 problems 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 544.





# *School of Liberal Arts and Sciences*

**GERALD OSBORN,  
Dean**

**Departments:**

**Art  
Basic Studies  
Biology  
Chemistry  
Economics  
English  
Geography  
History  
Languages  
Mathematics  
Music  
Philosophy and Religion  
Physics  
Political Science  
Psychology  
Sociology  
Speech**

◀ The West Campus is the new center of university activities, and the scene of most classes for the School of Liberal Arts and Sciences.

*School of Liberal Arts and Sciences*

The School of Liberal Arts and Sciences is composed of five divisions:

- Basic Studies: Offerings in the areas of English, Natural Sciences, Humanities, and Social Sciences are included in this division.
- Fine Arts: The Departments of Music and Art are in this division.
- Language and Literature: This division includes the English, Languages, Philosophy and Religion, and Speech Departments.
- Science and Mathematics: This division is composed of the following departments: Biology, Chemistry, Geography, Mathematics, Physics, and Psychology.
- Social Science: The social science division is composed of the following departments: Economics, History, Political Science and Sociology.

General objective: The School of Liberal Arts and Sciences offers a variety of subjects that combine to develop a student who will be at home in the world of ideas, and whose experience of living will be deepened by an understanding of his cultural heritage. It aims to offer him training in thinking objectively, critically, and creatively. Its offerings serve not only the special student of the sciences and humanities but also provide a background of liberal education for students in the other schools of the university and for those in the pre-professional courses.

## I. DEGREE CURRICULA

### THE GENERAL CURRICULUM

#### B.A. or B.S. Degree

In this curriculum a student may satisfy the requirement for pre-professional work. If 124 hours are completed in this program the student will be eligible for a degree of Bachelor of Arts or Bachelor of Science.

#### A. General Education Requirements.

Communication Area	6-8 hours
Communication 114, 115 (8 hours) or	
College Writing, 116, 117 (6 hours)	
Science Area	8 hours
Biological Science 107 (4 hours)	
Physical Geography 105 (4 hours)	
Physical Science 108, 109 (4 or 8 hours)	
Social Science Area	8 hours
World Civilizations 100, 101 (8 hours) or	
Man and Society 102, 103 (8 hours) or	
Introduction to the Non-Western World 104 (4 hours)	

*Degree Curricula*

## Humanities Area

6 hours

Humanities 220, 221 (6 hours) or

Humanities 222, 223 (6 hours)

(See counselors for alternative courses temporarily permitted.)

- B. Eight hours additional work (10, if a student took College Writing) must be elected from non-professional courses marked by an asterisk in the Division of Basic Studies and the Departments of Art and Music, or from any non-professional courses in the Divisions of Language and Literature, Social Sciences, and Science and Mathematics. 8-10 hours
- C. Course in Government in accordance with Act 106, Public Acts of 1954. 3 hours
- D. Physical Education or R.O.T.C. 4 hours
- E. Courses to complete a major, minor and electives to make a total of 124 hours

**LIBERAL ARTS CURRICULUM**

## B.A. Degree

- A. One hundred hours' work in the School of Liberal Arts and Sciences.
- B. The regular Basic Studies requirements.
- C. Six (6) hours in each of the three divisions of Science and Mathematics, Language and Literature, and Social Science, and six hours selected from those courses marked by an asterisk in the Division of Fine Arts.
- D. Thirty hours of work in 300, 400 and 500 courses.
- E. Four hours of intermediate work in a foreign language, or successful completion of a qualifying examination.
- F. Six hours of college mathematics (or a high school preparation of two years of algebra, geometry, and/or trigonometry).
- G. Course in Government in accordance with Act 106, Public Acts of 1954.
- H. Physical education or R.O.T.C., four hours.
- I. Courses to complete a major, minor and electives to make a total of 124 hours.

**MEDICAL TECHNOLOGY**

A Bachelor of Science degree is awarded in the field of Medical Technology on completion of the following series of courses and a one-year internship in Medical Technology at a hospital affiliated with Western Michigan University. The curriculum fulfills the minimum requirements of the American Society of Clinical Pathologists as well as their recommendations for a strong program. A major is allowed in Medical Technology with 30 hours, credit for the year of internship. This credit is only allowed if the internship is preceded by the required work in Chemistry and Biology, and is taken at an affiliated hospital.

Tuition must be paid during the year of internship and grades for the work completed during that year are recorded on the student's record.

At the completion of the course, the registry examination must be passed to become a Registered Medical Technologist.

**Medical Technology Curriculum**

First Year		S.H.	Second Year		S.H.
Biology 100, 101		8	Quant. Analysis 222		4
College Writing 116, 117		6	Anat. and Physiol. 216, 217		8
Chemistry 100 or 102, 120	8 or 9		Gov't. 202, 204 or 200		3
Man and Society 102, 103 or		8	Humanities 220, 221		6
Math. 120 or 122		3-5	Man and Society 102, 103 or		8
Phys. Ed.		2	Math. 120 or 122		3-5
			Phys. Ed.		2
Third Year		S.H.	Fourth Year		S.H.
Physics 110		4			
Bacteriology 312, 313		8			
Organic Chem. 265 or 360		4	Medical Tech. 435		30
Biochem. 551, 552, 553		4			
Electives		10			

To total at least 94 Semester Hours.

Recommended electives: Mathematics, Psychology, Parasites and Parasitism 551, Histology 341.

**MUSIC****1. APPLIED MUSIC CURRICULUM**

B.M. Degree: Major-Applied Music; Minor-Theory

First Year	S.H.	Second Year	S.H.
*Applied Music	6	Applied Music	6
Freshman Theory 160, 161	8	Sophomore Theory 260, 261	8
**Piano Class 120, 121	2	Adv. Piano Class 220, 221	2
Communication 114, 115	8	Elementary Acoustics 102	2
Physical Education	2	Political Science 200	3
	—	Physical Education	2
	26		—
			23
Third Year	S.H.	Fourth Year	S.H.
Applied Music	6	Applied Music	6
Choral Conducting 330	1	Counterpoint 560, 561	4
Instrumental Conducting 331	1	Orchestration 567, 568	4
Composition 362, 363	4	Adv. Conducting 530 or 531	1
Style and Structure 364	2		—
Cont. Music Lit. 365	2		15
Hist. and Lit. of Music 370, 371	8		
Music Arranging 366	2		
	—		
	26		

Four semester hours credit of Major Performance Literature 233, is required of instrumental majors.

Diction and Song Literature classes in English, Italian, German and French are required of vocal majors.

Non-Music Courses: In addition to the above outlined courses, the student must complete a minimum of 19 S.H. in subjects of general cultural value. Courses in modern languages, poetry, drama and correlated arts should be included.

\*The instrumental major must start his major performance area on fifth level as indicated in the Music Supplement Catalog.

\*\*The vocal major must pass a piano proficiency examination covering Piano H 43 before graduating.

**3. MUSIC THERAPY CURRICULUM**

B.M. Degree: Major-Music Therapy, Minor-Theory, Minor-Applied Music

First Year	S.H.	Second Year	S.H.
Applied Music (Piano)	4	Applied Music (Piano)	4
Freshman Theory 160, 161	8	Sophomore Theory 260, 261	8
Communication 114, 115	8	Man and Society 102	4
Physical Science 108	4	Psychology 200	3
Biological Science 107	4	Psychology of Adolescence 270	3
*Physical Education	2	Comparative Arts 231	4
†Large Ensemble (Vocal or Inst.)	2	Recreational Music 290	2
—	32	Introduction to Mus. Therapy 281	2
		*Physical Education	2
		†Large Ensemble (Vocal or Inst.)	2
		—	34
Third Year	S.H.	Fourth Year	S.H.
Applied Music (Organ and Voice)	4	**Applied Music	4
Music History and Lit. 370, 371	8	Mus. Therapy Methods and Materials 480	2
Motivational Aspects of Music 380	2	Psychology of Music Ed. 543	2
Influ. of Music on Behavior 382, 383	4	String Class 128	1
Psychiatric Lectures 322	2	Percussion Class 130	1
Choral Conducting 330	1	Woodwind Class 126	1
Instrumental Conducting 331	1	Political Science 200	3
Music Arranging 366	2	Style and Structure 364	2
Brass Class 124	1	Contemporary Music Lit. 365	2
Abnormal Psychology 322	3	Electives	9
Marriage and Family 340	3	†Large Ensemble (Vocal or Inst.)	2
†Large Ensemble (Vocal or Inst.)	2	—	29
	33		

Other suggested electives: Kinesiology, Speech Correction, Dramatics, Special Education, Acoustics, Additional Psychology.

\*The student should select all the various types of dancing courses offered.

†The student should participate in as many different types of Large Ensemble groups as possible. Participation in the Music Ed. Band and Orchestra is strongly recommended.

\*\*May be in any field of Applied Music if the student has demonstrated piano skill through level H 49.

**INTERNSHIP REQUIREMENT**

A minimum of six months' clinical training through resident internship in an approved neuropsychiatric hospital with an established music program is required. Students planning to work with mentally defective or handicapped children should spend two months of this internship in an appropriate institution. This is Music Therapy Internship 580, 6 S.H. credit.

**2. MUSIC COMPOSITION - THEORY CURRICULUM**

B.M. Degree: Major-Theory; Minor-Applied Music

First Year	S.H.	Second Year	S.H.
*Applied Music	4	Applied Music	4
Freshman Theory 160, 161	8	Sophomore Theory 260, 261	8
Piano Class 120, 121	2	Adv. Piano Class 220, 221	2
Communication 114, 115	8	Elementary Acoustics 102	2
String Class 128, 129	2	Political Science 200	3
Physical Education	2	Woodwind Class 126, 127	2
	—	Percussion Class 130	1
	26	Physical Education	2
			—
			24
Third Year	S.H.	Fourth Year	S.H.
Applied Music	6	Applied Music	6
Hist. and Lit. of Music 370, 371	8	Counterpoint 560, 561	4
Style and Structure 364	2	Orchestration 567, 568	4
Contemporary Music Lit. 365	2	Adv. Composition 562, 563	4
Choral Conducting 330	1		—
Instrumental Conducting 331	1		18
Brass Class 124, 125	2		
Composition 362, 363	4		
Music Arranging 366	2		
	—		
	28		

**Non-Music Courses:** In addition to the above outlined courses, the student must complete a minimum of 19 S.H. in subjects of general cultural value. He must also pass a piano proficiency examination covering Piano H 43 before graduating.

\*The student will be advised what course number to enroll for after he has taken his placement examination at the time of his original registration.

**SOCIAL WORK****A.B. or B.S. Degree, with Certificate in Social Work**

This curriculum is designed to prepare students for the lower levels of social work positions, and for the civil service examinations required for employment in many public agencies. It also provides basic pre-professional education for graduate training in social work. Graduates who continue in social work as a profession should plan to take, as early in their career as possible, one or two years of professional social work training at the graduate level.

Certain students in the social work curriculum may spend one semester at the Merrill-Palmer Institute of Human Development and Family Life, in Detroit, receiving credit towards graduation at Western. Students interested in this should consult with the social work advisor early in their college career.

Satisfactory completion of the courses in this curriculum is required for the Certificate in Social Work. In addition the student must take whatever courses are needed to satisfy the group and general education requirements for the A.B. or B.S. degree.

First Year	S.H.	Second Year	S.H.
Communication 114, 115	8	General Psych. 200	3
Biological Sci. 107	4	Psych. of Personality 220 or	
Physical Geography 105	4	Intro. to Mental Hygiene 381 or	
World Civil. 100, 101	8	Human Growth 250	3
Physical Ed.	2	Principles of Economics 200 or	
Electives	6	Economics of Consumption 230	
	—	or Modern Economics 502	3
	32	Principles of Sociology 200	3
		Modern Social Problems 210	3
		Social Psych. 220	3
		Fields of Social Work 260	2
		Physical Ed.	2
		Humanities 220, 221	6
		Electives	2
			—
			30

**Third and Fourth Year**

American Nat'l. Gov't. 202	3	Family and Child Adjust. 362	3
State and Local Gov't. 204	3	Public Welfare 364 or	
A minimum of 8 hours of adv.		Welfare Organ. 368	3-2
sociology in addition to the		Prin. of Social Wk. 360	3
courses listed below, selected		Orientation to Field Work 462	2
with the advice and approval		Supervised Field Work 463	3
of the departmental advisor	8	Electives	30-31
Intro. to Social Research 280	2		—
Social Research Projects 381	2		62



The required courses in this curriculum provide for a social science major of 34 or 37 hours and a minor in social work of 17 or 18 hours. Some 50 hours of elective courses are allowed. These electives should be used primarily to fulfill the requirements for the general degree and to strengthen the general education of the student. To meet the need of certain students for special skill, however, some elections from such tool subjects as the following may well be considered: Elementary Typewriting 182, Home Management 350, Community Recreation, Scouting and Campfire 276, Laboratory Psychological Testing 302, Clinical Psychology 309, Labor Problems 510 and Elementary Statistical Methods 330.

## II. PRE-PROFESSIONAL CURRICULA

Every professional school has prescribed the nature and amount of the academic work to be completed as a prerequisite to the professional training for a particular vocation. Four years of higher education are generally required by most professional schools for entrance. Western Michigan University is able to offer its students courses of study that meet the requirements for this pre-professional training. It should be noted, however, that the courses outlined are only suggested plans to illustrate in general the kinds of programs that pre-professional students should follow. IN EVERY CASE THE STUDENT SHOULD PLAN HIS COURSE ACCORDING TO THE REQUIREMENTS OF THE SCHOOL TO WHICH HE PLANS TO TRANSFER FOR HIS PROFESSIONAL TRAINING. It cannot be emphasized too strongly that the student should exercise care to see to it that the specific requirements of a particular school will have been met.

### CHRISTIAN MINISTRY

The following program includes every basic recommendation of The American Association of Theological Schools. Most seminaries urge that undergraduates major in a humanistic field such as Philosophy, History, or Literature. Many seminaries, especially those which have the highest reputation for excellence, recommend a minor in Religion at the undergraduate level.

The program at Western as outlined below is not mandatory in every detail, but departures from it should be discussed with Professor Loew.

First Year	S.H.	Second Year	S.H.
Communication 114, 115 or		Humanities 222, 223	6
College Writing 116, 117	6 or 8	German, French, or Latin	8
Biological Science 107	4	Philosophy 200	3
Physical Science 108	4	Religion 310, 311	6
World Civ., 100, 101	8	Phys. Ed.	2
Religion 201, 202	6	Introductory Courses in major	
Phys. Ed.	2	field	6
Third Year	S.H.	Fourth Year	S.H.
German, French, or Latin	8	Complete requirements for major,	
History 552, 555	4	and fill out program with	
Pol. Sci. 200	3	electives.	
Religion 321, 341 or 342	3		
Philosophy 360, 361	6		
Elective courses	8 or 10		

**DENTISTRY**

Although the Dental Aptitude Test is required of all applicants to any dental school, the amount and kind of academic work needed for admission varies. Therefore, a student planning to do his pre-dental work at Western Michigan University should have a catalog from the dental school of his choice and plan his work at Western to meet the requirements of that particular school.

The following program will in most instances satisfy dental school requirements:

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	Physics 110, 111	8
Biology 100, 101	8	Organic Chem. 360, 361	8
Chem. 100 or 102, 120	8 or 9	Phys. Ed. 204, 205 or R.O.T.C.	2-4
Man and Society 102, 103 or	8	Language or Humanities	6-8
World Civil. 100, 101 or		Electives	6-8
Introd. to the Non-Western			
World, 104 (4 hours)			
Phys. Ed. 104, 105 or R.O.T.C.	2-4		
Trig. (If none in high school)	3		
Third Year	S.H.		
Zoology	8		
Psychology	6		
Electives (complete minors)	6		

**ENGINEERING****For all Engineering Curricula**

First Year	S.H.		S.H.
College Writing 116, 117	6	Gen. Chem. 100 or 102, 120	
or Communication 114, 115	8	or 109	8 or 9
College Alg. and Trig. 122		Engineering Drwg. 230	3
Analytic Geometry and		Descriptive Geometry 231	3
Calculus 123	10	Physical Ed.	1
		Electives	0-3

**Chemical and Metallurgical**

Second Year	S.H.	Third Year	S.H.
Calculus 222, 223	10	Modern Economics 502 and	
Physics 112, 113	10	Accounting 210	6
Eng. Materials 210 or Biology		Organic Chemistry 360, 361	8
100	3-4	General Speech 100	3
Quant. Anal. 222	4	American Government 200	3
Metal Processing 270	2	Labor Problems 510, 511	
Physical Ed.	1	or Industrial Sociology 374	2
		Humanities 220, 221 or 222, 223	
		or alternatives	6
		Electives	3-4

*School of Liberal Arts and Sciences***Aeronautical, Civil, Electrical, Marine and Mechanical**

Second Year	S.H.	Third Year	S.H.
Calculus 222, 223	10	Prin. of Economics 200, 201	6
Physics 112, 113	10	Differential Equations 306	3
Eng. Material 210	3	or Geology 230, 231	8
Metal Processing 270	2	Labor Problems 510	2
General Speech 100	3	American Govt. 200	3
Physical Ed.	1	Humanities 220, 221 or 222, 223	6
		Electives	6

- Notes: 1. Differential Equations 306 is required in Aeronautical, Electrical, Marine and Mechanical Engineering.
2. Geology 230 and 231 should be taken in the third year of Civil Engineering Curriculum.
3. Civil Engineering requires surveying (Math. 200).
4. Descriptive Geometry not needed at Mich. State Univ. in all areas of Engineering except Agriculture Engineering.

**FORESTRY**

The following is a two-year program approved by Michigan State University:

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	Chemistry 100 or 102, 109	8
General Biology 100, 101	8	Botany 220, 221	8
Math.	6, 8 or 10	Humanities	8
Agronomy 220, 221	6	Soils 320	3
Phys. Ed. or R.O.T.C.	2 or 4	Phys. Ed. or R.O.T.C.	2 or 4

Students planning to transfer to the University of Michigan for work in forestry at the end of the second year must plan on attending the University's summer camp before beginning work on the Ann Arbor campus.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117 or	6	Geology 230	4
Communication 114, 115	8	Physics 112	5
General Chem. 100 or 102, 109	8 or 9	Agronomy 220	3
World Civil. 100, 101 or		Economics 200, 201	6
Man and Society 102, 103, or		Surveying 200	3
Introd. to the Non-West. World		Botany 220	4
104 (4 hours)		Botany 224	2
Gen. Biology 100, 101	8		
Trig. 121	3		

## JOURNALISM

Most schools of journalism have very definite requirements for admission. A student wishing to do his pre-journalism work at Western Michigan University should plan his course of study according to the requirements for the particular school of his choice. The following is only a suggested program. Many schools require work in a foreign language in addition.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	Journalism 264, 265	6
Speech 100	3	U. S. Hist. 210, 211	6
Phy. Sci. 108	4	Man and Society 102, 103	8
World Civil. 100, 101	8	Comparative Arts 231	
Biol. Sci. 107	4	or Humanities	3-4
Phys. Ed.	2	Phys. Ed.	2
Electives	3 or 4	Electives	3 or 4

## LAW

No special college program is required or recommended by most law schools. In general, law schools do urge a solid, four-year program leading to the Bachelor of Arts Degree, or its equivalent. Even those schools which consider applications for admission at the end of the third year of undergraduate study highly recommend that the four-year program be completed. Although it is relatively unimportant what area the prospective law student uses for his major, it is most important that a high level of academic achievement be maintained. It is also important that the prospective lawyer's education be as broad as possible.

Although a student might choose to be in any of the University's curricula for his pre-legal education, if he specifies pre-law his four-year program will be based upon either the general curriculum or the liberal arts curriculum as offered in the School of Liberal Arts and Sciences. If a student interested in law desires another curriculum, he should confer with his regularly assigned curriculum counselor.

Students interested in pre-legal education should review the degree requirements as outlined under the general curriculum or liberal arts curriculum which may be found on the first few pages of the section in the University catalog devoted to the School of Liberal Arts and Sciences.

## LIBRARIANSHIP

**Librarianship:** A pre-professional curriculum in librarianship is outlined in this bulletin under the Graduate School on page 296.

## MEDICINE

Many medical schools accept students with three years of college work. Others require that the student finish four years before entering. The Medical College Admission Test is required of all applicants to medical schools.

*School of Liberal Arts and Sciences*

A student planning to do his pre-medical work at Western Michigan University should obtain catalogs from three medical schools of his choice and should plan his college work to meet their requirements. A special counselor for those enrolled in pre-medical work will assist the student in planning his course of study.

First Year	S.H.	Second Year	S.H.
College Writing 116, 117	6	Quant. Analysis 222	4
Biology 100, 101	8	Physics 110, 111	8
Chem. 100 or 102, 120	8 or 9	Lang. or Humanities	6-8
Lang.	8	Man and Society 102, 103	8
Phys. Ed. or R.O.T.C.		Phys. Ed. or R.O.T.C.	
Third Year	S.H.	Summer	S.H.
Zoology 240, 241	8	Emb. 343 or Histology 341	
Organic Chemistry 360, 361	8		
Electives in Soc. Sci.	6		
Electives			
		Fourth Year	S.H.

(If four-year pre-med is taken then omit summer session above.)

Complete major and minor requirements and other degree requirements. Take electives in Art, Music, Literature, Speech and Social Sciences.

**MORTUARY SCIENCE**

The first two years of a three-year program in Mortuary Science are called the pre-professional part of the program. To complete the requirements for this, a student must earn 60 hours of credit. It is strongly recommended that this course work include the following: English (6 hours), General Chemistry (8 hours), Organic Chemistry (3 hours), Social Sciences including geography, history, government, economics, sociology and philosophy, (8 hours), Zoology or Biology (4 hours), Psychology (2 or 3 hours), Mathematics or Accounting (4 hours).

The Michigan Board of Examiners of Mortuary Science requires completion of certain group requirements which the student should check thoroughly.

Suggested First Year	S.H.		S.H.
College Writing 116, 117	6	Biology 100	4
Chem. 100 or 102, 109	8 or 9	Small Bus. Mgmt. 250	3
Man and Society 102, 103 or		Phys. Ed.	2
World Civil. 100, 101 or	8		
Non-West. World 104 (4 hours)			

**NURSING**

Pre-professional preparation for transfer to a college of nursing may be taken at Western Michigan University for one or two academic years. Most Universities offering a correlated program leading to a B.S. degree and R.N. accept transfer students from an accredited institution upon the completion of specified requirements.

Students should plan with care, in cooperation with the pre-nursing counselor, to meet the admission requirements of the school they wish to attend.

A typical one-year pre-professional required program:		A typical two-year pre-professional required program:	
	S.H.		S.H.
College Writing 116, 117 or Communication 114, 115	6-8	College Writing 116, 117 or Communication 114, 115	6-8
Chemistry 100 or 102, 109	8 or 9	Chemistry 100 or 102, 109	8 or 9
Biology 100, 101	4-8	Biology 100 or 102, 109	8
Psych. 200	3	Zoology 240, 241	4-8
Social Science	8	Psychology 200	3
Sociology 200	3	Social Studies	14-18
Phys. Education	Each-sem.	Phys. Education	Each sem.
Electives (to bring total to at least 30 semester hours)		Humanities	6
		Electives (to bring total to at least 60 semester hours)	

Bronson Methodist Hospital School of Nursing students receive pre-clinical instruction at Western in special courses arranged for their particular needs. These courses are given University credit but their applicability to curricula or graduation requirements here is determined by departmental evaluation.

**PHARMACY**

A student transferring to a college of pharmacy is required to be in residence at that school for a minimum of six semesters regardless of how much previous college training he may have had. Therefore, the pre-pharmacy course of study at Western Michigan consists of one year's work.

First Year	S.H.		S.H.
Chemistry 100 or 102, 109	8 or 9	Electives (Speech 100 recommended)	
College Writing 116, 117	6		
Biology 100, 101	8	Phys. Ed. or R.O.T.C.	2 or 4
Math. (if Trig. was not taken in high school)	3 or 4		

### III. DESCRIPTION OF COURSES

#### DIVISION OF BASIC STUDIES

**Robert M. Limpus, Director**

The Division of Basic Studies is responsible for coordinating and administering the basic courses in the General Education program.

Every student should take Communication or College Writing in the freshman year. Credit is interchangeable between these courses.

In Science the student must have a total of 8 hours. The usual combination is Biological Science 102 and Physical Geography 105, or Physical Science 108 and 109. The choice should depend upon the individual's background and intended field of specialization. If a student plans to major and has considerable background in one area, he should choose the one in which his background is less adequate.

In the Social Science area a student must have a total of eight hours from World Civilizations, Man and Society, or Non-Western World. These are recommended for the freshman year.

The two Humanities sequences, Humanities 220 & 221, 222 & 223, are recommended for the sophomore year.

#### COMMUNICATION:

**114 Communication**

**4 hrs. Fall, Spring**

This course attempts to help the student to understand the nature of language, evaluate communication as inter-action, and acquires skill in using the communication tools. Lectures, readings, tape-recordings, films and other devices are used to motivate group discussions, informal talks, and written exercises. Skills of primary and secondary research are emphasized; one research paper is required.

**115 Communication**

**4 hrs. Fall, Spring**

A continuation of 114. Prerequisite 114 or 116.

**116 College Writing**

**3 hrs. Fall, Spring**

The course is planned to aid the student in developing greater facility in the use of language, with special emphasis on reading and writing.

**117 College Writing**

**3 hrs. Fall, Spring**

A continuation of 116. Prerequisite 114 or 116. The critical approach to writing is given special emphasis.



**SCIENCE:****\*105 Physical Geography 4 hrs. Fall, Spring**

Designed to build an understanding of major human activities in relation to environmental factors throughout the world. Consideration is given to effects of climate, soil, minerals, topography, and the biotic environment on occupational pursuits of people, transportation and communication, density of population and growth of cities.

**\*107 Biological Science 4 hrs. Fall, Spring**

A course designed to present basic biological principles and to give the student an understanding of the operation of the world of life.

**\*108 Physical Science 4 hrs. Fall, Spring**

The major objective of the course is to prepare the student for intelligent living in the nuclear age. The course is designed for students who are not planning to specialize in any of the physical sciences. Physical Science 108 with 109 are planned to provide a scientific background for understanding our rapidly changing culture.

**\*109 Physical Science 4 hrs. Spring**

This course continues with a more complete treatment of the major topics in 108. New topics from astronomy, physics, and chemistry are introduced. This course emphasizes the applications of physical science principles to broad problems of social and industrial significance. Prerequisite: Physical Science 108.

**SOCIAL SCIENCE:****\*100 World Civilizations (formerly Foundations of Western Civilization) 4 hrs. Fall, Spring**

This course is designed to give the student an understanding and an appreciation of contemporary institutions and culture through a study of their origins and development. It is essentially a history of culture which shows how the present is a product of the past and how peoples widely separated in space and time have contributed to the present.

**\*101 World Civilizations (formerly Foundations of Western Civilization) 4 hrs. Fall, Spring**

A continuation, from the seventeenth century, of 100. This course surveys important developments in all parts of the world. It emphasizes the last half-century. Prerequisite: 100.

**\*102 Man and Society 4 hrs. Fall, Spring**

The emphasis is on understanding basic ideas in the social sciences and on acquiring a mature ability to analyze and appreciate the individual in society. The student is introduced to such matters as: the nature of man and the purpose and meaning of human existence; the ways in which per-

sonality and society are mutually interdependent; the ways men work, the reasons why they work and the effect of such economic factors on the composition and political complexion of society; the reasons for and types of communities into which men form themselves.

**\*103 Man and Society** 4 hrs. Spring, Fall

A continuation of 102.

**\*104 The Non-Western World** 4 hrs. Fall, Spring

A cultural survey of those societies which have developed essentially apart from European forces.

## **HUMANITIES:**

**\*220 Humanities** 3 hrs. Fall

A study of the creative life of man through an examination of the climatic periods during the Greco-Roman and medieval times. The course is organized in terms of the expressions of the purposes of life and values of men through the art, literature, philosophy and theology of those periods.

**\*221 Humanities** 3 hrs. Spring

This course is a continuation of 220 and is concerned with the Renaissance, the age of enlightenment and the contemporary period.

**\*222 Humanities** 3 hrs. Fall, Spring

This course explores esthetic expression in painting, music, and literature, and acquaints students with principles of composition and techniques of analysis in all three arts.

**\*223 Humanities** 3 hrs. Spring, Fall

This course makes use of a selection of great writings and works of art to stimulate the student to examine human values.

## **HONORS:**

**134 Honors Colloquium** 2 hrs. Fall

Reading, writing, and discussion. Training in primary and secondary research. Fulfills the Communication Area requirement for students admitted to Basic Studies Honors.

**135 Honors Colloquium** 2 hrs. Spring

A continuation of 134.

**234 Honors Colloquium** 2 hrs. Fall

A continuation of 134 and 135.

**235 Honors Colloquium** 2 hrs. Spring

A continuation of 234.

# DIVISION OF FINE ARTS

Elwyn F. Carter, Chairman

The Division includes the Departments of Art and Music. The heads of the departments and the departmental counselors will advise students relative to requirements for majors or minors in these departments and concerning any special requirements set up by the departments. In certain cases, where a group major or minor is possible and advisable, the chairman of the Division should be consulted.

## Art

Harry S. Hefner, Head  
Robert Engstrom  
Marc F. Hansen  
David Grath

Gordon Grinwis  
Carole Harrison  
John G. Kemper  
Helmi Moulton

Stanley K. S. Phillips  
Barbara Rensenhouse  
Paul Robbert  
Elizabeth Smutz

Many courses in the department are designed for students not particularly talented in art, but interested in finding a field of art in which they may do well. Suggested courses which require no prerequisite are 161, 163, 121, 111, 123, and 134, 135, 222, 231.

A teaching major in art consists of: 140, 161, 163, 222, 251, 253, 217, 232, 233, 351, 328, 361, 355 plus electives to total 40 hours.

In addition 541 (Ed. Credit) is required for art majors and must be taken prior to practice teaching.

A general degree major in art consists of: 161, 163, 217, 251, 261, 232, 233, 351, 515, to total 25 hours.

An elementary minor in art consists of: 161, 163, 140, 134, 135, and art electives to total 15 hours.

A secondary minor in art consists of: 161, 163, 140, 135, 134 and art electives to total 18 hours.

232 or two points of 231 may be substituted for 134 and 135.

**111 Lettering and Poster Making** **2 hrs.**

Emphasis is on lettering and poster making for school and commercial use.

**121 Illustrative Handwork** **3 hrs.**

An elementary craft course with manual problems related to interests in the primary grades.

**123 Industrial Art** **3 hrs. Fall, Spring**

A studio course in textile design, designed to meet the needs of groups with varied interests. Weaving, blockprinting, stenciling, embroidery, tie and dye, and batik.

**\*134 Art Appreciation** **1 hr. Fall**

This course aims to develop aesthetic judgment. A brief survey of the history of painting, with special attention to modern painting, is given.

**\*135 Art Appreciation****1 hr. Spring and Fall**

A brief survey of the history of sculpture, architecture, and minor arts is given.

**140 Learning Through Art****3 hrs. Fall, Spring**

This is a laboratory course designed to help classroom teachers recognize art as a vital factor in child growth. Discussions, films, demonstrations, examination of children's work, supply sources, classroom display, studio projects relating to all grade groups, and current teaching practices are a part of the course.

**161 Elementary Design****2 or 3 hrs. Fall, Spring**

A fundamental course in art developing design and color theory through problems of various media.

**163 Art Structure****3 hrs. Fall, Spring**

A course giving drawing experience, lettering, figure, color, and design.

**217 Commercial Art****3 hrs. Fall, Spring**

This course is designed to offer special work in the study of advertising art. Posters for school, for business activities, lettering, typography, packaging design, and other related subjects are done. Various techniques and media, as well as technical methods used in the reproduction of art work are discussed. Prerequisite: 161, 163.

**222 Ceramics****3 hrs. Fall, Spring**

Basic Course in the designing and building of Pottery—pinch pots, hand building, throwing, glazing, and firing techniques.

**223 Ceramics****2 hrs.**

Continuation of Ceramics 222, developing greater knowledge of advanced ceramic techniques. Prerequisite: 222.

**225 Handicraft****3 hrs.**

Includes problems in metal, wood, and other materials. Emphasis on technique. Prerequisite: Elementary Design 161, or consent of instructor.

**\*231 Comparative Arts****4 hrs. Fall, Spring**

The course takes music and art and endeavors to point out to students the common core which permeates all the arts. Common expressions such as organization of form, rhythm, repetition, unity, harmony, and tonality are made meaningful through discussion and demonstration. Two hours of credit may be applied on a major or minor in either Music or Art.

**\*232 History of Art****3 hrs. Fall**

Study of primitive, Egyptian, Chaldean, Greek, and Roman architecture, sculpture, and painting.

**\*233 History of Art****3 hrs. Spring**

Study of the art of the Renaissance in Europe and of modern art in Europe and America.

**251 Figure Drawing 3 hrs. Spring, Fall**

Anatomy of the human figure is studied. Rapid sketches, line drawings, and memory sketches are made, after which the work progresses from gesture lines, shadow edges, planning and contour drawing to finished drawings. Prerequisite: 163 or consent of instructor.

**253 Sculpture 3 hrs.**

Basic course in modeling. Mediums are plaster, wood, metal, clay and stone. Prerequisite: 161 or consent.

**261 Art Composition 3 hrs. Spring, Fall**

Composing within a given space: emphasizing unity, spacing, distribution of dark and light; study of color harmony. Mediums used are show-card paints, charcoal, pen and ink. Prerequisite: 163, 161.

**263 Home Furnishing 2 hrs.**

A study of interior design and color, furniture past and present, experience in practical problems.

**265 Stage Design 2 hrs.**

A course for art and speech majors. Class makes practical use of knowledge of scene painting, lighting, and mechanics of staging.

**328 Jewelry 3 hrs. Fall, Spring**

Basic course in the designing and making of jewelry; study of basic techniques and processes—to include enameling.

**351 Oil Painting 2 hrs. Fall, Spring**

Continuation of Art Composition 261. Mediums are oil and casein. Prerequisite: 161, 163.

**355 Graphics 2 hrs. Fall, Spring**

Study of prints and print making, etching, wood-block, lithograph, and silk screen. Prerequisite: 151, 153.

**361 Advanced Design 3 hrs. Fall, Spring**

Continuation of Elementary Design 161. Applied Art Problems. Prerequisite: 161, 163.

**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.

**550 Painting (Water Color) 2 hrs. Fall**

Painting of still life and landscape, in the studio and outdoors. This course involves the study of composition, color value, and technique. Prerequisite: 161, 163, or consent of instructor.

# Music

Elywn F. Carter, Head  
 Ethel M. Adams  
 Sam B. Adams  
 Elmer R. Beloof  
 Margaret F. Beloof  
 Owen L. Berger  
 Russell W. Brown  
 Herbert Butler

Marcella Faustman  
 Robert R. Fink  
 Jack J. Frey  
 Tom R. Fulton  
 Thomas C. Hardie  
 Alice Gernant  
 James Hause  
 Robert Humiston

Daniel A. Kyser  
 Holon Matthews  
 Leonard V. Meretta  
 Charles E. Osborne  
 Robert Schieber  
 Dorothea S. Snyder  
 Julius Stulberg

The Department offers courses leading to the Bachelor of Music and Bachelor of Arts degrees. The Bachelor of Arts degree is defined on page 17 as to both purposes and requirements. The Bachelor of Music degree is different in that it is highly professional in its requirement aims and permits the student to do much more of his work in the field of music. Detailed information relative to the Bachelor of Music degree may be procured by writing for the Music Supplement Catalog.

Those students who want both elementary and secondary teaching certification in music should work for the B.M. degree. Elementary certification with a music major may be secured with the B.S. degree.

Those students who want a music major without teaching certification may work for the Bachelor of Arts degree. Such music majors must complete 16 hours of Applied Music (through level 6 in their major performance field); Theory 160, 161; Theory 260, 261; Music History and Literature 370, 371; Style and Structure 364; and one semester of an advanced theory or music literature course.

Minors in music seeking certification must complete Theory 160, 161, eight hours; a Methods and Materials course of three hours; Piano Class 120, 121, two hours; Conducting, either 331 or 330, one hour; plus four hours of electives in music.

Those students not seeking Teaching Certification who wish to minor in music should arrange their minor requirements with the Head of the Music Department.

Credit from another institution in any branch of theory will be accepted only upon satisfactory completion of an examination covering the field for which the student desires transferred credit. All transferred credit is tentative and is conditioned upon the successful completion of a semester's work at Western Michigan. No credit hours exceeding the number granted for parallel work at Western Michigan will be accepted for transfer from another institution.

All full-time (12 s.h.) undergraduate B.M. degree candidates must attend thirty (30) recitals and/or concerts sponsored by WMU each year. B.S. degree candidates with music major must attend fifteen (15). If the student's recital attendance record is satisfactory, he will be excused during his senior year. In the case of the senior student who has failed to meet the

yearly attendance requirements, the cumulative deficiency of the three-year period must be made up in the senior year. Exception to these regulations may not be made except by petition in advance to the faculty.

The University is a member of the National Association of Schools of Music. The requirements for entrance and for graduation as set forth in this catalog are in accordance with the published regulations of the National Association.

## MUSIC COURSES

### 120 Piano Class 1 hr. Fall

A course designed for students with little or no background in piano. Opportunity is provided for some individual instruction. Recommended to piano majors to gain a knowledge of piano class procedure and to elementary education majors.

### 121 Piano Class 1 hr. Spring

A continuation of 120.

### 122 Voice Class 1 hr. Fall

This course deals with the fundamental processes of breath control and tone production, provides some individual instruction and an opportunity to study standard song literature. Recommended to voice majors to gain a knowledge of voice class procedures and to candidates for certification as general supervisors to prepare for basic achievement examinations.

### 123 Voice Class 1 hr. Spring

A continuation of 122.

### 124 Brass Class (Cornet) 1 hr. Fall, Spring

Fundamentals of attack; breath control; formation of the embouchure. "Tune-a-Day" Herfurth. Solos from "Miniature Concert Series", by Goldman.

### 125 Brass Class (Mixed) 1 hr. Fall, Spring

The study of French horn, Trombone, Baritone, and Tuba, to the extent that the student can demonstrate a knowledge of the basic fundamentals of all four instruments. The study of a limited repertoire for these instruments.

### 126 Woodwind Class (Clarinet) 1 hr. Fall, Spring

Fundamentals of attack; breath control; formation of the embouchure. "The Study of the Clarinet," Stubbins. Selected solos.

### 127 Woodwind Class (Mixed) 1 hr. Fall, Spring

The study of oboe, flute, and bassoon, to the extent that the student can demonstrate a knowledge of the basic fundamentals of all three instruments. The study of a limited repertoire for these instruments.

**128 String Class** 1 hr. Fall

The study of a stringed instrument to the extent that the student can demonstrate a knowledge of the basic fundamentals on that instrument. The study of a limited repertoire for that instrument.

**129 String Class** 1 hr. Spring

A continuation of 128. Prerequisite: 128.

**130 Percussion Class** 1 hr. Fall, Spring

A survey of the requirements for a percussion player. The student is required to play in an acceptable manner at least one percussion instrument and to demonstrate a working knowledge of three others.

**131 English Diction and Song Literature** No credit. Fall

Required of all students whose field of concentration is voice. English diction and song literature are studied as a class; opportunity is provided for solo performance.

**132 Italian Diction and Song Literature** No credit. Fall

Required of all students whose concentration is voice. Italian diction and song literature are studied as a class, and opportunity is provided for solo performance.

**140 Music for Classroom Teacher** 3 hrs. Fall

This course is designed for the classroom teacher with or without previous music training. It deals with basic musical experiences, some work in sight-singing, music in general education, relationship of music to other subject areas, classroom problems in music education, e.g., listening, singing activities, place of performance, use of radio, and music in the movies. The song materials studied can later be used in directed teaching.

**141 Music for Classroom Teacher** 3 hrs. Spring

A continuation of 140.

**160 Freshman Theory** 4 hrs. Fall

This course is a closely integrated study of the construction and function of the language of music . . . through music reading; ear training and dictation; keyboard and written harmony; and composition, arrangement and analysis of musical material. The materials are drawn from vocal and instrumental music literature suitable for study. Topics of study include diatonic chords, modulation, non-harmonic tones, musical forms and harmonization.

**161 Freshman Theory** 4 hrs. Spring

A continuation of 160.

**\*170 Music Appreciation** 2 hrs. Fall

This course, primarily a listening one, is designed for students wishing a general cultural course to increase their knowledge and discrimination of music. Various types of music from the folk song and dance to the sym-



phony, oratorio, and opera are presented and discussed. Concerts and outstanding radio programs are related to the course.

- \*171 Music Appreciation** **2 hrs. Spring**  
A continuation of 170.

- 190 Accompanying** **1 hr. Fall, Spring**  
Supervised experience in accompanying vocal and instrumental music, both solo and ensemble. (This course may be repeated for credit not to exceed a total of four semester hours.)

- 220 Advanced Piano Class** **1 hr. Fall**  
A continuation of 120, 121. Recommended to elementary education majors. Prerequisite: Piano Class 120, 121.

- 221 Advanced Piano Class** **1 hr. Spring**  
A continuation of 220.

- 231 French Diction and Song Literature** **No Credit. Spring**  
Required of all students whose field of concentration is voice. French diction and song literature are studied as a class, and opportunity is provided for solo performance.

- 232 German Diction and Song Literature** **No Credit. Spring**  
Required of all students whose field of concentration is voice. German diction and song literature are studied as a class, and opportunity is provided for solo performance.

- 233 Major Performance Literature** **1 hr. Fall, Spring**  
Required of applied music (except voice) majors for last two years. Literature for the major performance instrument is studied as a class, and opportunity is provided for solo performance. (This course may be repeated for credit not to exceed a total of four semester hours.)

- 240 Elementary School Methods and Materials** **3 hrs. Fall, Spring**  
A study of the methods of teaching and an evaluation of the materials to be used in the singing, rhythmic, instrumental, creative, and listening activities of the basic music program in the elementary school.

- 244 Elementary Music Practicum** **3 hrs. Fall**  
This course is designed to meet the needs of the elementary music teacher in the areas of theory and piano. Special emphasis is given to music reading, arranging, keyboard facility in accompaniments, harmonization, etc. Materials for study are selected from the music used in the elementary schools.

Prerequisite: Freshman Theory 160-161.

- 245 Elementary Music Practicum** **3 hrs. Spring**  
A continuation of 244.

**260 Sophomore Theory** 4 hrs. Fall

A continuation on an advanced level with chromatic chords, modulations, non-harmonic tones, styles of composition as used in choral and instrumental music literature being studied. Material is drawn from the standard vocal and instrumental repertoire.

**261 Sophomore Theory** 4 hrs. Spring

A continuation of 260.

**281 Introduction to Music Therapy** 2 hrs. Fall

Function of music in total therapeutic program. History of development of music in therapy. Study of qualifications of the therapist. Survey of disability areas using music. Prerequisite: Psychology 200.

**290 Recreational Music** 2 hrs. Spring

Function of music in a recreation program. Fundamentals of non-symphonic instruments. Techniques and materials to be used in leading group singing and other group music activities.

**330 Choral Conducting** 1 hr. Fall, Spring

A beginning course working in the field of choral music. Opportunity is provided to prepare choral works with respect to tone quality, range of nuance, phrasing, tempo and balance of parts. A special section for non-music majors is offered each Fall semester.

**331 Instrumental Conducting** 1 hr. Fall, Spring

A continuation of 331. Application is made by use of easy literature for instrumental ensembles.

**340 Junior High School Methods and Materials** 3 hrs. Fall

A study of the place of music in the education of adolescent youth, correlating the vocal and instrumental aspects of music within the total school curriculum. Instrumentally, there will be evaluation of teaching methods of strings, brass, woodwind, and percussion and the organization of instrumental groups. Vocally, there will be study of the changing voice, voice testing and classification, vocal ensembles, and evaluation of suitable ensemble materials.

**341 Senior High School Methods and Materials** 3 hrs. Spring

A continuation of the Junior High School Methods course at the Senior High School level, with emphasis on the correlation of instrumental and vocal music and its place in the Senior High School curriculum.

**362 Composition** 2 hrs. Fall

Original work in composition, starting with the smaller forms in both the vocal instrumental fields. Prerequisite: 260, 261.

**363 Composition** 2 hrs. Spring

A continuation of 362.

**364 Style and Structure****2 hrs. Fall**

A study of the finest musical compositions with particular reference to design. Tracing the development of musical form from the phrase through the sonata form. Particular emphasis on the eighteenth and nineteenth century composers. Prerequisite: 260, 261.

**365 Contemporary Music Literature****2 hrs. Spring**

Survey of contemporary music literature through listening. Some study of the chronological evolution of modern structure and harmony. Special emphasis on idiom, neo-classicism, polytonality, and atonality.

**366 Music Arranging****2 hrs. Fall, Spring**

A course designed to meet the needs of School Music Teachers. Emphasis is placed on the use of available resources for small instrumental and vocal groups and the problems of arranging music for them to use as performing units.

**\*370 Music History and Literature****4 hrs. Fall**

A survey of the growth of music from the earliest times including melody, rhythm, and harmony through the Medieval, Renaissance, and Baroque periods; choral, operatic, symphonic and chamber music development to 1750; the classics, romantic, and contemporary scenes, as well as the earlier periods, are supplemented with recordings of composers' work.

**\*371 Music History and Literature****4 hrs. Spring**

A continuation of 370.

**374 Graderoom Music Literature****3 hrs. Fall**

Designed to meet the needs of the elementary teacher in music literature and application in the classroom. Included will be: (1) works of great composers in relation to the age and culture; (2) native and foreign folk music; (3) historical development, structure, timbre, and use of instruments.

**380 Motivational Aspects of Music****2 hrs. Spring**

The psychic and physiological effect of sound on the individual and systems of tonal relationships. The effect of music on personality and the consideration of music as a form of communication. The nature of musicality and its measurement. The nature of musical memory. The underlying bases for musical taste and for aesthetic experience in music. Prerequisite: Psychology 200.

**382 Influence of Music on Behavior****2 hrs. Fall**

Review of the relationship between musical effect and personality. The function of music in personality adjustment and development. A study of pertinent research methods by analysis and evaluation of published studies. A beginning on an original research project. Prerequisite: Consent of instructor.

**383 Influence of Music on Behavior****2 hrs. Spring**

Continuation of original research. Development of skills essential to research. An analytical survey of pertinent, recent publication. Prerequisite: Consent of instructor.

**442 Instrumental Organization and Administration in Public Schools****2 hrs. Summer**

Techniques of marching band, small and large instrumental ensembles. The organization of equipment, classes, schedules, and library management and materials. The development of the elementary and secondary school instrumental programs.

**480 Music Therapy Methods and Materials****2 hrs. Fall**

Survey of materials available for use in music therapy programs and methods of adopting such materials to institutional use. Study of publications and techniques developed specifically for use in music therapy programs. Prerequisite: Music 281.

**490 Undergraduate Workshop in Special Problems****1-3 hrs. Summer**

Designed for students interested in some special field of music not formally listed for instruction. All special problems must be approved by the head of the Department of Music, but may be under the direct guidance of any of the members of the music faculty. This course may be elected as many as three times.

**530 Advanced Choral Conducting****1 hr. Fall**

Supervised experience in conducting vocal groups. The student may be called upon to prepare an ensemble for public performance. Prerequisite: 330, 331.

**531 Advanced Instrumental Conducting****1 hr. Spring**

Supervised experience in conducting instrumental groups. The student may be called upon to prepare an ensemble for public performance. Prerequisite: 330, 331.

**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**

A course designed to acquaint the student with the history of 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. 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 organiza-

tions. 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, obbligatos, descants, canons and fugues. Prerequisite: 260, 261.

**561 Counterpoint** 2 hrs. Spring

A continuation of 560 (405A)

**562 Advanced Composition** 2 hrs. Fall

Further original work in composition dealing with the larger forms in both vocal and instrumental fields. Prerequisite: 362, 363.

**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. The course is about evenly divided between arranging for band and for orchestra. Some attention is given to the problems in score reading. Prerequisite: Sophomore 260, 261.

**568 Orchestration** 2 hrs. Spring

A continuation of 567.

**570 Music of Wagner and Beethoven** 2 hrs. Spring

A course 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. Open to any interested senior or graduate student.

**580 Music Therapy Internship** 6 hrs.

Six months' clinical training through resident internship in an approved neuropsychiatric hospital with an established music program.

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

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.

**APPLIED MUSIC**

Individual lessons in applied music can be elected for academic credit by any student in the university. Students in other departments of the university who wish individual instruction in some field of applied music should contact the head of the Department of Music for assignment of instructor. Such requests will be granted to the extent that the instructor's time and practice facilities are available beyond the needs of the music-major degree candidates. All B.M. degree candidates are required to have 60 minutes a week of individual instruction in their major performance field of concentration through the entire four year course.

Eight levels of study in the various areas of applied music are indicated in the Music Supplement Catalog. Levels one through five grant two semester hours of credit per semester. Levels five through eight may grant three semester hours of credit per semester.

H20 through H35 Harp

H40 through H55 Piano

H60 through H75 Organ

H80 through H95 Voice

Z20 through Z35 Stringed Instruments: Violin, Viola, Cello, Bass Viol

Z40 through Z55 Brass Instruments: Cornet or Trumpet, Trombone, French Horn, Tuba, Baritone

Z60 through Z75 Woodwind Instruments: Flute, Oboe, Bassoon, Clarinet, Saxophone

Z80 through Z95 Percussion

**MUSIC ENSEMBLES**

All B.M. degree candidates are required to participate in some large music ensemble, e.g., orchestra, choir, band, or glee club throughout their four years of study. It is expected that each student will take part for his first two years in a large ensemble employing his major performance area. The student will remain in that large ensemble for the entire academic year. Sometime during the student's residence he is expected to take one year of small ensemble (117). All music ensembles grant one hour of credit for each semester of participation. Not more than eight hours' credit will be granted for participation in any one ensemble. Not more than twelve hours of ensemble credit will be accepted toward any degree. Students who want to participate in an ensemble should contact the director.

**110 University Band****Mr. Meretta**

This organization affords to the student who plays some instrument an opportunity for development in both marching and playing. The band furnishes music at many athletic events, concerts are given during the

year on the campus and at various high schools. Uniforms and many of the instruments are furnished. (May be substituted for Physical Education credit.)

#### 111 University Orchestra

Mr. Stulberg

The orchestra is open to all students who have had a reasonable amount of orchestra experience. Many fine compositions will be studied and played during the year, and the orchestra joins with other campus organizations in joint programs. Instruments are available for the use of the students.

#### 112 University Choir

Mr. Hardie

The University Choir has a limited membership. The organization aims to develop and perpetuate a high standard of choral-ensemble singing. Each year the choir makes a number of appearances on the campus and before high schools and other organizations.

#### 113 University Singers

Mr. Frey

University Singers is open to all students (men and women) who wish to obtain a knowledge of choral music. The choir sings concerts on campus and for other organizations in the area.

#### 114 Varsity Band

Mr. Meretta

Membership in this band is open to students who have had some previous experience on a wind instrument. This organization is designed for students whose schedules or qualifications do not permit their immediate enrollment in the concert band. The band plays for athletic events and other university functions.

#### 115 Men's Glee Club

Mr. Frey

Open to all men with musical ability who have had experience in singing. The club makes a concert tour during the spring vacation in addition to filling numerous other engagements and taking an active part in the musical life of the campus.

#### 116 Women's Glee Club

Mrs. Snyder

The Women's Glee Club of fifty is selected by try-outs. The object is to select students for special artistic training in ensemble work. The Glee Club sings before a number of high schools throughout the state and takes an active part in the musical work on the campus and in the city.

#### 117 Special Music Ensembles

The Staff

Special instrumental or vocal ensembles may be formed with the permission of the head of the Department of Music. Where a sufficient number of hours of rehearsal per week warrant it, one hour of credit will be granted.

## DIVISION OF LANGUAGES AND LITERATURE

**Zack York, Chairman**

The Division includes the Departments of English, Languages, Philosophy and Religion, and Speech. The heads of the departments and the departmental counselors will advise students relative to requirements for majors and minors in these departments and concerning any special requirements set up by the departments.

### DIVISIONAL COURSE

**500 Studies in American Culture**

**3 hrs.**

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.

## English

Frederick J. Rogers, Head  
Thelma E. Anton  
Georgiann Burge  
Edward T. Callan  
Bernadine P. Carlson  
Philip S. Denenfeld  
Phyllis J. Divita  
Patricia Eliet  
John R. Freund  
Edward L. Galligan  
Lorena M. Gary  
Clare R. Goldfarb  
Russell M. Goldfarb  
Clyde T. Hankey

Clayton A. Holaday  
Frank C. Householder  
J. Lee Kaufman  
Robert M. Limpus  
Irving Lo  
John J. McNally  
Ken Macrorie  
Jean Malmstrom  
Helen E. Master  
Ralph N. Miller  
Arnold Nelson  
Lucille A. Nobbs  
John B. Orr  
Dorothy Osborn  
Robert A. Palmatier

John R. Phillips  
David G. Pugh  
Katharine D. Rogers  
William R. Rosegrant  
David F. Sadler  
Albert L. Sampson  
Nancy Schrock  
Helen G. Sellers  
Robert L. Shafer  
Charles A. Smith  
Anne O. Szalkowski  
Ruth G. Van Horn  
John W. Woods  
Jerome Zuckerman

The study of English has a time-honored place in the university as a force to increase a student's sensitivity to art, to people, and to language. It is recognized also for its importance as a preparation for certain vocations.

The Department offers the student an opportunity to prepare himself for teaching, for graduate study, for the professions, and for the increasing number of positions which utilize the special skills and information of the liberal arts graduate. The Department wishes the student majoring in



English to have an acquaintance with literary history, the relation of culture and literature, principles of the evaluation of literature, the history and structure of the language, and techniques of composition.

The English major and minor sequences are being revised during the current year. In order to insure a balanced and coherent sequence, a student intending to major or minor in English should confer with an adviser in the Department by the end of his third semester. All students proposing to take courses in English should be aware that written work must meet the Department's standards of competent writing.

Students who major in English should have a reading knowledge of some modern language, preferably French or German. Students who plan to teach can enhance their professional value by electing courses or getting experience in at least one of these related fields: journalism, play production, teaching of reading.

## COMPARATIVE LITERATURE

### 112 General Literature 3 hrs.

Readings in European literature from the Greeks to the Middle Ages.

### 113 General Literature 3 hrs.

Readings in European literature from the Renaissance to the contemporary period.

### 210 Literary Interpretation 3 hrs.

An introduction to literary study to develop skills in critical interpretation.

### 519 Chinese Literature in Translation 2 hrs.

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

## NATIONAL LITERATURE

### 222 American Literature 3 hrs.

A survey of American literature from the beginning to the Civil War.

### 223 American Literature 3 hrs.

A survey of American literature since the Civil War.

### 322 Great American Writers 3 hrs.

A study of major American writers. (This course cannot be counted for credit together with courses 222 and 223). Prerequisite: 210.

### 522 American Realism 2 hrs.

The rise of realism in American literature in the late nineteenth and early twentieth centuries. Prerequisite: 210.

**LITERARY PERIODS**

- 238 Modern Literature** 3 hrs.  
British and American literature from 1900 to World War II.
- 239 Contemporary Literature** 3 hrs.  
British and American literature from World War II to the present.
- 330 Medieval Literature** 3 hrs.  
A study of medieval narrative, lyric poetry, and drama. Prerequisite: 210.
- 331 The Age of Chaucer** 3 hrs.  
A study of Chaucer's major poems in their historical and literary context. Prerequisite: 210.
- 332 Elizabethan Literature** 3 hrs.  
A study of the non-dramatic poetry and prose of the sixteenth century. Prerequisite: 210.
- 333 The Age of Milton** 3 hrs.  
A study of seventeenth-century non-dramatic poetry and prose, with special attention to John Milton. Prerequisite: 210.
- 534 Neo-Classical Literature** 3 hrs.  
English literature 1660-1730, with major emphasis on Dryden, Pope, and Swift. Prerequisite: 210.
- 535 Eighteenth-Century Literature** 3 hrs.  
Readings in Johnson, Boswell, Gray, Fielding, Sterne, and Smollett. Prerequisite: 210.
- 536 Romantic Literature** 3 hrs.  
Readings in poetry and criticism, with emphasis on Blake, Burns, Wordsworth, Coleridge, Scott, Byron, Shelley, Keats. Prerequisite: 210.
- 537 Victorian Literature** 3 hrs.  
Readings emphasizing Carlyle, Mill, Dickens, Thackeray, Tennyson, Browning, Arnold. Prerequisite: 210.

**LITERARY TYPES**

- 240 Development of English Verse** 3 hrs.  
A study of major verse forms.
- 242 Development of the Drama** 3 hrs.  
Readings in the drama from the Renaissance to Ibsen.
- 243 Development of the Drama** 3 hrs.  
Readings in the drama from Ibsen to the present.

- 244 **Development of the Novel** 3 hrs.  
Readings in the novel from its beginnings through the nineteenth century.
- 245 **Development of the Novel** 3 hrs.  
Readings in the novel of the twentieth century.
- 249 **Short Story** 3 hrs.  
Study of the short story as an art form.
- 548 **Studies in Satire** 2 hrs.  
Studies concentrating chiefly on the satire of Pope and Swift. Prerequisite: 210.

## AUTHORS

- 252 **Shakespeare** 3 hrs.  
A study of Shakespeare's art through the application of several critical methods to selected tragedies, histories and comedies.
- 253 **Shakespeare** 3 hrs.  
An intensive study of special critical problems in Shakespeare's dramas. Prerequisite: 252.

## WRITING

- 264 **Journalism** 3 hrs.  
Theory and practice in writing news stories, interviews, features, and publicity; copy-writing and headlines.
- 265 **Journalism** 3 hrs.  
Study of editorials, opinion columns, critical writing, cartoons, advertising copy and lay-out, typography and page lay-outs. Prerequisite: 264.
- 362 **Advanced Writing** 3 hrs.  
Instruction intended to prepare students to write for professional and avocational purposes.
- 366 **Creative Writing** 3 hrs.  
Original writing in the field of the student's choice. Open to sophomores on recommendation of their freshman writing teachers.
- 367 **Creative Writing** 3 hrs.  
Additional original writing. 366 is not a prerequisite.
- 566 **Creative Writing Roundtable** 2 hrs.  
Writing of poetry and fiction, intended for teachers and advanced students.
- 567 **Creative Writing Roundtable** 2 hrs.  
Given in alternate semesters with 566. A student may elect either or both courses; they may be elected in either order.

**568 Literary Criticism****2 hrs.**

A study of ancient and modern critics, with writing of practical criticism.  
Prerequisite: 210.

**LANGUAGE STUDY****270 English Language****3 hrs.**

Introduction to the principles which govern language study, with particular reference to their use in understanding English.

**372 Development of Modern English****3 hrs.**

A course in the history of the language treating the historic and linguistic forces which have affected pronunciation, grammar, and vocabulary.  
Prerequisite: 270.

**374 American English****3 hrs.**

An examination of the characteristic structure and of the variations in the English spoken and written in the United States. Prerequisite: 270.

**574 Structure of Modern English****2 hrs.**

A study of the evolution of modern syntax. Prerequisite: 270.

**TEACHING****282 Children's Literature****3 hrs.**

A general survey of the literature suited to the needs and interests of children.

**380 Teaching of English****3 hrs.**

Teaching methods and sources of materials for the English teacher.

**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: 282.

**SPECIAL STUDIES****396 English Honors****3 hrs.**

Special studies under departmental guidance, for selected English majors.

**397 English Honors****3 hrs.**

Continuation of 396.

**496 English Honors****3 hrs.**

Continuation of 397.

**499 Senior Studies in English****3 hrs.**

Special studies in language and literature open only to senior English majors. The course may be repeated for up to nine hours of credit.

# Language

Wayne Wonderley, Head	Elizabeth Giedeman	Frances E. Noble
Maurice H. Bourquin	Herb B. Jones	Hermann E. Rothfuss
Roger L. Cole	Eunice E. Kraft	Marion Tamin

The usual major consists of twenty-four hours of university credit. The usual minor consists of eighteen hours of university credit. Some work is to be taken in courses numbered beyond the two-hundreds.

The selection of specific courses for a major or a minor is planned in cooperation with the departmental adviser. The student should secure a departmental adviser's slip early in his university studies.

Major in French		Minor in French	
Phonetics 406	3 hrs.	Phonetics 406	3 hrs.
France and the French 304, 305	2 hrs.	France and the French 304, 305	2 hrs.
19 hrs. in sequence in addition		13 hrs. in sequence in addition, except in the secondary curriculum	
Major in German		Minor in German	
German Conversation and Composition 310, 311	4 hrs.	18 hrs. in sequence, except in the secondary curriculum	
20 hrs. in sequence in addition			
Major in Latin		Minor in Latin	
Latin Writing 420	3 hrs.	18 hrs. in sequence, except in the secondary curriculum	
21 hrs. in sequence in addition			
Major in Spanish		Minor in Spanish	
24 hrs. in sequence, including a 400 literature course		18 hrs. in sequence, including Conversation 332, except in the secondary curriculum	

In the Secondary Curriculum, the elementary courses cannot be used for a major or minor.

Students who wish to do practice teaching in Latin should take Teaching of Latin 442 (see "Methods of Teaching," School of Education).

A course in modern European history is desirable for students majoring or minoring in a modern foreign language.

English majors should have a reading knowledge of some modern language.

Students are urged to take the advanced courses as full year units.

No credit will be given unless the elementary course is completed.

Instruction in Language Honors Courses or in Modern Foreign Languages 580 is credited for minor or major.

**390-391 490-491 Language Honors 3 hrs. Spring, Fall**

A special program designed for selected students of language. Departmental permission required. Each course carries three hours' credit; any three, totalling nine hours, are required to complete this program. The courses need not be taken in sequence.

**FRENCH****100 Elementary French 4 hrs. Fall**

This course is designed to give the basic foundation needed to read a simple text in French. It aims also, to give training in understanding spoken French and an elementary knowledge of pronunciation with the help of electronic devices.

**101 Elementary French 4 hrs. Spring**

This course is a continuation of the basic grammar, pronunciation, drill, and work in oral comprehension begun in French 100. About 150 pages of reading will be used as a basis for conversation practice. Electronic aids are used.

**200 Intermediate French 4 hrs. Fall**

This course consists of a review of French grammar with frequent written and oral exercises aiming at making grammar functional. About 200 pages of text chosen from novels, short stories, and plays are read. The composition consists of reproduction of texts read in class; other texts are read outside for comprehension and enjoyment.

**201 Intermediate French 4 hrs. Spring**

This is a continuation of 200. In this semester 300 pages of reading are completed.

**208 Readings from Modern French Novels and Plays 2 hrs. Summer**

This course is intended for students beyond the first year French level and takes into account, through individual work, differences in preparation. The course consists of reading as a basis for conversation practice and vocabulary building.

**300 Nineteenth Century French Literature 3 hrs. Fall**

This course is a study of romanticism and the development of realism, with reading from Chateaubriand, Victor Hugo, Alfred de Vigny, Musset. Prerequisite: 200-201 or equivalent.

**301 Nineteenth Century French Literature 3 hrs. Spring**

This continuation of 300 is a study of naturalism, with readings from Balzac, Flaubert, Zola, Rostand; and the Parnassian and symbolistic schools of poetry.

**302 Conversation and Composition 2 hrs. Fall**

This course is intended to develop ease and accuracy in the use of everyday French. Prerequisite: 101 or two years of high school French.

**303 Conversation and Composition****2 hrs. Spring**

This is a continuation of 302.

**304 France and the French****1 hr. Fall**

This course is required of, but not restricted to, those specializing in French, and is conducted in English. A study is made of geography, art, historical monuments, and contemporary problems of French life.

**305 France and the French****1 hr. Spring**

This is a continuation of 304.

**400 Contemporary French Literature****2 hrs.**

A study of a few outstanding novels by leading writers of the period between the two wars, with a definite effort to find out the different trends of thought of contemporary writers. Prerequisite: three years of college French or equivalent.

**401 Contemporary French Literature****2 hrs.**

This continuation of 400 consists of a study of the evolution of the drama in France from the beginning of the twentieth century, with careful reading of a few outstanding plays. Prerequisite: three years of college French or equivalent.

**402 Seventeenth Century French Literature****3 hrs.**

This is a study of the development of classicism against the social background of the seventeenth century. An anthology of the prose and poetry of the period is used as the center of interest. Prerequisite: three years of college French or equivalent.

**403 Seventeenth Century French Literature****3 hrs.**

This is a study of the great dramatists: Corneille, Racine, Molière, with a thorough study of some of their best-known plays. Prerequisite: three years of college French or equivalent.

**404 Survey of French Literature****2 hrs. Fall**

This course is intended to acquaint students with the masterpieces of French Literature, with special emphasis on the medieval period and the Renaissance. Prerequisite: three years of college French or equivalent.

**405 Survey of French Literature****2 hrs. Spring**

This is a continuation of 404 with emphasis on the eighteenth century philosophers and their influence on the political reformers in America.

**406 Phonetics****3 hrs. Fall**

This course is intended to give a corrective description of the difficulties encountered by students of French with Anglo-American habits of pronunciation. Required of all students majoring or minoring in French. Prerequisite: two years of college French or equivalent.

**407 Advanced Composition and Grammar Review 3 hrs. Spring**

This course is intended to verify and to strengthen the knowledge of fundamental principles of grammar in those students who are planning to teach French. Prerequisite: two years of college French or equivalent.

**500 Studies in Contemporary France 2 hrs.**

This course investigates more deeply some phases of French life which were only mentioned in 304, 305. An effort is made to understand those factors in French thinking which strongly affect international thought today. There is no prerequisite in foreign language. Summer session.

**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**

The aims of this continuation of French 502 are to study the history and traditional purposes of the Comédie-Française and to make the student aware of the renovation of stagecraft in France under the impulse of great producers.

**GERMAN****110 Elementary German 4 hrs. Fall**

This course aims to give the student an understanding of the fundamentals of German grammar, and some facility in speaking and writing the language. Ability to read German is developed by the study of 100 pages of prose. One year of high school German may be applied on the elementary course.

**111 Elementary German 4 hrs. Spring**

This is a continuation of 110. Approximately 100 pages of prose are read, and grammar, oral work, and composition are correlated. A student presenting one unit of high school German may enter the course in this second semester.

**210 Intermediate German 4 hrs. Fall**

This course begins with a review of basic German for the purpose of making it function in speech, composition, and reading. A study of cultural material and contemporary prose with related oral and written composition completes the semester's work. Prerequisite: one year of college German or two years of high school German.

**211 Intermediate German 4 hrs. Spring**

This is a continuation of 210; introduction to selected modern literature.

**212 Scientific German 4 hrs. Fall**

This is a course in the extensive reading of scientific material. Students are given an opportunity for specialization in the field of their major in-



terests. Prerequisite: one year of college German or two years of high school German.

**213 Scientific German** 4 hrs. Spring

This is a continuation of the extensive reading of scientific material. Unedited material from encyclopedias of science or from current science periodicals is introduced.

**310 German Conversation and Composition** 2 hrs.

The aim of this course is practice in speaking and writing German. It is required of students majoring in German. Prerequisite: the equivalent of two years of college German.

**311 German Conversation and Composition** 2 hrs.

This is a continuation of 310.

**314 Readings in German Prose** 2 hrs. Fall

Course is designed for students desiring wider experience in the reading of literature. Selections will be from 20th century authors.

**315 German Readings** 2 hrs. Spring

Facility is further developed by reading selected literary forms, including poetry, from authors of the 19th and 20th century.

**410 German Literature to 1825** 4 hrs. Fall

This is a survey of German literature through the time of Lessing, with readings from early German epics and lyrics and a detailed study of the times and works of Lessing. Prerequisite: the equivalent of two years of college German.

**411 German Literature to 1825** 4 hrs. Spring

This is a study of the classical period, and a continuation of 410. The life and works of Goethe, Schiller, and other poets of the period are studied.

**412 Romanticism in German Literature** 4 hrs. Fall

The romantic movement in Germany and concurrent German drama are studied. The works of romanticists and the dramas of Kleist and Hebbel are read. Prerequisite: the equivalent of two years of college German.

**413 German Literature from 1825 to the Present** 4 hrs. Spring

This course is a continuation of 412. The work covers German literature from Grillparzer to the present. A study is made of the dramatic, epic, and lyric poetry of the period, with readings from Grillparzer, Hauptmann, Hugo von Hofmannsthal, and other poets.

**510 The Central European Area** 2 hrs.

This course proposes to investigate cultural aspects necessary for an understanding of the Central European situation. Countries included will be Germany, Austria, Switzerland, and Czechoslovakia. Historical, geographical, social and religious problems will be investigated to give the

student an insight into this topic. There is no foreign language prerequisite for the course.

**512 Development of German Thought** 2 hrs. Fall

This course is a study of the development of Germany and the German national character. It will include a study of selected authors on history, philosophy and pedagogy, as well as German literature in translation. There is no foreign language prerequisite.

**514 Germany Through the Centuries** 2 hrs. Fall

This course is intended, by means of a study of German cultural history, to give the student an understanding of the vital German problem as it developed through the centuries down to our own day. Geographical, literary, philosophical, educational, and art aspects will be investigated by means of readings and discussions. No foreign language prerequisite.

**580 Modern Language Instruction** 2 hrs. Summer

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.

## LATIN

**120 Elementary Latin** 4 hrs. Fall

This course is designed for those students who need two units of Latin for admission to the AB curriculum or to a medical, law, or other professional course. With 121 it covers the work of two units of high school language requirement.

**121 Elementary Latin** 4 hrs. Spring

A continuation of 120. A student may present one unit of high school Latin and enter the course in the second semester.

**220 Cicero and Ovid** 4 hrs.

Before reading orations and letters of Cicero a certain amount of review of elementary Latin in vocabulary, grammatical usage, and special constructions is given. One day each week is devoted to Latin composition. Prerequisite: two units of high school Latin or Latin 120, 121.

**221 Cicero and Ovid** 4 hrs.

This is a continuation of 220. Selections from Cicero and from Ovid's *Metamorphoses* are read.

**222 Virgil** 4 hrs. Fall

Before reading the first books of the *Aeneid* and undertaking a survey of the whole, a certain amount of review of elementary Latin in vocabulary,

grammatical usage, and special constructions is given. A study of Greek and Roman mythology accompanies the reading. Prerequisite: two units of high school Latin or Latin 120, 121.

**223 Virgil** 4 hrs. Spring

This is a continuation of 222. Intensive study of the first six books is continued, and the survey of the whole is completed.

**320 Horace** 4 hrs.

The *Odes*, *Epodes*, and *Satires* are read. A study of the philosophy of Horace accompanies the reading.

**321. Horace and Latin Comedy** 4 hrs. Spring

The epistles of Horace are read, the *Ars Poetica* acting as an introduction to the study of the rise and development of Latin comedy, which is represented by selected plays of Plautus and Terence.

**324 Latin Literature** 4 hrs. Fall

A survey of Roman literature with reading of representative Latin authors is the aim of this course. Selections from Pliny's *Letters* and Cicero's philosophical works are read.

**325 Latin Literature** 4 hrs. Spring

In this continuation of 324, selections from the Histories of Livy and the Latin poets are read.

**358 Mythology** 3 hrs. Spring

This is a survey of the principal myths and legends of Greece and Rome. It is accompanied by a study of their representations in painting and sculpture, and by appropriate readings in English literature. Credit from this course may be applied on Group I or on an English major and minor.

**420 Latin Writing** 3 hrs. Fall

Practice is given in the fundamental principles of correct expression in Latin. Required of all students majoring in Latin.

**558 Mythology** 3 hrs.

This course investigates the origins, elements and interpretation of the principal myths and legends of Greece and Rome; also their preservation not only in literature but also in painting, music, and sculpture.

## RUSSIAN

**160 Elementary Russian** 4 hrs. Fall

Fundamentals of pronunciation, vocabulary, grammar, and sentence structure are given as a basis for reading Russian.

**161 Elementary Russian** 4 hrs. Spring

The basic work is continued with the addition of simple reading texts. Both semesters must be completed if the student wishes credit.

**260 Intermediate Russian**

4 hrs. Spring

This is a course in reading literary, scientific, and technical texts. Functional grammar is included.

**261 Intermediate Russian**

4 hrs. Spring

This is a continuation of 260 and aims to increase facility in comprehension of texts.

**SPANISH****130 Elementary Spanish**

4 hrs. Fall

This course is planned to give the student a thorough preparation in the fundamentals of Spanish. Attention is devoted to both the written and spoken language, with emphasis on its practical application. The language laboratory is made available for individual development.

**131 Elementary Spanish**

4 hrs. Spring

This is a continuation of 130.

**230 Intermediate Spanish**

4 hrs. Fall

This is a review course designed to strengthen the knowledge and abilities acquired in Spanish 130, 131 and, at the same time, enlarge the vocabulary. Cultural and historical accomplishments of Spain provide the basis for reading and conversational practice. Prerequisite: two years of high school Spanish, or 130, 131.

**231 Intermediate Spanish**

4 hrs. Spring

This is a continuation of 230.

**238 Readings in Intermediate Spanish**

2 hrs.

A short novel will be read to increase the student's vocabulary and to broaden his understanding of Spanish culture. It will be the basis for conversation and for the study of idioms. Prerequisite: Elementary Spanish.

**330 Survey of Spanish Literature**

4 hrs. Fall

This survey of literature includes works representative of Spanish literary production, as well as corresponding historical and cultural background. Exercises to improve writing and speaking skills, a secondary purpose, are based upon material read.

**331 Survey of Spanish Literature**

4 hrs. Spring

This is a continuation of 330.

**332 Spanish Conversation**

2 hrs. Fall

This course is intended to develop ease and accuracy in the use of everyday Spanish. Prerequisite: two years of college Spanish or equivalent.

**333 Spanish Conversation and Composition**

2 hrs. Spring

This is a continuation of 332. Prerequisite: two years of college Spanish or equivalent.

**334 Latin-American Life and Culture****2 hrs.**

This course is a survey of the customs, arts, and literature in Latin-American countries, with particular attention to Mexico. It is conducted in English. There is no prerequisite.

**336 Spanish Life and Culture****2 hrs. Fall**

This survey course is designed to provide an introduction to the literature, arts, history, and life in Spain. There is no prerequisite and the course is given in English.

**430 Spanish-American Literature****2 hrs.**

This is a survey of Spanish-American literature from the pre-Columbian period to the present, including the literature of the Conquest, the Colonial and Independence period, and that of the Gauchos. Prerequisites: 330, 331 or its equivalent.

**431 Spanish-American Literature****2 hrs. Spring**

This is a continuation of 430 bringing the survey to the contemporary writers of Latin-America.

**434 The Spanish Novel****2 hrs. Fall**

The development of the Spanish novel during the past hundred years is studied through readings from the works of Fernán Caballero, Juan Valera, José María Pereda, and Palacio Valdés. Prerequisite: 330 or the permission of the instructor. Not offered in 1962-1963.

**435 The Spanish Novel****2 hrs. Spring**

The study of the novel is continued through reading works of Pérez Galdós, Blasco Ibáñez and contemporaries. Not offered in 1962-1963.

**436 Golden Age of Spanish Literature****2 hrs. Fall**

This is a survey of the prose, poetry, and theater of the classical period which covers most of the 16th and 17th centuries. Prerequisite: 330, 331, or permission of instructor.

**437 Golden Age of Spanish Literature****2 hrs. Spring**

This is a continuation of 436.

**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. No prerequisite in Spanish.

**533 Cervantes****2 hrs. Spring**

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.

# Philosophy and Religion

Cornelius Loew, Head  
William Emblom

Otto Grundler

Rhoda H. Kotzin  
E. Thomas Lawson

Philosophy and Religion are separate fields of study, joined in one department for administrative reasons. Only courses listed under Philosophy may be applied toward a major or a minor in Philosophy, and only courses listed under Religion may be applied toward a minor in Religion.

## PHILOSOPHY

A major in philosophy consists of a minimum of 24 hours and includes Phil. 250 (or equivalent), 251, 360, 361, 362 or 363, and 570 or 571, with the remaining hours selected from Phil. 200, 270, 364, 371, 381, and Pol. Sci. 560, 561.

A minor consists of a minimum of 15 hours and includes Phil. 250 (or equivalent), 360, 361, with the remaining hours selected from the courses listed below.

### 200 Introduction to Philosophy 3 hrs. Fall, Spring

An introduction to the nature of philosophy through an examination of selected texts. Special attention is given to fundamental concepts and principles of philosophical inquiry. Open to Freshmen.

### 250 Elementary Logic 3 hrs. Fall

A study of methods and principles of deductive reasoning and some of the sources of common fallacies. Topics included are Aristotelian logic and an introduction to techniques of modern logical systems. Open to Freshmen.

### 251 Intermediate Logic 3 hrs. Spring

Continuation of Phil. 250. Modern symbolic logic; the calculus of propositions; Boolean algebra; theory of relations; introduction to paradoxes and theory of types. Prerequisite: Phil. 250 or permission of the instructor.

### 270 Introduction to Ethics 3 hrs. Fall

A study of the theoretical grounds of moral acts, with attention to ethical problems associated with the meanings of such terms as right and wrong, obligations, freedom, and the good life.

### 342 20th Century Philosophers of Religion 3 hrs. Spring

See Religion courses for description. May be applied toward a major in Philosophy.

### 360 History of Ancient Philosophy 3 hrs. Fall

Greek philosophical thought, with emphasis on Plato and Aristotle; Hellenistic philosophy; major figures of medieval philosophy.

**361 History of Modern Philosophy 3 hrs. Spring**

The new world-view since the Renaissance: Bruno, Galileo, Descartes, Spinoza, Leibnitz; English thinkers from Locke to Hume; German thinkers from Kant to Hegel.

**362 Representative 19th Century Philosophers 3 hrs. Fall**

Reading and discussion of the work of a small number of outstanding philosophers of the period.

**363 Representative 20th Century Philosophers 3 hrs. Spring**

Reading and discussion of the work of a small number of outstanding philosophers of the period.

**364 Existentialist Philosophies 3 hrs. Spring**

Concentrated study of leading figures in modern philosophical existentialism, Kierkegaard, Heidegger, Jaspers, Sartre, Marcel.

**366 Asian Thought: China 3 hrs. Fall**

A study of the major strands of Chinese thought, notably Confucianism and Taoism, with particular emphasis on their relevance to recent developments in China.

**371 Social Philosophy 3 hrs. Spring**

Examination of theories of society, man, and the state.

**381 Philosophy of Science 3 hrs. Fall**

Examination of the sciences from the point of view of their methods, presuppositions, and implications for philosophy.

**466 and 467 Independent Study****570 Epistemology 3 hrs. Spring**

Reading and discussion of works which present theories of consciousness, knowledge, and truth. Prerequisite: Phil. 251 or any 300-level course in philosophy.

**571 Metaphysics 3 hrs. Spring**

Examination of theories of reality, existence, being, substance, and causality. Prerequisite: Phil. 251 or any 300-level course in philosophy. (Not offered in 1962-63)

**RELIGION**

A student may earn a minor in Religion by taking Rel. 201 and 202, and by electing at least nine hours from the other courses listed below. In addition, the following courses are strongly recommended as cognates: Hist. 552, 555; Soc. 574.

**201 Introduction to Religion in the West 3 hrs. Fall, Spring**

A survey of anthropological and historical data which provide a background against which the Biblical view of nature, man, and God can be seen

and understood; with special emphasis on three modes of religious expression; myth, philosophy, and history.

**202 Foundations of Christian Thought** 3 hrs. Spring

Examination of the role of myth, philosophy, and history as modes of religious expression in the development of Christian thought during the first five centuries.

**310 Understanding the Old Testament** 3 hrs. Fall.

The distinctive faith and traditions of the Hebrew people studied both historically and in the light of later Jewish and Christian interpretations.

**311 Understanding the New Testament** 3 hrs. Spring

The distinctive faith and traditions of the early Christian Church studied under three headings: the Community emerges, the Community expands, the Community matures.

**321 Representative Christian Thinkers** 3 hrs. Spring

Portions of the writings of theologians of the Middle Ages and of the Reformation period will be examined: Anselm, Thomas Aquinas, Abelard, Bernard of Clairvaux, Bonaventura, Calvin, Luther, Zwingli.

**325 The Shaping of Religion in America** 3 hrs. Spring

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

**330 Great Religions of the World: the East** 3 hrs. Fall

A study of Hinduism and Buddhism in terms of their historical development, systems of thought, and contemporary revival. Special emphasis is placed on reading and analysis of original sources available in English translation.

**341 Contemporary Challenges to Christian Thought** 3 hrs. Fall

Intellectual challenges to Christian thought in the works of Darwin, Feuerbach, Marx, Nietzsche, and Freud.

**342 20th Century Philosophers of Religion** 3 hrs. Spring

Constructive responses to contemporary intellectual challenges to Christian thought; study of such men as Tillich, Buber, Wieman, Whitehead, and the Niebuhrs.

**344 The Religious Quest in Modern Literature** 3 hrs. Fall

Selected works of such writers as Eliot, Auden, Tennessee Williams, Graham Greene, Albert Camps, Sartre, O'Neill. The concern of the course is to teach students to read imaginative literature in genuinely religious as well as fully aesthetic terms.



# Speech

Zack L. York, Head  
 Albert B. Becker  
 Charles T. Brown  
 Marvin E. DeBoer  
 Faber B. DeChaine  
 Ronald H. Denison

Vlada M. Dimac  
 William R. Dopheide  
 Robert Dye  
 George O. Egland  
 Beatrice Hartman  
 Charles R. Helgesen

Deldee M. Herman  
 Dorothy Kester  
 Radford Kuykendall  
 James McIntyre  
 Charles Van Riper  
 M. Glen Wilson

Effective communication is the imperative for the world today and for the world of tomorrow if there is to be one. The Department of Speech, in endeavoring to help students become qualified and responsible users of speech, considers itself a functional part of a University which not only offers the student opportunity to train himself professionally but also to educate himself in the liberal arts tradition as well.

## I. MAJORS

Two majors are available.

### (1) Speech Major

A Speech major includes 30 semester hours of speech to be arranged in consultation with the student and the Head of the Department.

### (2) Speech Education Major\*

Speech Education major requires 30 semester hours of speech including the following core courses.

100	General Speech**	3 sem hrs
302	Communicative Processes of Speech	3 sem hrs
304	Physiological Processes of Speech	3 sem hrs
562	Teaching Speech in Secondary School	3 sem hrs

## II. MINORS

Two minors are available.

### (1) Speech Minor

A speech minor requires 18 semester hours of speech including General Speech 100\*\*, Communicative Process of Speech 302 and 12 additional elective hours to be chosen in consultation with the Head of the Speech Department. This minor is designed for students not intending to teach and for those students in Secondary Education who are special teachers of Art, Industrial Arts and Music.

\*To teach Speech in a school accredited under North Central Association, teachers must have 13 hours in English.

\*\* Exceptions may be made upon the approval of the Chairman of the Department, Room 100, Theatre.

**(2) Speech Education Minor\***

A speech education minor requires 18 semester hours of speech for teaching in secondary and elementary schools, including the following core courses:

100	General Speech**	3 sem hrs
302	Communicative Processes of Speech	3 sem hrs
304	Physiological Processes of Speech	3 sem hrs
560	Teaching Speech in Elementary School	3 sem hrs
or 562	Teaching Speech in Secondary School	3 sem hrs

**I. CORE COURSES****100 General Speech 3 hrs. Fall, Spring**

A beginning course in speech dealing with the study and application of basic principles underlying effective oral communication. Required of all students planning to secure a teaching major or minor in speech.

**302 Communicative Processes of Speech 3 hrs. Fall, Spring**

Advanced study exploring the way experience is perceived, symbolized and patterned. It interrelates speech, personality and society.

**304 Physiological Processes of Speech 3 hrs. Fall, Spring**

Deals with the anatomy and function of speech organs involved in processes of voice production; nature and analysis of sound and sound production; detection and treatment of common speech deficiencies; and the use of common speech aids in classroom study of speech.

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

A methods course for the elementary teacher, designed to help her improve the oral language skills of her pupils.

**562 Teaching Speech in the Secondary School 3 hrs. Fall, Spring**

Designed to give the prospective teacher and the teacher in the field an understanding of the problems of teaching speech to high school students. It considers the aims, principles, curricula, and techniques of modern speech; and seeks to bridge the gap between the student's academic training and its application to the teaching situation. Prerequisite: Speech major or minor or consent of instructor.

**II. INDEPENDENT STUDY****329 Independent Study in Speech**

Designed to allow outstanding students to work independently under staff supervision. Includes extensive study, research or special creative projects in any of the several speech areas. 1-6 semester hours credit may be accumulated. Offered as needed.

\*To teach Speech in a school accredited under North Central Association, teachers must have 13 hours in English.

\*\*Exceptions may be made upon the approval of the Chairman of the Department, Room 100, Theatre.

### III. SERVICE COURSES

**102 Speech for Teachers** 3 hrs. Fall, Spring

Designed for students planning to teach. A beginning course in speech dealing with the study and application of basic principles underlying effective oral communication. Particular attention given to developing skill in meeting the special situations encountered by the teacher.

**104 Business and Professional Speech** 3 hrs. Fall, Spring

Designed for students in business or pre-professional curricula. A beginning course in speech dealing with the study and application of basic principles underlying effective oral communication. Particular attention given to developing skill in meeting the speech situations encountered in the business and professional world.

**106 Voice and Diction** 3 hrs. Fall, Spring

Emphasis is placed exclusively upon voice production and diction. It gives the student a basis for individual analysis and emphasizes an intensive program for self-improvement.

**114, 115 Communication**

For description of course see Division of Basic Studies. Credit for these courses may be given upon recommendation of the instructor and approval of the head of the Speech Department.

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

A course for upperclassmen and teachers in service who find that they need more work in speech. Emphasis is given to the individual speech needs of the teacher, and to the role of speech in the classroom. A research project on a specific area of speech is required.

### IV. PUBLIC ADDRESS

**131 Parliamentary Procedure** 1 hr. Fall, Spring

Designed for students who desire knowledge and practice in participating in and conducting business meetings.

**230 Public Speaking** 3 hrs. Fall, Spring

Introductory study of principles of public speech and audience psychology. Aids to develop skill in speech composition, clear thinking, and effectiveness in speaking. Frequent opportunity for platform work is given. Prerequisite: Speech 100, 102, or 104.

**232 Discussion** 3 hrs. Fall, Spring

Study and practice in discussion and conference. Skill in participation, leadership, group thinking, and evaluation are emphasized. Recommended for any student whose vocation involves work with groups, such as students in business, pre-professional, or teaching curricula.

**236 Intercollegiate Debating** 1 hr. Fall, Spring

Gives student an opportunity to participate in intercollegiate debates, discussions and student congresses. The national college debate and discussion topics are used. Debaters meet regularly as a group. Students interested in qualifying for this activity should contact either the men's or women's debate coach. Maximum of six semester hours may be accumulated. May not be counted in fulfilling major or minor requirements.

**334 Argumentation and Debate** 3 hrs. Fall, Spring

A study of the principles of argumentation and frequent practice in debating current public questions. Attention given to problems involved in judging debates.

**530 Public Speaking** 2 hrs. Spring

The intensive study of speech organization, audience adaptation, and delivery with emphasis upon the language of effective speech. The course includes practice in speaking and analysis of contemporary model speeches. A research project in public speaking is required.

**532 Persuasion** 2 hrs. Fall, Summer

The basic considerations of the course are the factors of human behavior that can be utilized in oral communication and their ethical implications. Research, experimentation, and discussion are the primary class activities.

**566 Direction of Forensic Activities** 2 hrs.

Includes principles of coaching discussion, debate, extempore speaking, oratory, and reading. Opportunities given for participating in the management and judging of speech contests and festivals. Prerequisite: A major or minor in speech, or consent of instructor.

**V. RADIO AND TELEVISION****240 Introduction to Broadcasting** 3 hrs. Fall, Spring

Introductory study and analysis of radio and television with a consideration of the social and psychological effects of broadcasting. Attention is given to developing skill in radio speaking.

**244 World Systems of Mass Communications** 3 hrs. Fall

A study of the basic purposes, design, control, operational characteristics, and current dimensions of significant mass communication systems. Prerequisite: 240.

**342 Radio and TV Journalism** 3 hrs. Spring

Basic principles of news reporting; radio and TV as news media; newscasts, commentators, on-the-spot coverage and features. Problems of news staff organization. Emphasis is given to news sources and providing of visual and audio materials.

**344 Practicum in Broadcasting Arts 2 hrs. Summer**

Provides the student with practical experience at commercial or educational stations, allowing him to gain some familiarity with operation, equipment and problems of broadcasting. Prerequisites: Speech major or minor and consent of instructor.

**345 Practicum in Broadcasting Arts 2 hrs. Summer**

A continuation of 344. Prerequisite: 344.

**540 Broadcasting Regulations 2 hrs. Fall**

Growth of self regulation and governmental regulation or the radio and television industry. Requirements and responsibilities of the broadcaster as an administrator of a public trust. Prerequisite: 240 or consent of instructor.

**542 Educational Broadcasting 2 hrs. Spring**

Study and analysis of educational broadcasting and its development. Evaluation of current programs, studies and utilization methods.

**545 Workshop in Educational Television 2 hrs. Post Summer**

Designed specifically for the classroom teacher and administrator involved in educational television. Utilization of the medium will be explored with emphasis on use of educational and commercial closed-circuit and airborne ETV program. Sessions will involve planning, preparation for production of programs and associated materials.

**VI. THEATRE AND INTERPRETATION****111 Choral Reading 1 hr. Fall, Spring**

Familiarizes the student with theory, techniques and skills of choral reading. Provides opportunity to participate in group activity in area of oral interpretation. Public performances may be given as part of course work each semester. May be taken for accumulated credit to a maximum of 4 semester hours.

**210 Oral Interpretation 3 hrs. Fall, Spring**

Analysis and interpretation of the more simple types of prose and poetry. Emphasis is placed upon developing the student's standards of appreciation of literature and his skill in reading orally from the printed page. Prerequisite: Speech 100, 102 or 104.

**220 Introduction to Theatre 3 hrs. Fall, Spring**

Considers the many aspects of the theatre with the purpose of developing the student's interest in and appreciation of theatre as a part of his cultural heritage and liberal arts background. Some laboratory experience is provided in viewing and participating in the University Theatre program.

**222 Acting 3 hrs. Fall, Spring**

Study and practice of the basic principles and techniques of acting designed to help the student to develop a basis for appreciation and criticism. Prerequisite: Speech 110, or instructor's consent.

**224 Stagecraft 3 hrs. Fall**

A beginning course in technical production including the planning and construction of stage scenery. Includes laboratory work on University Theatre productions.

**226 Stage Design 3 hrs. Spring**

A beginning course for students in designing and executing stage settings. Includes laboratory practice in staging University Theatre productions. Note: This course may be counted for credit in either Art or Speech.

**228 Stage Make-up 1 hr. Fall, Spring**

Study and practice of the principles and techniques of stage make-up.

**310 Oral Interpretation 2 hrs. Fall**

Advanced work in the oral interpretation of literature, with special emphasis on the dramatic form. Prerequisite: 110 or consent of instructor.

**320 Stage Direction 3 hrs. Fall, Spring**

Theory and application of basic principles of directing and staging plays with particular emphasis upon production problems of school and community. Prerequisite: 222 or instructor's consent.

**324 Stage Lighting 3 hrs. Spring**

Course considers basic theories of stage lighting, planning lighting for performance, and practical application of stage lighting in laboratory experience in conjunction with University Theatre productions.

**326 History of the Theatre 3 hrs. Fall**

From the beginning to the English Renaissance.

**327 History of the Theatre 3 hrs. Spring**

From the English Renaissance to the present day.

**328 Stage Costume 3 hrs.**

Considers study of historic costume as adapted for the stage; the use of basic patterns, fabrics and materials in costume construction. Practical laboratory experience offered in conjunction with University Theatre productions.

**340 Dramatic Writing 3 hrs.**

A study of the basic elements of the playwriting process; theme, plot, character, dialogue and language. The student may write plays for stage, film, television or radio. With instructor's approval the course may be taken twice for credit. (Not offered in 1962-63.)

**516 Oral Interpretation of Drama****2 hrs.**

Reading and analysis of the dramatic form in literature. Aim is to develop and establish a basis for intelligent criticism and appreciation of the drama. Prerequisite: 110.

**520 Children's Theatre****2 hrs. Spring**

Deals with the production of formal plays with and for children. Considers the dramatic literature of the field; selection, staging and direction of children's plays; and psychology of child audiences. Prerequisite: 220 or 564.

**522 Acting****2 hrs.**

Intensive work in the techniques of creative acting. Each student creates at least one role in a play. Prerequisite: Acting 222 or consent of instructor.

**524 Problems of Play Direction****2 hrs.**

Consider special problems facing the teacher in the field with little or no formal theatre training. Study limited to selecting and casting the play; approach and preparation of the role and directing the play.

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

Companion course to 524. Emphasis placed on problems in planning and executing scenery, lighting, costuming, and make-up.

**564 Creative Dramatics for Children****2 hrs. Fall, Spring**

The study of the principles, materials and techniques of informal dramatics as a classroom activity in elementary grades. Includes observation of demonstration groups.

**VII. SPEECH CORRECTION****99 Special Speech Problems****No Credit. Fall, Spring**

Designed to meet the needs of the students with special speech difficulties. Emphasis is placed upon the solution of the individual speech problems through individual and group therapy.

**250 Introduction to Speech Correction****3 hrs. Fall, Spring**

Designed to acquaint the student with the scope, history and nature of speech correction. Topics considered are: the development of speech in the child, the psychology of the speech defective and the nature of the speech disorders and their treatment.

**252 Principles of Speech Correction****3 hrs. Fall, Spring**

Designed for students in speech correction, special education, and elementary education. The course is designed to acquaint the student with the methods used in speech correction for the various speech disorders. Prerequisite: 250.

**254 Problems of the Deaf and Hard of Hearing 3 hrs. Spring**

An introduction to fundamental aspects of normal and defective hearing considered from a practical standpoint, as applied to teachers, parents and therapists working with speech and hearing problems.

**350 Phonetics 2 hrs. Fall**

Designed to acquaint the student with the phonetic alphabet, sound-formation and phonetic transcription, and with the application of these to foreign language dialect, interpretive reading, dramatics and speech correction.

**352 Practicum in Speech Therapy 1 hr. Fall, Spring**

This course consists of supervised practice in clinical speech correction. Case presentations, therapy, planning, the review of pertinent literature, and actual therapy compose the course content. Prerequisite: 250.

**354 Practicum in Speech Therapy 1 hr. Fall, Spring**

A continuation of 352. Prerequisite: 352.

**356 Practicum in Speech Therapy 1 hr. Fall, Spring**

A continuation of 354. Prerequisite: 354.

**454 Applied Speech Correction 3 hrs. Fall, Spring**

For students interested in the actual practice of speech correction. The course will involve training in the remedial treatment of both adult and child speech defectives in the university clinic and schools associated with the university and the study of the principles of clinical practice. Prerequisite: 252 or consent of instructor.

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

For students majoring in speech or speech correction. Topics considered 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 provide the student with more detailed knowledge of the nature, causes, and development of stuttering and other serious functional speech disorders. The literature will be surveyed, and the various methods for treating these disorders will be described in detail. Prerequisite: 252.

**558 The 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. Prerequisite: 252 or consent of instructor.



Deals with problems of teaching high school chemistry, physics and physical science. The main emphasis is on effective methods of instruction. Practical methods of apparatus ordering, maintenance, and construction are also considered. Prerequisite: One year of college chemistry and one year of college physics.

## College Science Courses Recommended for Training Prospective Science Teachers for Secondary Schools

Teaching Pattern	Biology	Chemistry	Physics	Mathematics	General Education Basic Science	Other Science Courses	Science Methods
A. Biology and General Science. In combination with Physical Education	A Basic Course in Introductory Biology				Physical Science (2 semesters)	Meteorology (one semester)	Biology Methods (one semester)
	A Field Course involving Botany Additional Courses to total at least an 18-hour teaching minor in Biology						
B. Biology and General Science	A Basic Course in Introductory Biology (usually 2 semesters)	General Chemistry (one semester)			Physical Science (2 semesters)	Astronomy (one semester) including Field Work (2 semesters) Meteorology (one semester)	Biology Methods (one semester)
	A Field Course involving Botany (one semester) Additional Courses to total at least 24 hours (major) in Biology, to include Botanical and Zoological (both vertebrate and invertebrate) areas						
C. Chemistry Mathematics and General Science		General Chemistry (2 semesters)	General Physics (2 semesters)	Trigonometry (one semester) College Algebra (one semester) Analytic Geometry (one semester) Additional Courses to make a minor (18 hours)	Biological Science (one semester) Physical Geography (one semester)	Astronomy (one semester)	Physical Science Methods (one semester)
		Additional Courses to make a major (24 hours) in Chemistry or in Physics or a group major (30 hours) in a Chemistry-Physics combination					
D. Biology Chemistry and General Science	A Basic Course in Introductory Biology (usually 2 semesters)	General Chemistry (2 semesters)	General Physics (2 semesters)			Geology, included in group minor with Biology (2 semesters) Meteorology (one semester)	Biology or Physical Science Methods (one semester)
	A Field Course involving Botany (one semester) Additional Courses in Biology and Geology to total at least 20 hours (group minor)	Additional Courses to make a major (24 hours) in Chemistry or in Physics or a group major (30 hours) in a Chemistry-Physics combination					

**530 Conservation Education****2 hrs. Spring**

Survey of the whole 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. Designed primarily for teachers in service. Prerequisite: consent of instructor.

# Biology

W. C. Van Deventer, Head  
 Harriette V. Bartoo  
 Richard Brewer  
 W. Jackson Davis  
 Joseph Engemann  
 A. Verne Fuller

Frank J. Hinds  
 Imy Vincent Holt  
 Elaine Hurst  
 Jean M. Lawrence  
 Myrtle M. Powers

Thane S. Robinson  
 Beth Schultz  
 Edwin B. Steen  
 Harry Stevens  
 Leo C. VanderBeek  
 Merrill R. Wiseman

A recommended major for pre-medical and pre-dental students should include 100, 101, 240, 241, 341, and 343. If possible, 312 and 313 should be elected. A recommended major for students preparing to enter forestry, horticulture or landscape architecture should consist of 100, 101, 220, 221, 240, and 241. If possible, 347 and 320 should be elected. Students majoring or minoring in biology are advised to take their basic studies science work in the physical science area.

A major or minor for secondary teachers should embrace as wide a range of courses as possible within the department. Not more than eight hours of 100 level work are counted toward a major or minor. Any major or minor must include work in the following areas: (1) animals, (2) plants and (3) the human body. It must also include some work taken at the junior or senior level. Prospective secondary teachers majoring or minoring in biology must take 304. This course should be taken before the student enrolls for directed teaching in biology.

A recommended biology major for elementary teachers must include General Biology 100 and Biological Science 107, and Outdoor Science 232 and 233. Electives to complete the major should include courses in botany, zoology, ecology, human body, and Teaching of Elementary Science 203. A recommended biology minor for elementary teachers must include Biological Science 107, one semester of Outdoor Science 231, 232, or 233 and Teaching of Elementary Science 203. Electives should include courses in botany, ecology, zoology, and human body. Work at the Conservation Training School at Higgins Lake may be included in either the major or the minor.

Students intending to do graduate work in biology should consider the following courses basic: freshman biology (two semesters), field botany, field zoology, ecology, genetics and evolution. In addition to these, students wishing to specialize in zoology should take a course in each of the following areas: comparative vertebrate anatomy, physiology, histology and em-

bryology. Students wishing to specialize in botany should take a course in each of the following areas: plant taxonomy, plant physiology and plant morphology. Additionally, students intending to do graduate work in biology should take chemistry at least through organic, mathematics through statistics, and at least two courses in physics. Training in geology and psychology is recommended, and students should be familiar with at least one foreign language (preferably Russian, German or French).

All biology majors are required to attend Biology Seminar.

**100 General Biology****4 hrs. Fall, Spring, Summer**

This and the following course, 101, cover the field of biology and serve as a foundation for advanced courses. This course includes a study of the cell and protoplasm, unicellular organisms, and the animal groups in the order of advancing complexity. Six class hours weekly, including lecture and laboratory.

**101 General Biology****4 hrs. Spring**

A continuation of 100, covering the higher animal groups, the plant groups, genetics, evolution, ecology and conservation. Six class hours weekly, including lecture and laboratory.

**107 Biological Science****4 hrs. Fall, Spring, Summer**

A course designed to present basic biological principles, and to give the student an understanding of the operation of the world of life. Six class hours weekly, including lecture and laboratory. This course fulfills the general education requirement for biological science.

**201 General Ecology****2 hrs. Spring**

This is a study which deals with plant-animal communities, relationships among living organisms, and interrelationships of living organisms with their environment. Ecological concepts are presented and illustrated. Field work is emphasized. Prerequisite: eight hours of college biology.

**231 Outdoor Science for Teachers****3 hrs. Summer**

An abridgment of 232 and 233, designed for teachers in service. Offered only in summers and by extension.

**232 Outdoor Science****4 hrs. Fall**

The development of ability to interpret natural phenomena with scientific accuracy, and to gain an understanding and appreciation of the relationships of life forms to each other and to their environment. The course includes flowering and non-flowering plants, insects, spiders, winter birds, mammals and astronomy. Especially desirable for elementary teachers. Field trips are a part of the scheduled work.

**233 Outdoor Science****4 hrs. Spring**

This course has the same aims as 232. It includes spring plants, pond life, migratory and resident birds, rocks, minerals and weather. Especially desirable for elementary teachers. Field trips are a part of the scheduled work. Students may enter without having had 232.

**302 Man and the Living Environment 3 hrs. Fall**

A study of interrelationships among plants and animals, including man. Emphasis is placed on classroom and field experiences which will lead to an understanding of man's dominance and of the development of the human-plant-animal community. Prerequisite: eight hours of college biology.

**304 Methods and Materials in Biology 2 hrs. Fall, Spring**

Class discussion, laboratory experience and field work, as a basis for biology teaching in high school. Required of all students who are following a secondary education curriculum, and list biology as a major or minor. Prerequisite: twelve hours of biology, including both zoological and botanical aspects.

**306 Genetics 2 hrs. Fall**

A comprehensive study of the laws of heredity, including their application to plant and animal breeding and to man. Prerequisite: eight hours of college biology.

**308 Evolution 2 hrs. Fall**

A consideration of the evidence for and the principles involved in the evolution of plants and animals, including man. Prerequisite: eight hours of college biology.

**309 Nature of Science 2 hrs. Spring**

A consideration of the nature and application of scientific attitude and scientific methodology as exemplified by specific cases from the history of scientific research. Prerequisite: eight hours of college biology, or two semesters of any other college science.

**330 Fish and Game 3 hrs. Fall**

Designed to acquaint the student with the basic principles, techniques and practices which are employed in the management of fish and game animals. Life histories, food, cover and other important environmental factors are discussed. Prerequisite: eight hours of college biology.

**500 Selected Experiences in Biology 2 hrs. Spring**

Designed for elementary teachers and secondary 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. Prerequisite: consent of instructor.

**508 Modern Biology 2 hrs. Fall**

The course is designed to present the results of recent research findings in biology and recommendations of professional organizations interested in biology education. Prerequisite: at least a minor in biology.

**509 Modern Biology 2 hrs. Spring**

A continuation of 508. May be taken without the Fall semester.

**553 Limnology**

2 hrs. Summer, Fall

Biological, chemical and physical aspects of lakes and streams. Emphasis will be on ecological relationships of invertebrate animals and lower plants. Lectures, field studies and independent investigations under supervision of the instructor. Prerequisite: at least a minor in biology.

**554 Field Studies in Ecology**

2 hrs. 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: at least a minor in biology.

**ANATOMY, PHYSIOLOGY AND HEALTH****111 Healthful Living**

2 hrs. Fall, Spring

A study of the principles underlying sound health practices. Factors in the causation, prevention and control of all departures from normalcy in health are considered.

**210 The Human Body**

3 hrs. Fall

A study of the structure and functioning of the human body. Designed especially for teachers. Prerequisite: eight hours of college biology.

**212 Community Hygiene**

3 hrs. Fall

An introduction to the field of public health. Organized activities for the promotion of physical and mental efficiency, the prevention of disease and the prolongation of life are considered. Prerequisite: eight hours of college biology.

**213 Anatomy and Physiology**

4 hrs. Fall, Spring

The gross and microscopic structures, and the functions of organs and tissues of the vertebrate body, with special reference to man. Three lectures and four hours of laboratory per week. Prerequisite: 100 or equivalent.

**214 Anatomy and Physiology for Nurses**

4 hrs. Fall

An abridgment of 216 and 217, especially adapted to meet the needs of students in the Bronson Methodist Hospital School of Nursing. For Bronson students only.

**215 Bacteriology for Nurses**

3 hrs. Spring

A specialized course dealing with microorganisms, adapted to the needs of students in the Bronson Methodist Hospital School of Nursing. For Bronson students only.

**216 Anatomy**

4 hrs. Fall

A study of the gross and microscopic structures of the organs and tissues of the mammalian body, with emphasis on that of man. In the laboratory, the cat is dissected in detail. Prerequisite: eight hours of college biology.

**217 Physiology** 4 hrs. Spring

A study of the functions of the various organs and tissues of the human body. Experiments concerned with fundamental life processes are performed in the laboratory. Prerequisite: 216 or equivalent.

**312 Bacteriology** 4 hrs. Fall

A general introduction to the principles governing the study of all microorganisms. Practical techniques are employed in the laboratory. Prerequisite: eight hours of college biology.

**313 Advanced Bacteriology** 4 hrs. Spring

This course is for more advanced students who are particularly interested in the microorganisms which cause disease. Special techniques are used in the laboratory, and a number of unknowns are identified. Prerequisite: 312 or equivalent.

**512 Health Problems** 2 hrs. Fall

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

**514 Methods and Materials for School Health Education** 2 hrs. Fall

A course of lectures and demonstrations in which 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 with that of other subjects in the curriculum. Prerequisite: consent of instructor.

**515 Alcohol Problems** 2 hrs. Fall

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

**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 in anatomy and in physiology.

**517 Cellular Physiology** 2 hrs. Spring

Concerned with the details of structure and functioning of cells, both animal and plant. The current status of major problems in the field is considered. Laboratory work consists of individual projects dealing with various aspects of cell physiology. Prerequisite: at least a minor in biology.

**BOTANY****220 Botany of Seed Plants**

4 hrs. Fall

The study of seed plants, their fundamental gross and microscopic structure, physiology, classification and development. The university greenhouse is used in experiments involving living plants and their propagation. Prerequisite: eight hours of college biology.

**221 The Plant Kingdom**

4 hrs. Spring

A systematic study of the various plant groups in relation to their identification, structure, reproduction and ecology. During the second half of the semester field studies occupy the major portion of class time. The second half of this course may be taken separately, without the first half, under the title of course 225. Prerequisite: eight hours of college biology.

**224 Trees and Shrubs**

2 hrs. Extension

A field course in the identification of trees and shrubs occurring in Southwestern Michigan. Attention is given to their geographic and physiographic distribution, and to their economic uses. Prerequisite: consent of instructor.

**225 Local Flora**

2 hrs. Spring

An elementary field course in the identification of flowering plants. Designed for those who need an acquaintance with the common wild flora occurring in this region. This course may be taken as the last half of 221. Prerequisite: eight hours of college biology.

**320 Plant Pathology**

3 hrs. Spring

For students with an interest in biology, agriculture, forestry, or allied fields. Deals with the common diseases of higher plants, caused by fungi, viruses and physiological factors, as well as those connected with the presence of animals such as nematodes and insect larvae. Emphasis is on causes, carriers and "cures" for plant diseases commonly found in farm, garden and greenhouse cultivation. Prerequisite: eight hours of college biology.

**323 Reproduction and Growth in Plants**

3 hrs. Spring

For advanced students in biology, who need a course covering a comparative approach to the study of reproduction from the lower forms to advanced organisms. Discussions will deal with asexual and sexual reproduction, alternation of generations, parthenogenesis, apospory and apogamy. Experiments in these areas as well as in subsequent growth of type organisms will be set up. Prerequisite: eight hours of college biology.

**421 Flowering Plants**

2 hrs. Spring

Field study and identification of flowering plants, prefaced by a brief review of lower plant groups. Students will be expected to use keys for identification, and assemble an herbarium collection for their own use. Prerequisite: eight hours of college biology.



**426 Plant Physiology**

2 hrs. Fall

A course in which the broader aspects of physiological processes shared commonly with animals are emphasized. Functions of various plant organs are discussed and related to structure. Prerequisite: eight hours of college biology.

**522 Phytogeography**

2 hrs. Spring

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

**523 Paleobotany**

3 hrs. Fall

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: at least a minor in biology.

**524 Economic Botany**

3 hrs. Fall

A course dealing with plants useful to man for food, flavoring, drugs, clothing and building purposes. Field trips are planned to places where plant products are grown, manufactured, exhibited or sold. Emphasis is placed on a knowledge of plant life of economic value in connection with teaching at both elementary and secondary levels. Prerequisite: eight hours of college biology.

**525 Biological Constituents**

2 hrs. Spring

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

**ZOOLOGY****240 Invertebrate Zoology**

4 hrs. Fall

The structural characteristics, physiology, life histories, habits, distribution and classification of the invertebrates. Identification of local forms and those having economic importance is emphasized. Prerequisite: eight hours of college biology.

**241 Vertebrate Zoology (Comparative Anatomy)**

4 hrs. Spring

A study of the Phylum Chordata; essential features of lower types; general features of chordate development and the comparative anatomy of the systems of vertebrates. Field work may include a trip to the Chicago Natural History Museum. Prerequisite: 240, or equivalent.

**341 Histology**

4 hrs. Spring

The microscopic study of the cells, tissues and organs of the body, with some attention to their preparation for study. Prerequisite: eight hours of college biology.

**343 Embryology**

4 hrs. Spring

The development of the individual from the origin of the germ cells to adulthood. The frog and chick are emphasized in the laboratory. Prerequisite: eight hours of college biology.

**347 Ornithology**

3 hrs. Spring

A development of knowledge and appreciation of birds through a study of their plumage, song, flight, migration, nesting habits, relation to environment and importance to man. The student learns to identify birds in the field, and a minimum of 100 species in the laboratory. Early morning field trips are required. Prerequisite: eight hours of college biology.

**518 Endocrinology**

2 hrs. Fall

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

**542 Entomology**

2 hrs. Fall, Summer

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

**543 Protozoology**

2 hrs. Fall

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

**545 Ichthyology**

2 hrs. Spring

The anatomy, physiology, taxonomy and ecology of fresh-water fishes, with particular emphasis on those occurring in Michigan. Prerequisite: at least a minor in biology.

**547 Advanced Ornithology**

3 hrs. Spring

Investigation of details of song, habitat, habits and identification of shore and marsh birds. Skins of birds of Michigan, both resident and migrant, are provided for identification. Early morning field trips are required. Prerequisite: at least a minor in biology.

**551 Parasites and Parasitism**

2 hrs. Fall

Parasitism and its effects on parasite and host. Typical representatives of the principal groups of animal and plant parasites will be studied in detail. Special attention will be given to the parasites of humans. Prerequisite: at least a minor in biology.

**557 Natural History of Invertebrates**

3 hrs. Spring

To acquaint students with the ecology, distribution and taxonomy of the invertebrates of the region, with special reference to their life histories and economic importance. Students will prepare their own teaching collections. Prerequisite: eight hours of college biology.

# Chemistry

Lillian H. Meyer, Head	Paul Holkeboer	Gerald Osborn
Robert H. Anderson	Alfred E. Hoover	Lauri E. Osterberg
James W. Boynton	Don C. Iffland	Elizabeth F. Tuller
Donald J. Brown	Lawrence G. Knowlton	Esther Woodruff
Robert Harmon	Robert C. Nagler	

A major in chemistry consists of 24 hours of chemistry. Students majoring in chemistry in the general degree curriculum and desiring an industrial laboratory position upon graduation are urged to take an additional ten hours of chemistry. Students majoring in chemistry should have a minor in physics or a minor in biology with one year of physics.

All chemistry majors are required to take chemistry seminar during junior and senior years.

A minor sequence in chemistry consists of 8 hours of general chemistry and 8 hours from the following: 222, 360, 361, 551, 552, 553.

The Secondary Education curriculum requires an 18 hour minor. All students who wish to practice teach in chemistry must have one year of physics.

The Chemistry Department is accredited by the American Chemical Society. Students who take 40 hours of chemistry from the course sequence described below meet the minimum standards for professional training of the American Chemical Society and are certified by the Department Chairman on graduation. These students are eligible for membership, senior grade, in the American Chemical Society after two years of experience in the field of chemistry, rather than five years of experience. The courses required include the 32 hours of basic chemistry including Organic 362, 363 and Physical Chemistry 530-533; and 8 hours of advanced work. The advanced courses may be taken from the following: 410, 505, 560, 580, 590 and 591.

## 100 General Chemistry

5 hrs. Fall

A course with emphasis on the fundamental principles, theories, and problems of chemistry. It is designed for students with no high school chemistry preparation. Prerequisite: One year of algebra.

## 102 General Chemistry

4 hrs. Fall, Spring

The theory and fundamental principles of chemistry are emphasized in this foundation course. Prerequisite: One unit of high school chemistry and one unit of algebra.

## 105 General Chemistry

4 hrs. Spring

Some applications of inorganic chemistry to home economics, elementary organic chemistry, introduction to the chemistry of foods and the body, and to textiles and dyeing. Open only to students in Home Economics. Prerequisite: 100 or 102.

**106 Chemistry for Nurses****4 hrs. Fall**

The fundamentals of chemistry are studied with a view to applying them to the field of nursing. Credit does not apply towards a major or minor in chemistry.

**107 Applied Chemistry****3 hrs. Spring**

A course for the students in the curriculum in Petroleum Distribution. Fundamental principles of chemistry and an introduction to petroleum chemistry are given emphasis.

**108 Honors General Chemistry****5 hrs.**

A one semester course designed for superior students. This course includes a rigorous treatment of such topics as: atomic structure, nature of the chemical bond, acid-base theory, equilibrium and electrochemistry. Students desiring to enroll in this course are required to take a qualifying examination.

**109 General Chemistry****4 hrs. Spring**

This terminal course is not acceptable as prerequisite for advanced chemistry, but is designed to meet the needs of those who require one year of chemistry. Descriptive chemistry of metallic and non-metallic elements with emphasis on industrial and practical applications, elementary equilibrium and simple organic chemistry are studied. Prerequisite: 100 or 102.

**120 Qualitative Analysis****4 hrs. Fall, Spring**

A lecture and laboratory course treating the theory and practice of separation and identification of both cations and anions. Prerequisite: 100 or 102.

**210 Engineering Materials****3 hrs. Fall**

An introductory course in the science of engineering materials. Engineering properties are correlated with (1) internal structures (atomic, crystal, micro-, and macro-) and (2) service environments (mechanical, thermal, chemical, electrical, magnetic, and radiation). Two lectures and two recitations. Prerequisite: 103, 108, 109.

**222 Quantitative Analysis****4 hrs. Fall, Spring**

This course includes the theory, techniques and calculations of quantitative analysis. Prerequisite: Qualitative Analysis 120. Instrumental techniques are used to supplement classical analytical procedures.

**265 Introduction to Organic Chemistry****4 hrs. Spring**

A one semester course which surveys the chemistry of aliphatic and aromatic carbon compounds, designed for those needing a working knowledge of organic chemistry without the theoretical detail of a full year course. The course includes lecture, laboratory, and quiz. This course will not serve as prerequisite for 361 and 363. Prerequisite: 120, 108, or 109.

**320 Advanced Qualitative Analysis****2 hrs.**

A laboratory course dealing with the analysis of complex solids and commercial products. Chromatographic methods of analysis and the determination of equilibrium constants will be included. Given on request. Prerequisite: 222.

**322 Advanced Quantitative Analysis****2 hrs.**

Special determinations will be selected by the student upon approval of the instructor. Several different types of determinations will be included. Laboratory, eight hours per week, plus consultation with the instructor. Given on request. Prerequisite: 222.

**360 Organic Chemistry****4 hrs. Fall, Spring**

The preparation and chemical properties of aliphatic and aromatic compounds are studied. Emphasis is placed upon the nature of covalent bonds and molecules and the general reactions of functional groups. The course includes lecture, laboratory and quiz. Prerequisite: 120.

**361 Organic Chemistry****4 hrs. Spring**

A continuation of course 360. Prerequisite: 360.

**362 Organic Chemistry****5 hrs. Fall**

This course is similar to chemistry 360. Additional laboratory instruction is provided including identification of organic compounds and more advanced organic synthesis. This course is required for Chemistry Majors completing American Chemical Society certification. Prerequisite: 120 or 108.

**363 Organic Chemistry****5 hrs. Spring**

A continuation of course 362. Prerequisite: 362.

**390 Teaching of Physical Science****2 hrs. Fall**

Deals with problems of teaching high school chemistry, physics and physical science. The main emphasis is on effective methods of instruction. Practical methods of apparatus ordering, maintenance, and construction are also considered.

**410 Inorganic Chemistry****2 hrs.**

The course includes descriptive and theoretical inorganic chemistry as well as preparation of different types of inorganic compounds. Four hours laboratory and one hour discussion and lecture per week. Prerequisite: 24 hrs. of chemistry.

**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 literature searches in analytical, inorganic, biological, organic and physical chemistry fields. Prerequisite: 24 hrs. chemistry.

**530 Physical Chemistry****3 hrs. Fall**

The course includes studies in kinetic theories of gases, liquids, solids, solutions, thermodynamics, physical basis for molecular structure, colloids, etc. Prerequisite: 120, Physics 113 and Calculus 221 and 223.

**531 Physical Chemistry****3 hrs. Spring**

A continuation of course 530. This course includes study of homogeneous equilibria, heterogeneous equilibria, quantum theory, atomic structure, surface chemistry, macromolecules, chemical thermodynamics, colloids, etc. Prerequisite: 530.

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

Includes experiments on molecular weight determination, viscosity, surface tension, vapor pressure, distillation of liquid mixtures, spectrophotometry, etc. Prerequisite or corequisite: 222. Corequisite: 530.

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

A continuation of Course 532. Includes experiments on absorption, colloids, kinetics, phase rule, electro chemistry, etc. Prerequisite: 222. Corequisite: 531.

**536 Theoretical Chemistry****3 hrs.**

This course is intended to acquaint high school science teachers with an elementary knowledge of physical chemistry. It includes the properties of gases, liquids, solids, solutions, and colloids. Prerequisite: 222, 1 yr. Physics, College Algebra, Analytical Geometry.

**537 Theoretical Chemistry****3 hrs.**

Thermochemistry, homogeneous and heterogeneous equilibrium, electrochemistry, kinetics, etc. Prerequisite: 536.

**540 Food Chemistry****2 hrs. Fall**

This is lecture and laboratory course on the chemistry of foods for important components such as carbohydrates, proteins, fats, minerals, vitamins, and food pigments. Prerequisite: 361, or 363, 222.

**551 Biochemistry****2 hrs. Spring**

Elementary study of the chemistry of the body, digestion, metabolism and excretion. Prerequisite: 265, 360 or 362.

**552 Biochemistry Laboratory****1 hr. Spring**

Preparation and analysis of body fluids and tissues and other experiments according to the needs of the student. Corequisite: Biochemistry 550. Prerequisite: 222 and 265 or 360 or 362.

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

Laboratory problems are selected to fit the needs of the student and increase his knowledge of biochemistry and improve techniques. To accompany 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. Prerequisite: 361 or 363 and 24 hrs. of 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 each week. Prerequisite: 361 and consent of Head of Department.

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

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 hrs. of chemistry or approval of Head of Department.

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

Advanced students who have completed certain basic work in chemistry may select a special problem in the fields of analytical, organic, biochemistry or physical chemistry. Prerequisite: 24 hrs. of chemistry or approval of Head of Department.

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

A continuation of special problem work started under 590. Given on request.

# Geography and Geology

William R. Brueckheimer, Head  
 Charles F. Heller  
 Oscar H. Horst  
 Eugene C. Kirchherr  
 F. Stanley Moore  
 George N. Nasse

John W. Pawling  
 Henry A. Raup  
 Lloyd J. Schmaltz  
 Cyril L. Stout  
 Robert Vogel

## GEOGRAPHY MAJOR OR MINOR

Geography 105 serves as the foundation course for both geography majors and minors and, therefore, is the prerequisite for all undergraduate geography courses except 244 and 350. There is no required sequence in the courses in regional geography.

Successful completion of 360 is prerequisite to receiving departmental recommendation for directed teaching or for a teaching position in geography at the elementary level.

### Major (24 hrs.)

Non-teaching 105, 106 or 244, 210 or 350, 366, 380 plus at least 9 additional hours in geography and Geology 130.

Elem. Educ. 105, 106, 210 or 350, 360, plus at least 11 additional hours in geography and Geology 130.

Sec. Educ. 105, 244, 210 or 350, 360 or 560 (preferred for senior high and junior college) plus at least 11 additional hours in geography and Geology 130.

### Minor

Non-teaching (18 hrs.) 105, 106 or 244, 210 or 350 plus at least 8 additional hours in geography.

Elem. Educ. (15-17 hrs., 18 recommended) 105, 106, 210 or 350, 360, plus electives in geography to total 15-18 hours.

Sec. Educ. (18 hrs.) 105, 244, 210, or 350, 360 or 560 (preferred for senior high and junior college) plus at least 5 additional hours in geography.

## MAJOR IN GEOLOGY

Departmental Counselor—Lloyd J. Schmaltz

### Major (24 hrs.)

Required Courses	S.H.
Physical Geology 230	4
Historical Geology 231	4
Invertebrate Paleontology 330	3
Mineralogy 335	3
Petrology 336	3
Structural Geology 430	3

Plus at least 4 additional hours in geology chosen with advice and consent of counselor.



Supporting required courses: Chemistry 100 and 101 or 102 and 103 (for students with a high school chemistry background); Physics 110 and 111; Physical Geography 105; Biology 100; and Mathematics 122 and 123. Some modification of these requirements may be made in consultation with the student's departmental counselor.

Desirable supporting courses: Geology majors who are preparing to do graduate work in geology should have an adequate background in the natural sciences, mathematics and foreign languages and, therefore, should take additional work recommended by his geology counselor in these areas.

## MAJOR OR MINOR IN EARTH SCIENCE

Major (24 hrs.)		Minor	
Required Courses	S.H.	Required Courses	S.H.
Physical Geography 105	4	Physical Geography 105	4
Weather + Climate 225	3	Weather + Climate 225	3
Physical Geology 230	4	Physical Geology 230	4
Historical Geology 231	4	Historical Geology 231	4
Conservation of Natural Resources 350	3	Astronomy (Physics 200)	3
Astronomy (Physics 200)	3		
plus at least 3 hours of additional course work in geology with the advice and consent of departmental advisor.			

## GEOGRAPHY OFFERINGS

### FOUNDATIONAL COURSES

105 Physical Geography

(See Division of Basic Studies)

### REGIONAL COURSES

106 Introduction to Regional Geography 3 hrs. Fall, Spring

(Formerly Regional Geography of the World). An introduction to the nature of regions and regional geography with case studies of selected regions and countries outside of North America. Prerequisite: 105.

210 United States and Canada 3 hrs. Fall, Spring

Study of areal differentiation in Anglo-America and of present-day problems, with emphasis upon occupational crises in selected regions. Prerequisite: 105.

212 South America 3 hrs. Spring

Regional study of the several countries of South America with attention to the interrelationships of the physical and cultural environments. Historical background necessary for the interpretation of the present political, social and economic conditions is included. Prerequisite: 105.

**213 Mexico and the Caribbean Lands** 2 hrs. Spring

Includes the regional study of Mexico, Central America and the West Indian Islands; present economic, social, and political development of these regions; their potentialities and trends. Prerequisite: 105.

**214 Europe** 3 hrs. Fall

Course discloses the ways man has adjusted his economic, political, and social life to the natural environmental conditions within the regions of the continent. Prerequisite: 105.

**314 Union of Soviet Socialist Republics** 3 hrs. Spring

Analysis of the geography of the whole of the Soviet realm. Prerequisite: 105.

**315 Asia** 3 hrs. Spring

Interpretation of the major geographic regions of Asia. Special emphasis is given to the population-resource problems of Asia. Prerequisite: 105.

**318 Africa** 3 hrs. Spring

The evolution of the present political pattern of the continent; governmental policies of the colonial powers; the geography of the major areas of economic exploitation; impending changes related to opposition to colonial status. Prerequisite: 105.

**319 Islands of the Pacific** 3 hrs. Spring

Study of populations and natural resources of Australia, New Zealand and the Pacific Islands with emphasis upon economic and political problems which have arisen. Prerequisite: 105.

**510 Geography of Michigan** 2 hrs. Fall, Spring

Detailed but non-technical study of Michigan in which are taken up the major economic, social, and recreational activities with a view to explaining their existence in the state where each activity is prominent.

**512 Economic Development in Latin America** 2 hrs. Spring

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. Prerequisite: 105 or consent of instructor.

**515 The Far East** 2 hrs. Spring

A study of the environmental and cultural assets and liabilities of Japan, China, Formosa, and Korea. Particular attention is given to the population and food problems of the Far East. Prerequisite: 105 or consent of instructor.

**516 Southeast Asia** 2 hrs. Fall

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

**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. Prerequisite: 105 or consent of instructor. Not offered 1962-63.

**SYSTEMATIC COURSES****225 Weather and Climate****3 hrs. Spring**

Non-technical study of such elements of weather and climate as temperature, pressure, and precipitation; the major air masses; the major and minor air disturbances and their relationships to man. Also the study of the distribution and characteristics of the major climates of the earth and phenomena causing these conditions. Prerequisite: 105.

**244 Economic Geography****3 hrs. Fall, Spring**

Course deals with important economic products from the standpoint of their places of origin, cultural and natural factors in their production, their flow in commerce, and principal regions of their consumption.

**350 Conservation of Natural Resources****3 hrs. Fall, Spring**

Critical evaluation of certain of the natural resources of the United States, such as minerals, soils, forests, water, and wild life; and study of the utilization of these resources so as to yield the greatest ultimate good. Methods in teaching conservation.

**360 Instructional Methods in Geography****3 hrs. Fall, Spring**

(Formerly Geographic Techniques) Study of objectives, tools, organization and presentation of material, methods of evaluation, and scrutiny of textual material in the field of geography. Primarily for the teacher in the elementary school. Prerequisite: 105 plus 6 semester hours.

**366 Field Geography****3 hrs. Spring**

Intensive study of type areas near Kalamazoo with the purpose of observing how agricultural and industrial development, transportation, commercial organization, and the urban pattern have made adjustments in these areas. The course is based primarily upon field work. Prerequisite: 380 or consent of instructor.

**380 Cartography and Graphics****2 hrs. Fall**

Study of maps, the construction of them for reproduction, and the projections and symbolism most commonly used; also the graphic presentation of statistical material. Prerequisite: 105.

**382 Interpretation of Maps and Aerial Photographs****2 hrs. Spring**

The interpretation of topographic and geologic maps and aerial photographs and their application to the physical and social sciences.

**540 Political Geography** 2 hrs. Summer

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

**541 Geographic Foundations of National Power** 3 hrs. Fall

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. Prerequisite: 105 or equivalent.

**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 in 1962-63.

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

Course gives prospective geography teachers at the High School and Junior College level guidance in the selection, organization and presentation of the best materials available in this field.

**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** 2 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 or Field Geography 366 or consent of instructor.

**580 Advanced Cartography** 3 hrs.

Study of the more complex map projections, the compilation of data and the design of maps and graphs for research papers, and the application of statistical techniques in mapping geographic phenomena. Students are assigned special problems to develop their proficiency in the use of cartography as a tool in research. One hour lecture and 2 two-hour labs. Prerequisite: 380 or consent of instructor. Not offered in 1962-63.

## GEOLOGY OFFERINGS

**130 Introduction to Geology** 4 hrs. Fall, Spring

A one-semester course covering both physical and historical geology designed for students who do not plan to major or minor in geology. The

course carries credit for graduation but not towards a geology major. Three lectures and a two-hour laboratory period.

**230 Physical Geology** 4 hrs. Fall

Study of the origin and development of surface features of the earth and processes involved in their development. Emphasis is given to the geologic work of water, wind, ice, vulcanism and diastrophism. Three lectures and a two-hour laboratory period.

**231 Historical Geology** 4 hrs. Spring

Course includes a study of the origin of the earth, development of plant and animal life as shown by fossils, and major changes that have occurred in elevation, size, and form of the continents throughout geologic time. Three lectures and a two-hour laboratory period. Prerequisite: 230.

**332 Invertebrate Paleontology** 3 hrs. Fall

The study of fossils in which consideration is given to the identification, classification, and historical significance of the major fossil groups. Prerequisite: 231.

**335 Mineralogy** 3 hrs. Fall

Study of the physical and chemical properties, occurrence, uses, and determination of approximately 100 or more of the common minerals. Lecture, 2 hours a week; laboratory, 2 hours a week. Prerequisite: 130, 230 or General Chemistry.

**336 Petrology** 3 hrs. Spring

A systematic study of the common rocks. Lecture, 2 hours a week; laboratory, 2 hours a week. Prerequisite: 335.

**382 Interpretation of Maps and Aerial Photographs** 2 hrs. Spring  
(See description under Geography).

**430 Structural Geology** 3 hrs.

The development of rock structures and the mechanics of rock deformation. Prerequisite: 230 and 231. Not offered in 1962-63.

**432 Economic Geology** 3 hrs.

Origin, occurrence, and utilization of metallic and non-metallic mineral deposits including fuels and water resources. The industrial and political significance of these resources is stressed. Prerequisite: 335. Not offered in 1962-63.

**532 Geomorphology** 3 hrs. Spring

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

**539 Field Geology—Summer Trip** 4 hrs.

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

# Mathematics

James H. Powell, Head  
Yousef Alavi  
Fred A. Beeler  
Charles H. Butler  
Herbert H. Hannon

Stanislaw Leja  
Joseph C. McCully  
Jack R. Meagher  
Joseph K. Peterson  
John W. Petro

James E. Riley  
Robert C. Seber  
Robert E. Sechler  
John E. Vollmer  
Gertrude Wolinski

The first two years (four semesters) of systematic work in mathematics includes the study of college algebra and trigonometry, analytic geometry and calculus. Completion of this work leads to a minor in mathematics, and eligibility to elect advanced courses from among the variety offered in the department.

A major in mathematics must include courses in algebra, geometry, analysis and foundations of mathematics. It must include at least 14 semester hours of course work with a calculus prerequisite and must be approved for the major by the departmental advisor. Teaching majors are required to take Teaching of Secondary Mathematics.

Certain special "service" courses also are offered. These are designed mainly for students in the School of Business Studies or the School of Applied Arts and Sciences. Such courses may not be included among those presented for a major or a minor in mathematics.

The courses in high school mathematics which a student presents for admission along with scores on entrance tests determine the pattern of his work in college mathematics. The student who plans to major or minor in mathematics can determine the appropriate sequence for his freshman and sophomore years by referring to the following table.

**Preparation in High School Mathematics**

Semester	Algebra, 1 unit Geometry, 1 unit	Algebra, 1½ or 2 units Geometry, 1 or 1½ units	Algebra, 2 units Geometry, 1 or 1½ units Trigonometry, ½ unit
1st	120 Intermediate Algebra (3)	122 College Algebra and Trigonometry (5)	123 Analytic Geometry and Calculus (5)
2nd	122 College Algebra and Trigonometry (5)	123 Analytic Geometry and Calculus (5)	220 Analytic Geometry and Calculus (5)
3rd	123 Analytic Geometry and Calculus (5)	220 Analytic Geometry and Calculus (5)	221 Analytic Geometry and Calculus (5)
4th	220* Analytic Geometry and Calculus (5)	221 Analytic Geometry and Calculus (5)	380 Foundations of Mathematics (2) 330 Introduction to Modern Algebra (3)

\*To complete a minor in mathematics this should be followed by 221.

Students who fail to earn a grade of C or better in Math. 120, 122, 123 or 220 will not be permitted to enroll in the next sequence course.

**90 Business Mathematics****2 hrs. Fall, Spring**

Diagnostic and remedial work in the fundamental operations of arithmetic, and a study of elementary business problems. Gives no credit toward a degree.

**120 Intermediate Algebra****3 hrs. Fall, Spring**

This course covers the work usually given in the third semester of high school algebra. Prerequisite: Plane geometry and one year of high school algebra.

**121 Plane Trigonometry****3 hrs. Fall, Spring**

A study of trigonometric functions, identities, and equations, inverse functions, logarithms, radian measure, and the solution of triangles. Prerequisite: 120 or equivalent.

**122 College Algebra and Trigonometry****5 hrs. Fall, Spring**

A semester course combining the study of the college algebra and plane trigonometry. Topics in algebra will include real numbers, functions, systems of equations, the binomial theorem, inequalities, determinants, complex numbers, logarithms, permutations and combinations, sequences, and selected topics from the theory of equations. In trigonometry only brief attention will be given to solution of triangles. Main emphasis will be on analytic trigonometry including properties of trigonometric functions, trigonometric identities, inverse functions, and trigonometric equations. Prerequisite: 120 or equivalent.

**123 Analytic Geometry and Calculus****5 hrs. Fall, Spring**

The first semester of a three-semester sequence in analytic geometry and the calculus. The following topics will be considered: functions, limits, derivatives, lines, circles, conic sections, related rates, maxima and minima, definite integrals with applications. Prerequisite: 122 or equivalent.

**202 Mathematics of Finance****3 hrs.**

This course includes the study of compound interest, simple annuities certain, and the application of such annuities to problems in the amortization of debts, sinking funds, valuation of bonds, depreciation, and perpetuities. Prerequisite: 122 or equivalent. Offered on request.

**220 Analytic Geometry and Calculus****5 hrs. Fall, Spring**

The second semester of a three-semester sequence in analytic geometry and the calculus. The following topics will be considered: polar coordinates, transcendental functions, hyperbolic functions, methods of integration, vectors, determinants and linear equations. Prerequisite: 123.

**221 Analytic Geometry and Calculus****5 hrs. Fall, Spring**

The third semester of a three-semester sequence in analytic geometry and the calculus. The following topics will be considered: solid analytic geometry, partial derivatives, multiple integrals with applications, infinite series, complex numbers and functions, and differential equations. Prerequisite: 220.

**222 Analytic Geometry and Calculus****4 hrs.**

The second semester of a three-semester sequence in analytic geometry and the calculus. Topics considered will include: polar coordinates, transcendental functions, methods of integration, determinants and linear equations. Prerequisite: 123. Not offered 1962-63.

**223 Analytic Geometry and Calculus****4 hrs.**

The third semester of a three-semester sequence in analytic geometry and the calculus. Topics considered will include: solid analytic geometry, partial derivatives, multiple integrals with applications, infinite series. Prerequisite: 220 or 222. Not offered 1962-63.

**250 Arithmetic for Teachers****3 hrs. Fall, Spring**

This course is designed for students who expect to teach arithmetic in grades 1 to 6. It deals with the history, philosophy, objectives, and methods of teaching arithmetic, and includes a review of the subject matter of arithmetic. This course is not open to freshmen.

**260 Elementary Statistical Practice****3 hrs.**

A study of histograms, probability, frequency distributions, sampling, estimation, testing hypotheses, correlation and regression. Prerequisite: 123 or equivalent.

**306 Differential Equations****3 hrs. Fall, Spring**

An elementary course in ordinary differential equations with applications to problems of engineering, physics, and chemistry. Prerequisite: 221 or equivalent.

**330 Introduction to Modern Algebra****3 hrs. Fall, Spring**

A postulational approach is used to introduce rings, integral domains, ordered integral domains, and fields. Many illustrations, including the integers and number fields of elementary algebra, are discussed. Complex numbers and polynomials are considered in detail. Prerequisite: 221 or equivalent.

**340 Fundamental Concepts of Geometry****3 hrs. Fall, Spring**

This is a critical review of Euclidean Geometry with emphasis on types of geometric transformations and the use of coordinates. Prerequisite: 221 or equivalent.

**350 Teaching of Junior High School Mathematics****3 hrs.**

A critical restudy of the mathematics commonly taught in grades 7, 8, and 9, with discussion of associated problems of learning and teaching. Offered on request.

**360 Statistical Methods for Industry****3 hrs. Fall**

A study of histograms, random variables and probability distributions, normal distribution, chi-square distribution, the t-distribution, F distribution, binomial distribution, significance tests, tests of hypotheses. Math



360 and Math 361 form an introductory course especially designed for the needs of people in industry. Prerequisite: 221 or equivalent.

**361 Statistical Methods for Industry** 3 hrs. Spring

A study of estimation, fitting straight lines, analysis of variance, analysis of enumeration data, control charts, sampling inspection. Prerequisite: 360.

**380 Foundations of Mathematics** 2 hrs. Fall, Spring

This course is recommended for all mathematics majors and should be taken with or before 330 or 340. Topics discussed play a fundamental role in mathematics. These are elementary set theory, the nature of proof and axiomatic methods, and the number systems of elementary mathematics. Prerequisite: 221 or equivalent.

**500 Advanced Differential Equations** 3 hrs. Fall

Additional topics on ordinary differential equations and an introduction to partial differential equations; series solutions; Bessel, Legendre and hypergeometric functions; Laplace's equation; Wave equation and related topics. Prerequisite: 306 and 570.

**502 Complex Variables** 3 hrs. Spring

A study of complex numbers, elementary functions, contour integrations, conformal maps, and potential fields together with applications. Prerequisite: 570.

**506 Programing for Computers** 3 hrs. Fall, Spring

Organization of, problem preparation for, and general use of high speed computing machines from the point of view of scientific and engineering computations. Flow charts and programs will be prepared for problems such as: social security, square root, quadratic equations, exponential, multiplication of matrices, solution of polynomials, and correlation. In addition to the three class meetings per week, one laboratory session each week will be devoted to coding and solution of the problems to be run on an electronic computer. Prerequisite: 221 or equivalent.

**530 Vectors and Matrices** 3 hrs. Spring

Properties of  $n$ -dimensional vector spaces, linear transformations, and matrix algebra are studied. Prerequisite: 380 or equivalent (330 recommended).

**540 Introduction to Higher Geometries** 3 hrs. Fall

Topics to be considered will be selected from: projective geometry, affine geometry, non-euclidean geometry and elementary topology. Mappings of a geometric nature, their algebraic and other properties, will be discussed in the development of each topic. Prerequisite: 380 or equivalent.

**550 Teaching of Secondary Mathematics** 3 hrs. Fall, Spring

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

**552 History of Mathematics****2 hrs. Summer**

A strongly historical treatment of some fundamental mathematical concepts. Topics considered will include sets, relations, functions and algebraic structures. Prerequisite: 221 or equivalent.

**560 Mathematical Statistics****3 hrs. Fall**

Probability spaces; events; random variables; conditional probability; independence; distribution functions; expectation and variance; combined random variables; sampling; binomial, normal and Poisson distributions; law of large numbers; Central Limit Theorem; estimation of parameters. Prerequisite: 380 or equivalent.

**561 Mathematical Statistics****3 hrs. Spring**

This course is a continuation of Math. 560. Topics included are: confidence intervals; tests of hypotheses; bivariate normal distribution; chi-square, t- and F distributions; correlation and regression; non-parametric methods; analysis of variance. Prerequisite: 560.

**570 Advanced Calculus****3 hrs. Fall**

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

**571 Advanced Calculus****3 hrs. Spring**

This course is a continuation of Math. 570. It will include such topics as surface and line integrals, Green's Theorem, infinite series, Fourier series, an introduction to complex variable. Prerequisite: 570.

# Physics

Paul Rood, Head  
George E. Bradley  
Stanley K. Derby

Jacob Dewitt  
Haym Kruglak  
Chong K. Lewe

Walter G. Marburger  
Robert B. Miller  
Nathan L. Nichols

A major consists of 24 hours of credit and a minor consists of 16 hours. Acceptable sequences of courses are arranged in consultation with the departmental advisor; these courses are listed below. Every major in Physics should have a minor in Mathematics and a minor in Chemistry. All physics majors are required to take Physics Seminar during their junior and senior year.

Courses applicable on a major in Physics:

112 and 113 Mechanics, Heat, Electricity and Electricity, Sound, Light	10 s.h.
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Fourteen semester hours chosen from the following:

200 Astronomy	2 s.h.	
or		
202 Photography	2	
340 Heat and El. Thermodynamics	3	
350 Light	3	
360 Introduction to Electronics	3	
380 Adv. Laboratory Physics	2	
460 Electricity and Magnetism	3	
530 Theoretical Physics	3	
552 Applied Spectroscopy	3	
562 Electrical Measurements	4	
564 Adv. Electronics	3	
570 Atomic Physics	3	
572 Nuclear Physics	3	14
		<hr/> 24 s.h.

Courses applicable on a minor in Physics:

110 and 111 General Physics	8 s.h.	8
or		or
112 and 113 Mechanics, Heat, Electricity and Electricity, Sound, Light	10 s.h.	10 s.h.
Eight (or six) semester hours chosen from the "200", "300", "400" and "500" courses listed under "Courses Applicable on a Major in Physics."		8 or 6
		<hr/> 16 s.h.

Any physics major may qualify for departmental honors in physics by meeting the following requirements:

1. Attain by the end of the semester preceding graduation an honor point ratio of at least 3.5 (B+) in all physics courses taken and an honor point ratio of 3.0 or more in all other subjects.

2. Complete 30 semester hours in the Department, including certain selected courses.

3. Carry out an advanced project (laboratory or reading).

4. Give a report on the assigned project before the Physics Seminar.

5. Complete a minor in one (preferably both) of the following:

1. Chemistry

2. Mathematics

## PHYSICS COURSES

108 and 109 Physical Science (See Division of Basic Studies)

### 102 Elementary Acoustics

2 hrs. Fall, Spring

In this course are studied the nature and transmission of sound, how sounds are produced, interference of waves, the physics of hearing, pitch, quality, and loudness of sounds, musical intervals, harmonic series, the physical basis for musical scales, string and wind instruments, vibrating rods and plates, architectural acoustics. This is a required course for students majoring in music, but is open to any student not majoring or minoring in physics.

### 110 General Physics

4 hrs. Fall

A general college physics course in the principles and practical application of mechanics, sound, and heat. Required of all medical and dental students. Recommended for general students desiring a four-hour course in physics.

### 111 General Physics

4 hrs. Spring

This course follows 110 and consists of studies in electricity, magnetism, and light. Prerequisite: 110.

### 112 Mechanics, Heat, and Electricity (General Physics)

5 hrs. Fall, Spring

A general college course dealing with mechanics, heat, and electricity and some of their applications. Recommended to freshmen who plan to major in physics and/or those who plan to teach physics. Prerequisite: concurrent registration in Analytic Geometry and Calculus 123 or consent of counselor.

### 113 Electricity, Sound, and Light (General Physics)

5 hrs. Fall, Spring

This course follows 112 and consists of studies in electricity, magnetism, sound, light, and modern physics. Prerequisite: 112.

### 114 Physics Problems

1 hr. Fall

A course in problems in mechanics, heat, and electricity. This course, together with 115, is required of engineers presenting only 8 s.h. of credit in Physics whose program calls for 10 s.h. in this subject.

**115 Physics Problems****1 hr. Spring**

A course in problems in electricity, sound, and light. Prerequisite: 114.

**200 Astronomy****3 hrs. Fall, Spring**

A non-mathematical course in astronomy for all students who desire an acquaintanceship with our solar system, with stars and constellations, and with the great galaxies of stars which nature has spread so abundantly throughout the known universe. Frequent use is made of an 18 ft. Spitz planetarium and a 4½" refracting telescope. Open to freshmen.

**202 Photography****3 hrs. Fall, Spring**

This is an elementary course in the theory and use of photographic materials.

**340 Heat and Elementary Thermodynamics****3 hrs. Spring**

An intermediate course dealing with expansion, specific heats, change of state, kinetic theory, and the elementary principles of thermodynamics. Prerequisite: 112, 113, Calculus 221 or 223.

**350 Light****3 hrs. Spring**

This is a course in physical optics. The main topics discussed are: wave motion, interference, diffraction, velocity of light, and polarization and double refraction. Prerequisite: 112, 113, Calculus 221 or 223.

**360 Introduction to Electronics****3 hrs. Fall**

This course includes an introduction to electric circuit analysis with particular reference to electron-tube circuits. The more important uses of electron tubes are considered in some detail. Prerequisite: 112, 113, Calculus 221 or 223.

**380 Advanced Laboratory Physics****2 hrs. Fall, Spring**

A course in laboratory experimentation more advanced than that in courses 112 and 113, usually elected by National Science Foundation undergraduate participants in research after consultation with the instructor. Prerequisite: Electricity and Light 113 and a declared major or minor in physics. Open to qualified juniors and seniors.

**390 Teaching of Physical Science****2 hrs. Fall**

Deals with problems of teaching high school chemistry, physics and physical science. The main emphasis is on effective methods of instruction. Practical methods of apparatus ordering, maintenance, and construction are also considered. Prerequisite: One year of college chemistry and one year of college physics.

**460 Electricity and Magnetism****3 hrs. Spring**

A theoretical course in electricity and magnetism dealing with electrostatics, electromagnetics, field theory, and Maxwell's equations. Line and surface integrals, Stokes', Greene's, and Gauss' theorems will be included. Prerequisites: College Physics 112 and 113, and Mathematics 221.

**530 Theoretical Physics****3 hrs. Fall**

A course designed to present the fundamental structure of physics in precise mathematical terms. It is particularly arranged for students who are majoring in physics or in mathematics. The topics will include mechanics from a vector point of view, flow of fluids, electrical and magnetic fields. Prerequisite: 112, 113, Calculus 221 or 223.

**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: 112, 113, 350 or consent of instructor.

**562 Electrical Measurements****4 hrs. Fall, Spring**

This course deals with the theory and use of instruments to measure electrical and magnetic quantities. Both AC and DC bridge methods are included. Prerequisite: 112, 113, Calculus 221 or 223.

**564 Advanced Electronics****3 hrs. Spring**

Applications of electronics in different types of radio frequency communication 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: 461, Calculus 221 or 223.

**570 Atomic Physics****3 hrs. Fall**

A study is made of energy and momentum relations for particles in classical, relativistic, quantum, and quantum-relativistic physics. Photon-electron interactions such as the photoelectric effect, Compton effect, electron-positron production, Bremsstrahlung collisions, and pair annihilation are considered. Other topics include deBroglie particle waves, structure and spectrum of hydrogen and many-electron atoms, special relativity, X-ray spectra, and high energy accelerating machines. Prerequisites: 112, 113, Calculus 221 or 223.

**572 Nuclear Physics****3 hrs. Spring**

This course includes natural and artificial radio-active transformations, the experimental methods of nuclear physics, properties of neutrons binding energy, nuclear reactions, nuclear structure, fission and cosmic rays. Three lectures and one two-hour laboratory per week. Prerequisite: 570 or consent of the instructor.

**674 Nuclear Physics for High School Teachers of Science** **2 hrs. Fall**

The history and the structure of the atomic nucleus and its characteristics will be reviewed. Emphasis will be placed on nuclear devices and their instrumentation, on operational principles of reactors, and on the use of nuclear materials in industry and research, together with the related necessary health safeguards. Prerequisite: General College Physics and the consent of the instructor. Not offered in 1962-63.

# Psychology

Stanley Kuffel, Head  
 Eston J. Asher  
 Herman Birch  
 Katherine G. Butler  
 Homer L. J. Carter

Frank A. Fatzinger  
 Chris Koronakos  
 George G. Mallinson  
 Dorothy J. McGinnis  
 Malcolm H. Robertson

Richard H. Schmidt  
 Charlotte Sumney  
 Henry Von Holt, Jr.  
 William Yankee

General Psychology 200 is prerequisite to all other courses in this department, except 100 and 102. A major in Psychology may be obtained by completing 24 hours of work in the department, including the following courses: 200, 220, 322, 330, 380, 432, and either 510, 512, and 514 or 516, 517 and 543.

A minor in Psychology consists of 15 hours; which for Education minors will include: 200, 220, 322 and 380; and for Business minors will include: 200, 220, 380, 340, and electives from 341, 542 and 560.

Students majoring in Psychology are advised to elect from the Departments of Biology, Mathematics and Sociology.

## **100 Introduction to Learning and Adjustment 1 hr. Fall, Spring**

Psychological principles of effective learning will be presented; methods of note-taking, reading, memorizing, and organization will be discussed. Emphasis will be placed upon problems of personal, educational, and social adjustment. This course may not be counted toward a major or a minor in psychology or in fulfillment of the requirements in the science area.

## **102 General Psychology for Nurses 2 hrs. Fall**

An introductory course intended to fit the needs of students of nursing. Not open to regular students. It covers the recommendations of the "Curriculum Guide for Schools of Nursing".

## **200 General Psychology 3 hrs. Fall, Spring, Summer**

A brief survey of the elementary principles of psychology. This course affords a general introduction to the field.

## **204 Applied Psychology 2 hrs. Fall, Spring**

An overview course introducing the student to the various areas of psychology at work. Some areas covered are: educational, industrial, business, military, clinical, criminal, and legal.

## **220 Psychology of Personality 3 hrs. Fall, Spring, Summer**

Attention is given to individual differences, traits, content, and synthesis of personality; modification of behavior and varieties of adjustive behavior. Emphasis is placed upon constructive personal adjustment and the manner in which it is achieved in various interpersonal relations.

**270 Psychology of Adolescence** 3 hrs. Fall, Spring, Summer

This course deals with the various kinds of development in the adolescent. It discusses his problems and difficulties and the proposals for reducing his difficulties and improving his adjustment.

**322 Abnormal Psychology** 3 hrs. Fall, Spring, Summer

A discussion of the deviant individual, with particular attention to the recognition of behavior disorders, to the factors contributing to their development and to the principles of therapy. Consult instructor before enrolling.

**330 Elementary Statistical Methods in Psychology** 3 hrs. Fall, Spring

Computation and interpretation of statistical techniques useful in the production and understanding of psychological and educational research. Required for majors.

**340 Introduction to Industrial Psychology** 2 hrs. Fall, Spring

A survey of the industrial applications of psychology. Emphasis on employee selection, classification, training, evaluation, and working conditions.

**341 Psychological Aspects of Business** 3 hrs. Fall, Spring

A psychological examination of the salesman, the consumer, and the business social structure. Emphasis on the psychological principles of buying, selling, market research, and advertising.

**380 Psychological Testing** 3 hrs. Fall, Spring, Summer

The course will consider selection, administration, and interpretation of educational, personality, and aptitude tests. Lecture and laboratory.

**415 Comparative Psychology** 2 hrs.

This is primarily a course for psychology majors. A general treatment of the behavior, sensory and perceptual processes, and learning of the lower animals as bearing on the problem of the evolution and development of human behavior. Consult instructor before enrolling.

**432 Elementary Experimental Psychology** 3 hrs. Fall, Spring

An introduction to current psychological problems and laboratory methods through experimental work in motivation, emotion, memory, learning, and perception. This is a course for majors. Six hours combined lecture and laboratory.

**481 Mental Testing** 2 hrs.

The purpose of this course is to provide training in the administration, scoring, and interpretation of various mental tests. This course supplements 380.

**490 Special Projects in Psychology** 1-2 hrs. Fall, Spring

General prerequisites must include twelve hours in psychology, and the permission of the instructor. Arrangements will be made for adequately prepared students to undertake individual problems under the direction of a member of the staff. This is a course for majors.



**492 Clinical Psychology****2-4 hours**

This course considers theory and practice of the case study. It involves individual case studies, home visits, interviewing, conferences, laboratory, and clinical procedures. Course 492 involves additional cases and practice in clinical procedure. Prerequisite: 380, 322, and 481, or consent of instructor.

**510 Learning and Memory****2 hrs. Fall, Summer**

An introduction to the experimental analysis and theoretical integration of some phenomena of learning and memory.

**512 Physiological Psychology****2 hrs. Spring**

The study of relationships between bodily processes and behavior. Psychology is treated as a biological science in this course.

**514 Emotion and Motivation****3 hrs. Spring**

An introduction to the experimental analysis of psychological and physiological aspects of motives, incentives, and emotions. Should follow Learning and Memory 510.

**516 Advanced General Psychology****2 hrs. 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.

**517 Advanced General Psychology****2 hrs. Spring**

A continuation of course 516. This course covers the topics not included in 516. Students are permitted to first enroll in either 516 or 517. Recommended for all graduate students in psychology.

**530 Statistics****3 hrs. Fall, Summer**

Application of Elementary Statistical concepts, such as central tendency, variability, correlation, reliability and validity, to problems of educational and psychological measurement. For Students in Education and for those who need statistics as a pre-requisite for graduate courses.

**534 Sensation and Perception****3 hrs. Fall**

An examination of the current facts and theories of sensation and perception. Emphasis on experimental methods. Prerequisite: Elementary Experimental Psychology.

**542 Occupational Analysis and Classification****2 hrs. Fall, Spring**

Sources of occupational information; procedures and techniques of job analysis and job classification; applications in employment procedures, placement, and vocational counseling.

**560 Vocational Psychology****2 hrs. Fall, Spring**

Interviewing and counseling techniques; applications of testing and counseling in industry and education. Practice in administration and interpretation of tests. Prerequisite: 380.

**561 Counseling and Psychotherapy for the Mentally Handicapped**

2 hrs. Fall

Methods and techniques used in counseling retarded. Group, play, psychodrama, speech, and industrial therapy. Counseling with parents. For Special Education students.

## **DIVISION OF SOCIAL SCIENCES**

**Robert S. Bowers, Chairman**

The Division includes the Departments of Economics, History, Political Science, and Sociology. It functions through the Divisional Planning Committee, working in conjunction with the department heads and the staff members of the Division.

Majors and minors in individual departments of the Division must have the approval of the heads of the respective departments. Special requirements are listed under the separate department headings.

Students preparing for social work should consult the head of the Sociology Department concerning their departmental or group major in the social sciences and their minor in social work. See the Social Work Curriculum for special requirements.

Group majors and minors in the Division should see Dr. Bowers, Economics, Ad. 218, or Dr. Kercher, Sociology, Ad. 221, or Dr. Weber, Political Science, Ad. 219, for Divisional counselling.

1. A group major must include:
  - a. Thirty or more hours in the Division.
  - b. A minimum of twelve hours in one department of the Division.
  - c. A minimum of nine hours in 300-500 level courses.
  - d. Acceptable courses in at least three departments of the Division. (Man and Society 102, 103, do not alone satisfy this requirement.)
2. A group minor for those who qualify for a teaching certificate must include:
  - a. To teach in the elementary schools:
    1. Twenty or more hours in the Division.
    2. At least one course at the 300-500 level.
    3. Acceptable courses in at least three departments of the division. (Man and Society 102, 103, do not satisfy this requirement.)
  - b. To teach in the secondary schools (Open only to those who major or minor in a department of the Division or in a closely related subject matter area taught in the secondary schools such as business studies, English, geography, and speech.)
    1. Twenty or more hours in the Division.

2. At least one course at the 300-500 level.
3. Acceptable courses in the three departments other than the one in which a student has a major or minor. (Man and Society 102, 103, do not satisfy this requirement.)
3. A group minor for students not working toward a teaching certificate must include:
  1. Twenty or more hours in the Division.
- a. May be developed around any of the following patterns:
  1. World Civilizations 100, 101 ..... 8 hrs.  
Electives ..... 12 hrs.
  2. Man and Society 102, 103 ..... 8 hrs.  
Electives ..... 12 hrs.
4. The required 3 hours of work in government may be applied toward the satisfaction of any of the above group majors and minors if it has not been applied toward a political science major or minor.

## DIVISIONAL COURSES

The general education offerings of the division include two sequences, one in history and the other in the combined social sciences.

The history sequence is made up of two courses, Foundations of Western Civilization 100, 101. It carries departmental credit only in history. The combined social science unit consists of two courses, Man and Society 102, 103.

Full credit for the history sequence or the combined social science sequence may be applied toward group majors or minors in the social sciences.

**100-101 World Civilizations** 8 hrs. Fall, Spring

For description of the course, see Division of Basic Studies.

**102-103 Man and Society** 8 hrs. Fall, Spring

For description of course, see Division of Basic Studies.

**500 Teaching of the Social Studies** 3 hrs. Fall, Spring

Teaching of the social studies in the Junior and Senior High School. Definition of objectives. 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' travel in the British Isles, the Seminar will be in formal session at Oxford University, England, for a period of four weeks. After Oxford the party will spend approximately a month touring several countries on the Continent. Graduate or under-

graduate credit, up to a maximum of three semester hours in any one department, may be distributed among economics, history, political science, and sociology. Next offered in Summer of 1963.

## Economics

Robert S. Bowers, Head  
Myrtle Beinbauer  
Theodore L. Carlson  
John A. Copps

Louis Junker  
George Klein  
Marguerite Patton

Myron Ross  
Werner Sichel  
Jared S. Wend

Courses are designed (1) to contribute to general education by attempting to make students more familiar with the ways and means by which men make their living in modern times; (2) to fulfill the requirements for the training of teachers in certain professional groups, such as social sciences, business studies, and business administration; and (3) to furnish courses and explore areas of economic thought which are prerequisite to graduate study and are recommended as pre-professional in business administration, engineering, journalism, law, medicine, and social work.

Principles 200, 201 are prerequisite to all other courses offered in the department except 230, 322, 502, 514, 604, 628, 612.

A minor in Economics consists of a minimum of 15 hours in the department.

A major in Economics consists of a minimum of 24 hours in the department.

**There are no set patterns for these minors and majors.** The selection of specific courses depends a great deal upon the student's interest and the kind of work he plans to take up following graduation. For example, the selection of courses for the prospective graduate student might be quite different from those for the person planning to be an accountant; by the same reasoning, a good background of courses for a salesman might be quite different from those sought by a person planning to do personnel work.

The head of the department will assist students in selecting courses suited to their needs in fulfilling the minor and major requirements.

For the student planning to do graduate work in Economics certain basic courses should be taken as early as possible as an undergraduate student because they are preliminary if not prerequisite to more specialized courses and studies. For example:

Principles of Economics 200, 201 is a prerequisite to nearly all the other courses in the area. Money and Credit 320, 321, forms the background for all courses and studies in finance, credit, and fiscal policies of private concerns and of government.

Economic Organization 445 familiarizes the student with our most significant forms of business organization. Labor Problems 510 acquaints the student with the whole labor field and is a desirable forerunner of

many, if not all, other labor courses. Business and Government 542 constitutes a good introduction to the constantly widening area of government economics and regulated industries.

### **Principles and General Theory**

#### **200 Principles of Economics 3 hrs. Fall, Spring**

A study of the fundamental principles of economics and their application to some of our more important economic problems. This course and the following one, 201, are basic to intelligent understanding of our American economic system as compared with communism or other "isms".

#### **201 Principles of Economics 3 hrs. Fall, Spring**

A continuation of Principles of Economics 200. Among the problems to which Principles are applied are those of national income, wages, interest, rents, profits, public utilities, monopolies, international economics, and fiscal policies, including taxes.

#### **500 Managerial Economics 3 hrs. Fall, Spring**

Describes and analyzes the ways in which the tools of the economist can be useful to management. Such basic decisions as those involving demand costs, and capital requirements are considered. Prerequisite: 200, 201, and statistics or consent of the instructor.

#### **502 Modern Economics 3 hrs. 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 200 and 201. 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 course in economics. Credit in either 200 or 201 will preclude credit in 502.

#### **503 Price Theory 2 hrs. Fall**

A basic course in economic theory, with emphasis on the theory of consumer behavior (the derivation of the demand curve), the theory of the firm and factor pricing. Prerequisite: 200, 201.

#### **504 Industrial Structures and Competition 3 hrs. Spring**

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

#### **506 Business Cycles 2 hrs. Spring**

An historical and theoretical analysis of business cycles. Prerequisite: 200, 201.

**508 Institutional Economics****3 hrs. Spring**

An intensive examination of heterodox economic theory, conceived in terms of the basic social concepts of institutions and technology, and utilizing developments in modern social science for the resolution of persistent economic problems. Prerequisite: 200, 201.

**Labor Economics****510 Labor Problems****3 hrs. Fall, Spring**

An analysis of the nature and underlying causes of the problems facing the worker in modern economic society. Includes an examination of unions, collective bargaining, labor legislation, wages, unemployment and economic insecurity. Prerequisite: 200, 201.

**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: 510, or the consent of the instructor.

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

The course deals with the government's role in the problems 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.

**Money, Credit and Finance****320 Money and Credit****2 hrs. Fall**

In this course an examination is made of the evolution and functions of money, monetary standards, and credit. Some attention is given to the history of currency in the United States, experiments with paper money, and price-level control, together with considerable factual material relative to credit and credit instruments. Prerequisite: 200, 201.

**321 Money and Credit****2 hrs. Spring**

A continuation of 320 with special emphasis on banking and other financial institutions. Prerequisite: 320.

**322 Budgeting****2 hrs. Spring**

An analysis and evaluation of budgeting as a tool of management, through the detailed study of modern budget practice as applied to the financial operations of households, businesses, and governments.

**524 Public Finance****3 hrs. Fall**

An analysis and evaluation of the problems and economic impact of government fiscal policies, with special emphasis on spending, taxing and borrowing. Prerequisite: 200, 201.

### Consumption Economics

**230 Economics of Consumption 3 hrs. Fall, Spring**

A study of the problems faced by the individual and the family in trying to satisfy their wants with the money income and other resources at their disposal.

**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: 200 and 201 or 230.

### Industrial Organization and Public Control

**444 Transportation 3 hrs. Spring**

An examination and study of the economics of the transportation industry, including its history and regulation. The course also offers an introduction to traffic management and problems. Prerequisite: 200, 201.

**445 Economic Organization 3 hrs. Fall**

A study of the organization of economic enterprise, particularly large corporations. The history, financing, and control of these enterprises will be studied in an effort to determine how the public interest is affected and how public control has protected and can protect the public interest. Prerequisite: 200, 201.

**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 needs 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: 200, 201. Work in Political Science may be substituted in special cases by permission of the instructor.

**546 Public Utilities 3 hrs. Fall**

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

### International Economics

**580 International Economics 2 hrs. Spring**

A study of the fundamentals of international trade and related problems, with special reference to the implications of the international economic policies of the United States both for the economy and for the firm. Prerequisite: 200, 201.

**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: 200, 201 or consent of instructor.

**586 Economics of the Soviet Union and Eastern Europe****3 hrs. Fall**

A study of Soviet and East European planning practices including an examination of the development in commerce, agriculture, and industry in these areas. Trade among the several East bloc nations will also be covered. Prerequisite: 200, 201.

**588 Economic Development****3 hrs. Fall**

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 patterns 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: 200, 201.

# History

Willis F. Dunbar, Head  
George T. Beech  
Ernst A. Breisach  
Alan S. Brown  
Walter J. Brunhumer  
Edward T. Callan  
Albert Castel  
Sherwood S. Cordier

Edward O. Elsasser  
Robert J. Hahn  
H. Nicholas Hamner  
Graham P. Hawks  
Margaret B. Macmillan  
Paul L. Maier  
A. Edythe Mange

Gilbert W. Morell  
Howard Mowen  
Andrew C. Nahm  
Emanuel Nodel  
Russell H. Seibert  
John R. Sommerfeldt  
Charles R. Starring  
John Yzenbaard

Students who plan to major or minor in history should consult the departmental adviser as early as possible in their college careers.

Students majoring or minoring in History are usually expected to elect World Civilizations (Basic Studies 100-101) and History 210-211 (United States History).

For the minor, students should elect four hours, at least, in addition to the above, in 300 or 500 series courses.

For the major, students are expected to elect at least 2 courses in the 500 series and to elect at least one course in each of the following: (1) advanced United States history or British history; (2) ancient, medieval, or modern European history; (3) Middle East, Far East, Russian, or Latin American history.



World Civilizations 100-101 in the Division of Basic Studies or their equivalents may be applied toward a major or a minor in history in the elementary and secondary education curricula. In other curricula either course 100 or course 101 may be applied.

Students who plan to teach history in the junior or senior high school are advised to elect Social Science 500 (Teaching of the Social Studies), but credits earned in this course do not apply toward a major or a minor in history.

Students planning to do graduate work in history are urged to elect two years of either French or German.

**100 World Civilizations** 4 hrs. Summer, Fall, Spring  
For description, see Division of Basic Studies.

**101 World Civilizations** 4 hrs. Summer, Fall, Spring  
For description, see Division of Basic Studies.

**210 The United States to 1865** 3 hrs. Summer, Fall, Spring  
A survey of United States history from colonial beginnings to the close of the Civil War.

**211 The United States Since 1865** 3 hrs. Fall, Spring  
A survey of United States history from the close of the Civil War to the present.

**302 The Modern Middle East** 3 hrs.  
Political, economic, religious, social, and cultural development of the Middle East. Not offered, 1962-63.

**310 History of Michigan** 3 hrs. Summer, Fall, Spring  
A course designed to show the development of the contemporary political, social, and economic status of Michigan. The relation of the history of the state to that of the nation is stressed.

**316 Economic History of the United States** 3 hrs. Fall  
A course especially designed for students planning a career in business. A general knowledge of United States history such as may be gained by taking Courses 210-211 is presupposed, and a knowledge of the principles of economics is desirable.

**340 Russia to 1917.** 3 hrs. Fall  
Political, economic, religious, social, and cultural developments of Russia in the Kievan, Muscovite, and Imperial periods.

**341 History of the U.S.S.R.** 3 hrs. Spring  
Political, economic, ideological, social, and cultural developments of the Union of Soviet Socialist Republics from 1917 to the present.

**342 Great Britain and the British Empire** 3 hrs. Fall  
A survey of the history of Great Britain and the British Empire from the end of the War of the Roses through the Napoleonic Wars.

*School of Liberal Arts and Sciences***343 Great Britain and the Commonwealth 3 hrs. Spring**

A survey of the history of Great Britain since 1815 and the evolution of the British Commonwealth of Nations.

**350 Ancient Greece 3 hrs. Summer**

Near Eastern and Aegean background; the Homeric Age; rise and fall of Athens; Alexander the Great; Hellenism; and the political achievements and cultural legacy of the Greeks.

**351 Ancient Rome 3 hrs. Spring**

Growth, civil wars, and conquests of the Roman Republic and Empire; constitutional history; Roman law; rise of the Christian Church; and the decline and fall of the Empire.

**352 Early Medieval History 3 hrs. Fall**

The genesis of European civilization from the fall of Rome to the twelfth century with emphasis on cultural development and political, economic, and social institutions.

**353 Later Medieval History 3 hrs. Spring**

The flowering and breakup of medieval unity from the twelfth century to the Renaissance with emphasis on political, religious, economic, and social institutions and ideas.

**370 Colonial Latin America 3 hrs. Fall**

A study of the social, political, economic, and cultural aspects of Latin American history to the end of the wars for independence.

**371 The Latin American Republics 3 hrs. Spring**

A study of the development of Latin America since the achievement of independence. Special stress is placed on foreign relations.

**380 The Early Far East 3 hrs. Fall**

The Far East and India before 1600. A study of pre-British India, early China, Japan, and southeast Asia.

**381 The Modern Far East 3 hrs. Spring**

European expansion into the Far East, its effect on Far East cultures, and the decline of colonialism.

**390 Introduction to Historical Study 2 hrs. Fall**

The history, methods, and philosophy of historical study. Consideration of bibliographies and subjects for independent study. This course is designed for students reading for honors in history.

**470 Independent Study in History Hours arranged**

Students undertaking the Department's honors program or desiring to carry on independent studies in history should register for this course. Approval must be obtained in advance of registration from the Head of the Department or the Departmental Honors Committee chairman.

**506 Intellectual History of Western Man to 1500 2 hrs. Summer, Fall**

A study of the leading ideas and intellectual movements in western culture from earliest times to 1500.

**507 Intellectual History of Western Man Since 1500 2 hrs. Spring**

Modes of thought and expression characteristic of the Renaissance and Reformation; the scientific revolution of the 17th century; classicism and the baroque in literature and the arts; the 18th century enlightenment and the reign of natural law; the romantic revolution; the force of liberalism and nationalism in the 19th century; materialism and socialism; the formation and leading features of the contemporary world view.

**508 Modern Nationalism in Europe and America 2 hrs. Spring**

Factors promoting the growth of nationalism in early modern times; its part in 18th and 19th century revolutions; changes in 20th century nationalism; effects of nationalism on international relations.

**516 Constitutional History of the U.S. to 1877 3 hrs. Fall**

The development of constitutional theory and practice in the United States, with emphasis on the origin and establishment of the governmental system and Federal-State relations. Prerequisite, Course 210 or consent of instructor.

**517 Constitutional History of the U.S. Since 1877 3 hrs. Spring**

Continuation of Course 516 down to the present, with emphasis on the problem of Federal regulation of the economy and civil rights. Prerequisite, Courses 210-211 or consent of the instructor.

**518 United States Foreign Policy 3 hrs. Spring, Fall**

The formation and evolution of United States foreign policy from the beginnings of the republic to the present time.

**520 Colonial Period in American History 2 hrs. Spring**

The English colonies in America, both continental and island, 1607-1763, with emphasis upon the development of institutions and upon imperial policy and administration.

**521 The Era of the American Revolution, 1763-1787 2 hrs. Fall**

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

**522 The United States, 1787-1815 2 hrs. Summer**

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

**523 The United States, 1815-1848 2 hrs. Fall**

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

**524 The Civil War and Reconstruction 2 hrs. Spring**

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

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

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

**533 The United States Since 1929 3 hrs. Spring**

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

**552 The Medieval Church 3 hrs. 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 the art of the Renaissance, 1350-1550; humanism; social and economic conditions in Renaissance Europe.

**555 The Reformation 2 hrs. Fall**

A history of the religious reformation in Europe at the beginning of modern times.

**557 Europe in the 17th Century 3 hrs. Fall**

The Thirty Years War and the shifting power relationships of Europe. Colonial enterprise, mercantilism, and absolutism. The rise of science and the baroque spirit.

**558 The Old Regime 2 hrs. Spring**

A study of the development of absolute monarchy; of the institutions; life, and thought of the eighteenth century, with special emphasis upon France; and of the causes of the French Revolution. Prerequisite: An introductory course in European history.

**559 The French Revolution and the Napoleonic Area, 1789-1815 2 hrs.**

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. Not offered in 1962-63.

**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, 1870-1913 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 ensure world peace and security.

**567 Twentieth Century Britain 2 hrs.**

A study of British political, social, and economic development since 1900 and of the changing character of the Empire and Commonwealth. Not offered 1962-63.

**571 History of Mexico 3 hrs. Spring**

A study of the political, social and economic evolution of Mexico from the Wars of Independence to the present day with attention given to the concurrent Mexico-United States relations.

**580 China Since 1912 3 hrs. Summer**

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

**581 Modern Japan 3 hrs. Fall**

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

**588 African History in the 20th Century 3 hrs Fall**

A study of political, social, and economic developments in Africa south of the Sahara, 1885-1960; from the period of dominance by European powers to the emergence of independent states.

# Political Science

William V. Weber, Head  
Robert J. Batson  
Samuel I. Clark  
Roland H. Ebel  
Milton Greenberg

Robert W. Kaufman  
C. I. Eugene Kim  
James E. Nadonly  
Roy Olton  
Claude S. Phillips, Jr.

Jack C. Plano  
Alvin D. Sokolow  
Leo C. Stine  
Melvin W. Wachs

Courses in the Department are designed to prepare a student to become (1) a functioning citizen; (2) a teacher of government or civics; (3) a governmental employee or officer; (4) to understand the part government plays in every day business or other activities; (5) to develop sound methods of investigation and reflection as well as the ability to evaluate political information critically; (6) to make clear the role which individuals and organized groups can play in the Political Process; and (7) to demonstrate relationship of the study of government and public affairs to the other social sciences.

The state legislature in 1954 passed a law requiring that all colleges receiving public money shall grant neither degree nor diploma after June 30, 1956, to any student unless such student shall have successfully completed a three semester hour course in Political Science, or in government and public administration. This requirement may be met by one of the following department courses: Nos. 200, 202, or 204.

A major in Political Science consists of a minimum of 24 semester hours of work in the Department plus an acceptable amount of work in other areas related to the individual student's interests. A minor consists of a minimum of 15 semester hours in the Department. After September 1, 1961, persons who begin teaching in high schools approved by the North Central Association must have a minimum of 18 hours in their minor. It is strongly recommended that if you wish to major or minor in Political Science, that you take Political Science 202, 204, 250, and 340. The student should plan his program so that he will have work in at least three of the major areas listed below.

Students majoring or minoring in Political Science should consult the head of the Department to determine the appropriate advanced courses to be included in the student's program.

Political Science 202, 204 overlap with 200. Therefore, credit in either 202 or 204 will preclude credit in 200.

The Department of Political Science cooperates with the School of Business in offering a curriculum in Public Administration designed for students planning careers in the public service or in other employment where their work will bring them into continuing contact with governmental agencies and activities. The student may take a Bachelor of Arts Degree with a Major in Political Science and a Minor in Business, or a Bachelor of Business Administration Degree consisting of a Business Administration Major

plus a Minor in Political Science. For further details see page 119 under Business Administration.

A program of graduate study leading to the Degree of Master of Arts is offered by the Political Science Department. For information on courses offered, see the Graduate Bulletin.

## MAJOR AREAS

### American Government

#### 200 American Government 3 hrs. Fall, Spring

The structure and function of our federal, state, county and municipal governments. Emphasis is placed on the rights and responsibilities of citizenship. This course is intended primarily for those who do not have an opportunity to take more courses in Political Science.

#### 202 National Government and Administration 3 hrs. Fall, Spring

An introductory course dealing with the national government structure, processes and functions. The structure and functions of political parties are touched upon incidentally. Emphasis is placed on the relationships and obligations of citizens to their government. Comparisons are made with our state and local governments. This course is intended for those who expect to major or minor in the department or to teach government or civics in the secondary schools.

#### 204 State and Local Government and Administration 3 hrs. Fall, Spring

Detailed attention is given to the structure, functions, and processes of state, county, township, municipal and school government, with emphasis upon Michigan patterns and practices. Comparison is made with our National Government and its relationships to state and local governments. This course is intended for those who expect to major or minor in the department or to teach government or civics in the secondary schools.

#### 300 Current Issues and Legislation 3 hrs.

Congress and the State Legislature in action. An examination of the major legislative problems of the current session of Congress and the State Legislature. Critical examination of the impact of current legislation upon vital community matters such as agriculture, education, taxation, welfare, housing, and civil rights are considered. Prerequisite: Junior standing. Not offered 1962-63.

#### 500 Municipal Government 2 hrs. Fall

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. Prerequisite: 204 or the equivalent.

#### 504 Rural Local Government 2 hrs. Spring

A survey of governmental organization, functions and political relationships of counties, townships, towns, villages, and special districts. Atten-

tion will be directed to the urbanization of rural areas and the emergence of the metropolitan problems. Prerequisite: 204 or the equivalent.

### **506 Current Problems of American Government** **2 hrs. 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.

## **Politics**

### **310 U.S. Politics: Political Parties and Pressure Groups**

**3 hrs. Fall, Spring**

Designed as an introduction to the field of Politics, this course will introduce the student to formal and informal instruments of politics and the role each plays in the operation of government. Special emphasis is placed on the role of public opinion, pressure groups and political parties. Prerequisite: Junior standing.

### **312 Public Opinion and Pressure Groups**

**2 hrs. Spring**

An analysis of the nature of public opinion, the methods of influencing it, and the techniques of opinion and attitude measurements, the organization, characteristics, methods, and results of propaganda are considered. Prerequisite: Junior standing.

### **316 Legislative Process**

**2 hrs. Spring**

This course deals with the organization, procedure, and practice of American national and state legislative bodies. Emphasis will be placed on the relationship between the executive and legislative bodies in the determination of legislative policy.

## **Public Law**

### **320 Constitutional Law**

**3 hrs. Fall**

This course considers the nature, principles, and the view of the government of the United States as embodied in written Constitutions and judicial decisions. Prerequisite: 202 or 200.

### **322 Administrative Law**

**2 hrs.**

A study of the legal requirements for, and the limits on, the exercise of administrative powers by public officials; of the means of safeguarding individual rights; the delegation of power; elements of fair administrative procedure; judicial control over administrative determination. Not offered in 1962-63.

### **324 International Law**

**3 hrs.**

Relations of nations in war and in peace, and the accepted usages regarding the rights of neutrals and belligerents, contraband, blockade, visit and search, changes of sovereignty, extradition, expatriation, and similar subjects. Changes brought about by World War II. Prerequisite: A course in modern European history or international affairs. (Not offered in 1962-63)



**420 Substantive Criminal Law****3 hrs.**

Includes outline of criminal sources, classification, limitations and general substantive law including such offenses as murder, felony murder, manslaughter, negligent homicide and sex offenses such as rape, sodomy, sex assault and others; covers criminal sexual psychopath proceedings, crimes of larceny, burglary and receiving stolen property, criminal responsibility, special defenses such as infancy, duress, mental illness and others. Not offered in 1962-63.

**421 Criminal Law and Evidence****3 hrs.**

Includes criminal law administration, legal controls over police investigative procedures, unlawful arrest, search and seizure, interrogation, self incrimination, entrapment. Civil rights and fair trial rights, including double jeopardy, speedy trial, right to counsel, jurisdiction and venue, and trial and pre-trial procedures. Not offered in 1962-63.

**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. Prerequisite: Junior standing.

**Public Administration****330 Introduction to Public Administration****3 hrs. Fall, Spring**

Development of administrative organization; administration and the executive, legislature, and judiciary; principles of organization, including line and staff relationships; the staff services of finance and personnel; formal and informal control. Prerequisite: 200 or 202.

**332 Problems of Public Administration****2 hrs. Fall**

The course will include an analysis of some typical problems of administration at all three levels of government. An attempt will be made to develop some principles which will aid the administrator in his consideration of such matters as organization and reorganization of agencies of government personnel and financial administration, techniques of control within the unit and public relations. Individual problems will be assigned at the level of government in which each is particularly interested. Prerequisite: 330 or equivalent.

**334 Public Personnel Administration****2 hrs.**

The organization and procedures of civil service and personnel systems in government. History of the merit system. Consideration of competitive examinations, position classification, pay administration, civil service discipline and appeals, prestige of the public service, motivation and morale of public servants, the role of bureaucracy in a democracy. Not offered in 1962-63.

**336 American Chief Executive****2 hrs. Spring**

This course considers the role and position of the chief executive in American government with primary attention given to the office of the President and the office of the Governor. The constitutional, political, administrative functions of the chief executive as well as the relation of the executive branch to the legislature and courts will be examined. The growth and development of the executive office in the 20th Century and the implications of this for democratic leadership will be studied. Prerequisite: 200 or 202.

**Comparative Government****340 Comparative Governments of Europe****3 hrs. Fall, Spring**

The organization and procedure of the political institutions of England, France, Germany, and the U.S.S.R. Political trends and forces challenging or reshaping democratic institutions are examined. Prerequisite: 202 or Junior standing.

**342 Governments and Politics of Modern Asia****3 hrs. Spring**

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. Prerequisite: 200.

**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: 202 or equivalent. Not offered in 1962-63.

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

This course includes a study of the governmental organization, an analysis of some of the more current economics, and social problems of selected Latin American countries.

**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.

**International Relations****250 International Relations****3 hrs. Fall, Spring**

This course includes a study of the forces which have operated to bring conflict among the states in the international community. It also includes an analysis of power and the ways in which power is gained, maintained

and used in international relations. Prerequisite: Political Science 200 or 202 or a course in modern history or equivalent.

**352 International Organization 3 hrs. Spring**

A study of systems and methods derived by states for dealing with their common problems. Consideration of the principles, objectives and methods of the United Nations. Emphasis will be given to the military, political, economic, social and cultural role of international agencies. (This course is designed as a continuation of 350 but may be taken separately.) Prerequisite: 200 or 202 or equivalent.

**550 American Foreign Policy 2 or 3 hrs. Fall**

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: Political Science 202 or a course in American History or equivalent.

### **Political Theory and Methodology**

**362 Contemporary Political Thought 3 hrs. Spring**

This course emphasizes the important political ideas of the past century. It deals with such political movements as Marxism, Social Democracy, Fascism, liberalism and conservatism. It is designed primarily for undergraduate non-majors. Prerequisite: Junior standing.

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

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. Spring**

Includes the great works of political philosophy from the late Middle Ages to the present.

**562 Communist Political Thought 2 hrs. Fall**

A study of Marxist Communism, its origins, content, and assumptions; together with its expression in the Soviet Union and other States.

### **Readings and Research**

**470 Readings and Research in Political Science 1 to 3 hrs. Fall, Spring**

Is intended to give an opportunity to advanced students with good scholastic records to pursue independently the study of some subject having especial interest for them. Subjects are chosen and arrangements are made to suit the needs of each particular student. Approval of head of department and instructor required.

# Sociology

Leonard C. Kercher, Head  
Donald H. Bouma  
Milton J. Brawer  
Paul B. Horton

Chester L. Hunt  
Robert F. Maher  
Jerome G. Manis

Nellie N. Reid  
Roy H. Rodgers  
Warren Sauer  
James Schellenberg

Courses are designed (1) to give students in general a better understanding of the significant factors and processes of modern life; (2) to meet the needs of students preparing to teach in the social-science field; (3) to prepare students to do graduate work in the field of sociology; and (4) to stimulate interest in and provide prerequisite study for the profession of social work.

A major in the field consists of 24 hours and a minor of 15 hours of course work. Those who teach in high schools approved by the North Central Association must have a minimum of 18 hours in their minor.

Students minoring in Sociology must take course 200 and either 210 or 230. Those majoring in Sociology must take in addition 380 and 381. Courses 500 and 580 are recommended for those planning to do graduate work in the area. All courses may be taken separately, and may be taken in any order by students who have had the prerequisite courses.

The curriculum in social work requires a major in sociology or a major in social science with a sociology concentration and a minor in social work, consisting of 19-20 semester hours selected from courses 260, 380, 381, 362, 364, 360, 368, 462, 463. Students intending to pursue this curriculum should seek counsel and guidance early from the instructor in social work.

Certain students majoring in Sociology or following the social work curriculum may spend one semester at the Merrill-Palmer Institute of Human Development and Family Life, in Detroit, receiving credit towards graduation at Western. Students interested in this should consult with the Head of the Department of Sociology or their social work advisor early in their college career.

The Center of Sociological Research has conducted studies of marital roles, race relations, voting behavior, migrancy, alcoholism, and mental health since it was established in 1956 within the Department of Sociology. As the research arm of the Department, it aims 1) to contribute to the field of sociology, 2) to assist and provide research facilities to faculty members engaged in research projects, 3) to enable students to participate in current research, and 4) to provide factual information for the community and region. Part-time training and employment is offered to a limited number of superior undergraduate and graduate students. See Dr. Jerome Manis, Director of the Center, for further information.

## MAJOR AREAS

### Theory

#### 100 Sociology (for Nurses)

2 hrs. Spring

An introductory course in sociology especially adapted to the need of students of nursing. Not open to regular students.

**200 Principles of Sociology 3 hrs. Fall, Spring**

A study of man's social nature and of the social world in which he lives. The biological, social, and cultural factors underlying the development of human personality and the various forms and processes of group association are analyzed.

**400 Readings in Sociology 1-4 hrs.**

Offers advanced students with good scholastic records an independent program of study, arranged in consultation with the instructor. 1 to 2 hrs. credit per semester, cumulative to 4 hrs. Prerequisite: Honors Program, or consent of Head of Department.

**404 Sociological Theory 3 hrs.**

A study of the major theoretical approaches in contemporary sociology. Prerequisite: 9 hrs. of sociology.

**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: 200 or Man and Society 102, or 600\*.

**502 Contemporary Social Movements 3 hrs. Spring**

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: 200, or 600\*.

### Social Problems

**210 Modern Social Problems 3 hrs. Fall, Spring**

A general survey of some of the major social problems now confronting American society, such as inter-group conflict, physical and mental ill health, economic insecurity, juvenile delinquency and crime, population changes, and mass communication. Prerequisite: 200.

**312 Criminology 3 hrs. Fall, Spring**

A study of crime as a social problem. Course includes (1) an analysis of causative factors in crime, (2) a study of American police and court systems, (3) a survey of the problems of penology, and (4) a consideration of crime prevention. Visits to institutions are made. Prerequisite: 200.

**314 Race Relations 2 hrs. Spring**

A study of race and inter-group relations, stressing (1) the meaning of race, (2) the nature and roots of race prejudice, race discrimination, and inter-group conflict, and (3) the character and effectiveness of various means of adjustment to the problem. Prerequisite: 200.

\*600 Social Dynamics of Human Behavior is a foundational course in sociology at the graduate level.

**514 Juvenile Delinquency and the Community 3 hrs. Fall, 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: 200, or 600\*, or equivalent.

**Social Psychology****220 Social Psychology 3 hrs. Fall, Spring**

A study of the social and cultural aspects of individual personality, together with an analysis of the problems of personal adjustment that arise from the interaction of personalities and from the relation of the individual to the social environment in general. Prerequisite: 200.

**322 Mass Communication 3 hrs. Spring**

The study of the media of mass communication in modern society. Impact of radio, television, movies, and newspapers on family life, delinquency, leisure, and mass behavior. Analysis of rumor, propaganda and ideologies. Prerequisite: 200.

**Anthropology****230 Introduction to Anthropology 3 hrs. Fall, Spring**

An introduction to the principal fields of anthropological study in terms of their concern with the nature of man as it is revealed in his development as a creator and user of culture.

**330 Cultural Anthropology 3 hrs. Spring**

A study of the nature of culture through an investigation of the ways of life of both "primitive" and "civilized" peoples. The structure and functions of culture are considered along with its relationships to environment, society, and the individual. Prerequisite: 200 or 230.

**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: 200 or 230, or 600\*, or equivalent.

**534 Comparative Culture Studies 2 hrs. Spring**

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: 200 or 600\*.

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\*600 Social Dynamics of Human Behavior is a foundational course in sociology at the graduate level.

**536 The Dynamics of Culture Change 2 hrs. Fall**

An inquiry into the dynamics of culture through a study of the principal theories of culture change and their application to concrete situation such as the rise of complex civilizations and the reactions of non-Western societies to contact with the West. Prerequisites: Sociology 200, 230, or 600.

**Marriage and Family****240 Modern Marriage 2 hrs. Fall, Spring**

A general education course designed to increase the student's competence for coping with interpersonal problems arising in dating, courtship, engagement, marriage and parenthood. Choosing a mate wisely, planning for marriage, adjusting to one's partner, preparing for successful parenthood are considered. Not counted in a sociology major or minor.

**340 Marriage and the Family 3 hrs. Fall, Spring**

A study of the institutional aspects of marriage and the family. Cross-cultural and historical research supplement contemporary studies of the changing family in the changing world. Prerequisite: 200.

**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.

**Community and Class****353 The City 2 hrs. Spring**

A study of city life as influenced by the processes of industrialization and urbanization. Community problems and social planning for community life are given appropriate consideration. Prerequisite: 200.

**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. Biosocial 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. Prerequisites: Sociology 200 or 600\*, or consent of instructor.

\*600 Social Dynamics of Human Behavior is a foundational course in sociology at the graduate level.

**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 and U. N. projects included.

**Social Work****260 The Field of Social Work 2 hrs. Spring**

A study of social work as a professional field. The philosophy, functions, employment opportunities, patterns of specialization, and methods of social work are surveyed. Interpretative visits to varied types of social work agencies are made.

**360 Principles of Social Work 3 hrs. Spring**

A course designed for students without social work experience. It constitutes a general introduction to the basic principles and processes of social case work and social group work. Prerequisite: Minimum of 5 sem. hrs. of Sociology.

**362 Family and Child Adjustment 3 hrs. Fall**

A study of personality development and adjustment in family situations during childhood and adolescence. Cases are analyzed to reveal the common emotional problems encountered by social workers. Prerequisite: Minimum of 5 sem. hrs. of Sociology.

**364 Public Welfare 3 hrs. Fall**

The history of social legislation and public welfare and their underlying philosophy are considered from the Elizabethan Poor Law to the Social Security Act. An analysis is made of various aspects of welfare legislation of importance to the social worker.

**368 Welfare Organization 2 hrs. Fall**

A study of the community organization method as it applies to the planning, coordination, and integration of social, health, welfare, and recreation services. The class will observe a community organization agency by visits to its meetings and offices.

**462 Orientation to Field Work 2 hrs. Fall**

A course in agency observation and study, aiming to orient the student to a specific field work assignment. A minimum of 90 hours of on-the-spot study of the agency's organization, functions, and methods is required. Prerequisite: Social Work curriculum.

**463 Supervised Field Work 3 hrs. Spring**

A continuation of 462, with emphasis on supervised participation in the work of the agency. Each student is required to complete 135 hours of field work on specific assignments. The student's work is evaluated jointly by



the agency supervisor and the instructor. Prerequisite: 462, and consent of the instructor.

### **Institutions**

#### **377 Cooperative Social Organization 2 hrs.**

A study of cooperative enterprise and cooperative movements; covering principles, historical developments, forms and manifestations, problems of operation, and place in contemporary society. Prerequisite: 200. Not offered in 1962-63.

#### **535 Social Structure of the Soviet Union 3 hrs. Spring**

A sociological analysis of contemporary Soviet society focusing on the patterns and functions of its basic institutions—the family, government, education, and industry. Consideration will also be given to the existing stratification system in terms of class formation and distribution of power. Prerequisite: 200 or 330 or 600 or consent of instructor.

#### **572 Community Agency Resources 2 hrs. 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 institution and beliefs, with particular reference to the United States; the relation between religion 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: 200 or 600.

#### **575 Industrial Sociology 2 hrs. Fall, Spring**

The sociological study of industrial relations with emphasis on the characteristics of modern industrial organization including mass production, bureaucratic structure, and specialization, and their consequences for society; a consideration of the power relationships between unions, management, and government.

#### **576 Sociology of Education 3 hrs. Fall**

The class room as a social situation analyzed in terms of the interaction between teacher-student and student-student. The educative process as a function of the interpersonal relations among teachers and between teachers and administrators. The school as a social system as it affects and is affected by the community in which it is located and society at large. Prerequisite: 200 or 600.

### **Research**

#### **380 Introduction to Social Research 2 hrs. Fall**

An introductory course in the principles and techniques of social investigation. The leading research approaches are surveyed. Procedures for

planning, organizing, and conducting limited research projects are analyzed. Statistical concepts and methods are studied. Each student will take part in a group study project. Prerequisite: 12 semester hours of social science other than history.

**381 Social Research Projects****2 hrs. Spring**

A concrete application of scientific methods to specific research projects developed in the introductory research course. Each student will participate in one or more field studies. Prerequisite: 380.

**580 Introduction to Social Statistics****3 hrs. Spring**

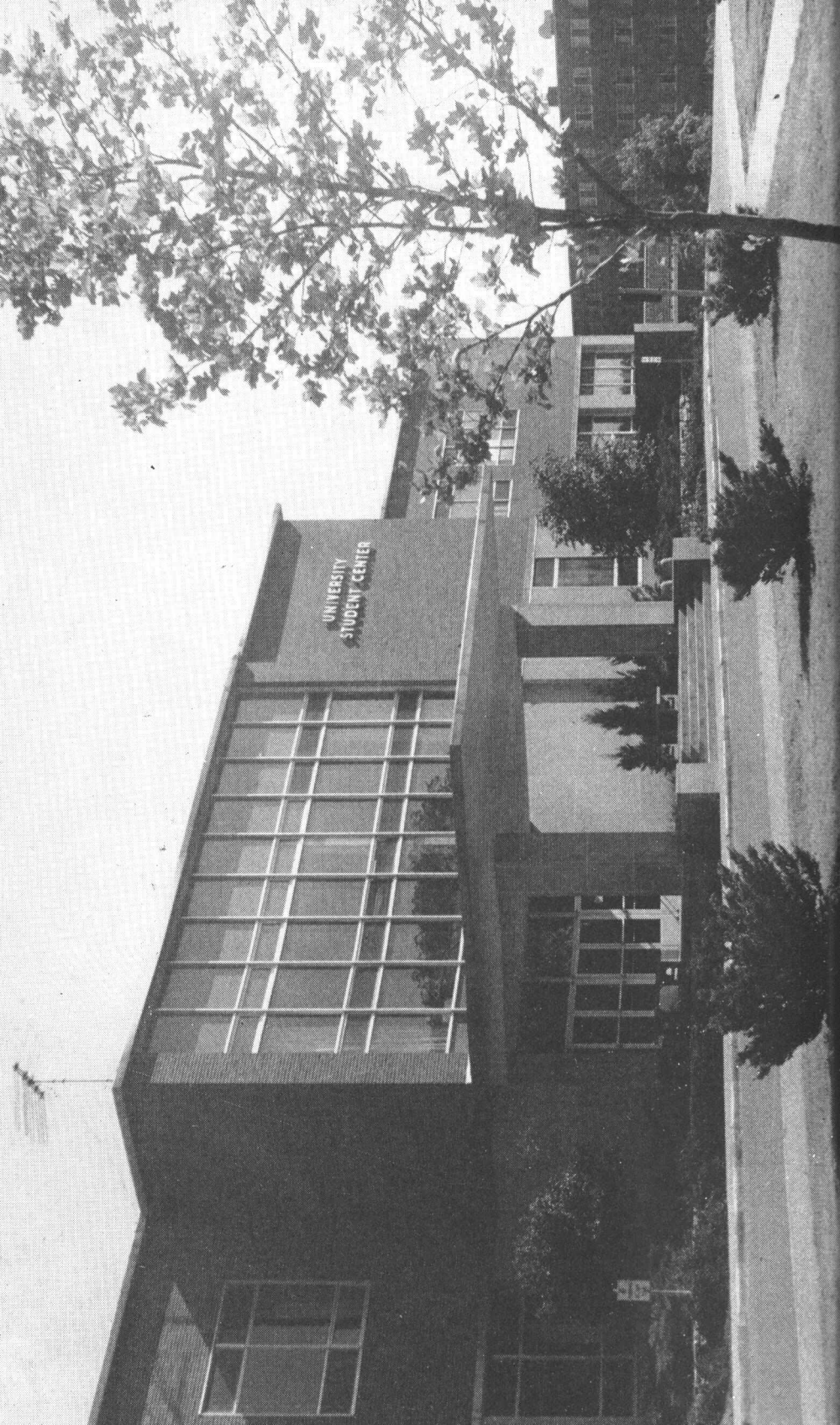
An introduction to statistical reasoning with particular reference to social science research. The course will view statistics as an aspect of scientific inquiry and consider problems of analysis and interpretation of typical social science data. While no prerequisite is required, a course in college algebra will be helpful.

*School of  
Graduate Studies*

**GEORGE G. MALLINSON,  
Dean**

**Departments:**

**Librarianship**



# School of Graduate Studies

## GENERAL STATEMENT OF RULES AND REGULATIONS

### GRADUATE INSTRUCTION

This University offers programs through its School of Graduate Studies leading to the Master of Arts degree in Biology, Chemistry, Economics, Education, English, History, Librarianship, Mathematics, Occupational Therapy, Physics, Political Science, Psychology and Sociology.

The Master of Business Administration degree is granted in cooperation with the School of Business.

A Specialist in Education diploma is offered for completion of a sixth-year program in Educational Administration and in School Psychology.

### 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 indicates the satisfactory completion of the bachelor's degree or its equivalent. A graduate bulletin and the application forms will be sent by the Graduate Office upon request.

**Unqualified Admission.** Unqualified admission is awarded to a student about whom no reservations are held. A student who receives unqualified admission will normally be assigned to a curriculum at the time of his admissions conference. The adviser of the curriculum to which he is assigned will help him in planning his graduate program.

**Admission for Extension Courses.** All students enrolled in graduate extension courses must be admitted to the Graduate School before the completion of the courses or credit will not be granted. No conference is required for such admission. However, the student must submit an application and an undergraduate transcript indicating the receipt of the bachelor's degree. No assurance is given to the student who receives such admission that the courses elected will be accepted toward a degree program if, at a later date, he desires to work toward the master's degree.

### 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 semester hours of graduate work from Western Michigan University. These ten semester hours may include both residence and extension courses. Special permission must be secured from the Dean, School of Graduate Studies, if later application is desired.

◆ The University Student Center is an important campus adjunct, providing many facilities for student and faculty functions.

**REQUIREMENTS FOR THE DEGREE**

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

**Graduate Program.** All students must meet the requirements for admission to one of the graduate programs and be admitted to candidacy at the completion of ten semester hours of graduate work.

**Total Hours.** A minimum of thirty semester hours of graduate work is required. At least fifteen semester hours of the program must be earned in courses restricted to graduate students.

**B Average.** An academic average of B or better in on-campus courses as well as an over-all average of B, must be attained.

**Residence Credit.** Of a total thirty semester hours, a minimum of eighteen must be elected in residence credit from the School of Graduate Studies. This election must include on-campus work on a full-time basis during one semester or summer session.

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

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

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

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

**TUITION AND FEES**

The following fees will be charged for graduate study:

**SEMESTER AND SUMMER FEES**

Sem. Hrs.	Resident Students			Non-Resident Students		
	Tuition	Loc. Fees	Total	Tuition	Loc. Fees	Total
1-2	\$12.00	\$23.00	\$35.00	\$ 35.00	\$23.00	\$ 58.00
3-4	24.00	29.00	53.00	70.00	29.00	99.00
5-6	36.00	35.00	71.00	105.00	35.00	140.00

## GRADUATE STUDENTS ARE LIMITED TO SIX SEMESTER HOURS IN SUMMER SESSION

Sem. Hrs.	Tuition	Loc. Fees	Total	Tuition	Loc. Fees	Total
7-8	\$48.00	\$41.00	\$89.00	\$140.00	\$41.00	\$181.00
9 or more	66.50	47.50	114.00	188.00	47.50	235.50

## ON-CAMPUS SHORT COURSES

1	\$ 6.00	\$14.00	\$20.00	\$17.00	\$14.00	31.00
2	12.00	14.00	26.00	34.00	14.00	48.00

## DOUBLE REGISTRATION

Senior students at Western Michigan University who are *within six hours of graduation* may seek tentative admission to the Graduate School for the final semester of their undergraduate work. These students may elect graduate courses, in addition to the undergraduate courses needed to complete the bachelor's degree, to encompass a full academic program.

Further information is available in the Graduate Bulletin which may be obtained by writing to the Dean, School of Graduate Studies, Western Michigan University.

## SPECIALIST PROGRAMS

Programs leading to the degree of Specialist in Education are now offered in School Administration and School Psychology. A point-hour average of 2.5 (B+) in all previous graduate work is required for admission to the program in addition to other requirements. A minimum of sixty semester hours of graduate work must be completed.

Persons interested in this program should write to the Dean, School of Graduate Studies, for further information.

## Librarianship

Alice Louise LeFevre, Head

Jean Lowrie  
Gary Purcell

Esther Carter  
L. Marion Moshier

The undergraduate curriculum in librarianship offers preparation for the teacher-librarian or for the student who expects to enter the graduate program in library science either at Western Michigan University or at some other library school. Starred courses are open to prospective teachers or others who desire a wider acquaintance with books and library materials and methods.

Students in the elementary or secondary curricula may meet certification requirements for teacher-librarianship by taking the undergraduate minor in library science along with a subject major. This Librarianship minor

*School of Graduate Studies*

consists of the following courses: 100, 101, 230, 510, 512, 530 and 542 or 546 and 516 if the candidate is in the elementary curriculum. The Field Assignment Seminar (520) is also required. A portion of the Directed Teaching period is spent in one of the cooperating school libraries.

The sequence for the Pre-professional Minor consists of 230, 510, 512, 530, and 520. Each candidate will be assigned to one of the cooperating libraries for experience in the area of library science of special interest to him, and for which he is qualified.

The school libraries on the campus and at Paw Paw serve as centers for field work for those preparing for school library service, and selected cooperating libraries throughout the state serve for field assignments in other areas of librarianship. A departmental laboratory containing books and other materials in library science and related fields is provided in the new quarters of the Department of Librarianship in the Dwight B. Waldo Library.

**PRE-PROFESSIONAL**

**A.B. or B.S. Degree**

Students who expect to enter a graduate school of library science either at Western Michigan University or elsewhere should matriculate in the following curriculum:

First Year	S.H.	Second Year	S.H.
Basic Studies		Children's Literature 282	3
College Writing 116, 117	6	Humanities 200 or equivalent	3
World Civilizations 100, 101	8	Psychology 200	3
Science	8	Speech	3
Modern Foreign Language	8	Organization of Library Materials	
Introd. to Librarianship 100, 101	2	230	2
Physical Education	2	Literary Interpret. 210	3
	—	American Government 200	3
	34	Departmental requirements for major and electives	8
		Physical Education	2
			—
			30
Third Year	S.H.	Fourth Year	S.H.
English	3	Non-Western World 104	4
History	3	Introd. to Classification and Cataloging 530	4
Psychology	3	Field Assignment Seminar 520	2
Reference Service 512	3	Electives and Departmental major requirements	20
Selection of Books and Related Materials 510	3		—
Electives and departmental major requirements	15		30
	—		
	30		



**100 Introduction to Librarianship****1 hr. Fall**

An introductory survey to acquaint students with the various types of services offered in the modern library as a social, cultural and educational institution. Students will have opportunity to observe, and in some cases, to participate in the work performed in school, public, county or regional, college and special libraries. Open to freshmen and sophomores who may wish to explore the profession of librarianship as a career.

**101 Introduction to Librarianship****1 hr. Spring**

A continuation of 100.

**230 Organization of Library Materials****2 hrs. Fall**

Methods of organizing various types of materials such as books, periodicals, pamphlets, and audio-visual aids for effective use in relation to the demands of schools and of the community. Emphasis is placed upon practical methods of keeping essential business records, book buying, processing and distributing books with a minimum of routine in schools and in small public libraries.

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

Study and evaluation of basic reference and bibliographic sources in the various subject fields. Critical examination of the publications of governmental agencies, societies and institutions especially as reference sources. Attention given to organization and methods of reference services.

**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 the gifted child. For teachers, parents and librarians and others who work with children. Prerequisite: Children's Literature 282 or equivalent.

**520 Field Assignment Seminar****2 hrs. Fall, Spring, Summer**

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.

**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 assigning subject headings, in adapting Library of Congress and Wilson printed catalog cards, and in cataloging non-book materials.

**531 Technical Process; Instructional Materials Centers 4 hrs. Fall**

An introductory course in classification and cataloging in which emphasis is placed on processing materials for the instructional materials center. Includes processing of books and other printed matter and audio-visual materials. Includes also the principles of application of the Dewey Decimal classification system, the assignment of subject headings, adaptation of printed catalog cards and introduces various methods of processing audio-visual materials both for the individual schools and centralized processing for school systems. Includes laboratory experiences.

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

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 story telling: 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.

## *Awards, Fellowships, Scholarships*

For complete details and application blanks, please write to the registrar.

### AWARDS

#### DEPARTMENTAL

**ATHLETICS**—The Athletic Board of Control Award is a plaque given to an outstanding athlete who ranks high in scholarship and participation.

**BIOLOGY**—The Harold Cook Memorial Prize of \$20 is given to a student judged most proficient by the Committee on Scholarship, in cooperation with the president of the Faculty Science Club.

**BUSINESS**—Gamma Tau chapter, Alpha Kappa Psi, professional fraternity in commerce, awards annually a Scholarship Key to the male senior student pursuing a degree in the School of Business, who has attained the highest scholastic average for three years of work at this University.

**CHEMISTRY**—The William McCracken Award was named in honor of the first head of the Chemistry Department. It is given to a senior who, in the opinion of the chemistry staff, has shown the greatest aptitude in the field of basic chemistry.

**ECONOMICS**—Harald Smith Patton prizes given in memory of Lieutenant Colonel Patton, accidentally killed in service 1945, while on military leave as Head of the Department of Economics, Michigan State University. The prizes will be given to outstanding Economics majors, one of \$60.00 to a senior, and one of \$30.00 to a junior. Required qualifications are on file in the Office of the Registrar.

**EDUCATION**—Election to Kappa Delta Pi.

**ENGLISH**—The George Sprau Award in English is given to the graduating senior with the best grades in English throughout his university career.

**FRENCH**—The French Embassy gives an annual prize to the outstanding student of French in the graduating class.

**HISTORY**—The James O. Knauss History Award was established in honor of a distinguished scholar and teacher who was on the faculty for thirty years and was head of the History Department for eleven. It is awarded annually to the senior history major who has made the most outstanding record in history during his university career.

**HOME ECONOMICS**—An award to a freshman girl based on scholarship and leadership.

**INDUSTRIAL EDUCATION**—A plaque is given to the outstanding senior student in that department.

*Miscellaneous Information*

**MATHEMATICS**—This prize is awarded to the senior student judged by the Department of Mathematics to have exhibited the highest proficiency and promise in that field.

**OCCUPATIONAL THERAPY**—The Marion R. Spear Award is an annual award of \$25 and a letter of commendation given by the Alumni Association to an outstanding senior in the department who gives promise of being a superior Occupational Therapist.

**PAPER TECHNOLOGY**—Awards ranging from \$100 to \$500 are given to students above freshman level who have demonstrated superior performance in the curriculum. These awards may be for one year only, and vary in amount and number.

**PHYSICS**—An annual prize of \$50 is given to the senior judged most proficient throughout his college course in the field of physics. An annual prize of a Handbook of Chemistry and Physics and \$10 cash is awarded to the best freshman student in physics.

**POLITICAL SCIENCE**—The D. C. Shilling Award was established in honor of a distinguished scholar and teacher who was on the faculty of Western Michigan University for thirty years, and Head of the Political Science Department for seven years. An annual award of thirty dollars is given to the graduating senior Political Science major or minor who has made the most outstanding record in Political Science during his university career.

**SCIENCE**—Membership in Kappa Rho Sigma.

**SPEECH**—Membership in Tau Kappa Alpha.

**ORGANIZATIONAL**

**ASSOCIATED WOMEN STUDENTS**—A prize to the outstanding woman student.

**KAPPA DELTA PI**—A prize to the outstanding student in academic areas.

**MEN'S UNION**—A prize to the outstanding male student.

**PI KAPPA RHO**—A scholarship cup awarded annually by the Committee on Scholarship to the outstanding women's organization.

**TAU KAPPA EPSILON**—A scholarship cup awarded annually by the Committee on Scholarship to the outstanding men's organization.

**FELLOWSHIPS**

**WESTERN MICHIGAN GRADUATE FELLOWSHIPS**—Ten graduate fellowships are awarded each year on the campus, permitting persons to pursue fulltime graduate study towards the master of arts degree, with

specialization in education. These fellowships carry a stipend of \$1,500 for two semesters. Applications should be filed by March 1 with the graduate office.

**STATE COLLEGE FELLOWSHIP**—A State College Fellowship with a stipend in the amount of \$1,600 is offered each year to a graduate of the university by the Horace Rackham School of Graduate Study at the University of Michigan.

**GRADUATE FELLOWSHIPS AND ASSISTANTSHIPS**—These are available in the leading universities for students who have a high scholarship record and who show promise of success in graduate work. Application should be made to the graduate school of the student's choice.

## SCHOLARSHIPS

For complete details and application blanks, please write to the registrar, or see your high school counselor.

### GENERAL

**ALPHA BETA EPSILON SCHOLARSHIPS**—Each of the 18 chapters of the sorority gives one or more scholarships each year. A student who receives a scholarship must fill the requirements set by the chapter. Apply to the chairman of the sorority chapter in your community.

**ASIAN STUDIES SCHOLARSHIP**—Open to juniors and seniors who are enrolled in the Asia Minor program or who are entering it. Applicants must have an outstanding scholastic record and show promise of continued success in the Asian field. \$300.00 per year. Apply to Chairman, Far East-South Asia Committee.

**CONSUMERS POWER COMPANY SCHOLARSHIP**—Open to incoming freshmen with good scholastic ability, character, personality, and citizenship. Applicant must be active in extra curricular activities, indicate seriousness of purpose and have financial need. Applicants must be February or June graduates of their high school and from an area serviced by the Consumers Power Company. The amount of the award is \$350 per year and is not renewable. Apply to the registrar.

**DETROIT EDISON COMPANY SCHOLARSHIP**—Open to freshmen entering Western from an area serviced by the Detroit Edison Company. Based on scholastic ability, character, personality, citizenship, and extra-curricular activities, seriousness of purpose, and financial need. Applicant must be a February or June graduate of his high school. Amount of the award is \$350 per year and is not renewable. Apply to the registrar.

**EXCHANGE CLUB MEMORIAL SCHOLARSHIPS**—These scholarships are sponsored and administered by the Kalamazoo Exchange Club in memory of former faculty members of the Exchange Club. They are partial-tuition scholarships and are usually limited to students from Kalamazoo County.

*Miscellaneous Information*

**THE FORD MOTOR COMPANY FUND** maintains a scholarship program for the sons and daughters of Ford Motor Company employees. Apply to the Ford Motor Company.

**GENERAL MOTORS FOUNDATION SCHOLARSHIP**—Two scholarships are awarded annually for a period of four years. Recommended for prospective freshmen who present outstanding scholastic and extra-curricular records from high school and show promise of continued success. Recipients are determined by the scholarship committee. The amount of the award is based on need which is determined by the College Scholarship Service and Western Michigan University, a minimum of \$200 per year. Apply to the Registrar.

**HONORARY SCHOLARSHIPS**—Western Michigan University annually grants a limited number of new scholarships to outstanding and deserving high school graduates with a definite need. Recipients are determined by a scholarship committee. The amount of the award varies. They may be renewed three times. Apply directly to the Registrar.

**THE STANDARDS BOARD SCHOLARSHIP** of 250 dollars for the year 1962-1963 will be given to a girl who has displayed good academic standing and leadership qualities. She must have been a Western student for at least one year. Applications should be made to the Scholarship Chairman, Standards Board.

**STUDENT COUNCIL GRANTS-IN-AID**—In March, 1953, the Student Council established a Grant-in-Aid program at the university. These grants, which vary in number, are open to any student enrolled in a full-time course of study beginning with the second semester of the freshman year. The recipient must show leadership in extra-curricular activities, have at least a C average, and have a definite need. The amount of the award is \$50 a semester. It may be renewed. Apply to the Student Council.

**ATHLETIC**—Western Michigan University offers these scholarships to students excelling in athletics, and participating in/or preparing to participate in varsity sports. A student must be recommended by the Physical Education Department and approved by the Scholarship Committee. Application should be made directly to the Physical Education Department, or to the Registrar.

**BUSINESS**

**GILMORE BROTHERS CO-OPERATIVE RETAILING SCHOLARSHIP**—Open to high school graduates currently enrolled in the cooperative retailing training program at Western. Recipients must be recommended by the coordinator of the cooperative retailing program and approved by the Dean of the School of Business and the Registrar. The scholarships will be granted on the basis of need, scholastic ability, good character, a pleasing personality, and a real interest in retailing as a career. There are two awards for tuition and fees each semester. Applicants should apply

to the coordinator of the cooperative retailing program, School of Business, Western Michigan University.

**KALAMAZOO ACCOUNTANT'S ASSOCIATION SCHOLARSHIP**—One award for tuition and fees and automatic membership in the Kalamazoo Accountant's Association for the period of the scholarship. Open to juniors or seniors majoring in accounting. Contact Mr. R. B. Wetnight, head of the Accounting Department, School of Business, Western Michigan University.

**LOAN FUND**—Open to students entering their junior or senior year who are enrolled in the business administration curriculum and are recommended by the School of Business. The award is given on the basis of merit, need, and extra-curricular activities specifically in the business and transportation areas. An overall scholastic average of 2.25 and a 2.75 average in business studies subjects is required. The amount varies from \$300 to \$500 per year. Apply directly to the Registrar.

**REAL ESTATE SCHOLARSHIP**—Open to any student enrolled in the School of Business who will commit himself to the Real Estate Certificate program. The student must exhibit a definite need as well as scholastic ability. The amount of the award is \$250 per semester for a total of \$1,500, including a year towards a master's degree. Apply to Dr. E. A. Grossnickle, School of Business, Western Michigan University.

**NATIONAL SECRETARIES ASSOCIATION SCHOLARSHIP**—Applicants must submit an essay stating "Why I am Preparing to be a Secretary (or Teacher)." Open to any student in the secretarial curriculum having an academic average of B and the recommendation of the faculty based on character, scholastic aptitudes, endeavor and financial need. The award is \$100. Contact Mr. T. W. Null, Coordinator, Cooperative Secretarial Training Program, School of Business, Western Michigan University.

## EDUCATION

**STATE BOARD OF EDUCATION GRANTS**—The Michigan State Board of Education has made available for Western Michigan University a limited number of tuition grants for high school graduates who wish to enter the teaching profession. These cover tuition and not local fees. The grant is awarded for two years, providing the student maintains a satisfactory scholastic average. It may be renewed for two additional years.

**ERNEST BURNHAM RURAL LIFE FUND**—This fund was established by friends and students of the late Ernest Burnham, to commemorate the twenty-fifth anniversary of his work at Western Michigan University. Income from the fund may be used for books or scholarships in the Area of Rural Life and Education.

**THE ELIZABETH R. STEWART SCHOLARSHIP**—This scholarship, made available by the Michigan Congress of Parents and Teachers, is in the amount of \$250.00 per year. Applicants must have completed two years

*Miscellaneous Information*

at Western Michigan University, and recipients of this scholarship must commit themselves to at least three years of teaching. Parents and recipients must be citizens of the United States and residents of the State of Michigan. Qualifications in respect to scholarship shall be the same as those for State Board Scholarships. Applications must be made to the Registrar's Office and forwarded to the Michigan Congress of Parents and Teachers by July 1.

**MICHIGAN ASSOCIATION FOR EMOTIONALLY DISTURBED CHILDREN SCHOLARSHIPS**—Scholarships of \$100 (or more) per year are open to promising undergraduate and graduate students who are preparing to teach emotionally disturbed and brain-injured children. Scholarships are renewable for those who show continued high performance. Apply to Kalamazoo Area Chapter, M.A.E.D.C., 2615 Stadium Drive, Kalamazoo.

**INDUSTRIAL EDUCATION**

**ATLAS PRESS SCHOLARSHIP**—Two scholarships offered by the Atlas Press Company to stimulate interest in Industrial Education. Open to any high school graduate in Michigan in Industrial Education curriculum who has had at least one course in Industrial Education. One award is for \$400 and another for \$100. Apply to the Registrar's Office.

**INDUSTRIAL DISTRIBUTION**

**MICHIGAN INDUSTRIAL DISTRIBUTORS SCHOLARSHIP AWARD**—For students enrolled in industrial distribution who are planning a career in the field. The award is open to juniors and seniors with business backgrounds or interests, who show evidence of becoming distributors, salesmen, or potential executives. A 2.5 scholastic average is required. Two awards of tuition and fees are awarded and may be renewed. Apply directly to the Engineering and Technology Department.

**INDUSTRIAL TECHNOLOGY**

**DURAMETALLIC SCHOLARSHIP**—The Durametallic Corporation offers \$250 per semester to a student who has completed two years of a technical program at the university and elects to go into the degree program in industrial supervision. Application should be made by the third week of each semester.

**LIBRARIANSHIP**

**JUNIOR COLLEGE SCHOLARSHIPS IN LIBRARIANSHIP**—These scholarships are open to graduates of Michigan Junior Colleges who are entering the librarianship curriculum and who have a C average. These ten scholarships pay tuition and are renewable. Apply to the Department of Librarianship.



## MEDICAL TECHNOLOGY

The American Cancer Society, Kalamazoo County Unit, offers each year one or more \$200.00 scholarships to sophomore students in Medical Technology. The same students receive similar awards in their junior year, if their academic average continues adequate (2.5 or better). They continue on in the senior year as \$100.00 awards. These awards are based on need and academic merit.

## MUSIC

**MUSIC SCHOLARSHIPS**—Ensemble: 10 Band, 10 Orchestra, and 10 Choral. These scholarships pay tuition only, and are valid for a period of one year. They are recommended by the Conductor of the Ensemble, with the approval of the Head of the Department of Music. Applications must be filed by July 1.

Applied Music: 8 Stringed Instruments, 8 Wind and Percussion, 8 Voice and 8 Piano and Organ. These scholarships pay state tuition and \$30.00 of the Applied Music fee, and are valid for one school year, provided the student maintains a 2.75 (near B) average. Bachelor of Music degree candidates only are eligible. Applications must be filed by April 1, since competitive auditions are held near the end of April.

Special Ability: A maximum of 4 scholarships that pay state tuition and student fees. These scholarships are valid for one school year and are renewable annually for three additional years, provided the student maintains a 2.75 (near B) average, and satisfactorily discharges his other duties. Students who have displayed superior ability are eligible, and may be recommended by the Head of the Music Department. Applications must be filed by August 1.

Drum Major and Majorette: Four awards are made annually on a competitive basis to pay student tuition and fees. The awards may be renewed annually, based on an audition and a minimum 2.0 (C) average. Applications should be received by May 1, since auditions are held approximately June 1.

## OCCUPATIONAL THERAPY

**EDNA BURIAN SKELTON SCHOLARSHIP FUND**—in occupational therapy is in the amount of \$1,000. Grants will be based on merit and financial need, and may be awarded at any time during the academic year. Preference will be given to sophomores, juniors and seniors, including advanced standing students. Grants will be made to freshmen when circumstances warrant and funds are available. Students should earn a minimum 2.5 grade average. Apply to the head, department of occupational therapy.

**ELKS FOUNDATION**—Offered to students engaged in specialized training in cerebral palsy, occupational therapy, physical therapy, and speech. The amount of the award varies to \$1,200. Applications should be submitted to the Elks Foundation, 16 Court Street, Boston, Massachusetts.

*Miscellaneous Information*

**KALAMAZOO SCHOOL ALUMNI ASSOCIATION SCHOLARSHIP**—One scholarship is given to a beginning occupational therapy student with a definite need for a period of one year. A second scholarship is given under the same circumstances but may be retained for two years. One scholarship pays \$100 for one year. The two-year scholarship pays \$100 each semester. Apply directly to the O.T. Department at Western.

**MICHIGAN OCCUPATIONAL THERAPIST ASSOCIATION**—Established by the Michigan Occupational Therapist Association for the purpose of aiding the worthwhile students in occupational therapy. Applicants must exhibit scholarship and show a definite need. Must be a Michigan occupational therapy student, junior or above. Amount of award is \$100 and two awards are given annually. Apply to the Occupational Therapy Department.

**NATIONAL ASSOCIATION OF AMERICAN BUSINESS CLUBS**—For juniors or seniors in occupational therapy who exhibit a definite need and who have at least a C average. The amount of the award varies. Applications should be submitted to Mr. W. Edinburg, Executive Secretary, National Association of American Business Clubs, 207 Duke Building, Box 762, Danville, Illinois.

**THE OFFICE OF VOCATIONAL REHABILITATION GRANT**—Offered to juniors and seniors, advanced standing and clinical students in occupational therapy.

**UNITED CEREBRAL PALSY GRANT**—Two awards of \$90 per student are given. The applicants must be an occupational therapy junior or above and exhibit scholarship as well as need. Apply to the Occupational Therapy Department.

## **PAPER TECHNOLOGY**

**PAPER TECHNOLOGY SCHOLARSHIPS**—A number of scholarships ranging from \$200.00 to \$500.00 per year are awarded to freshmen on a competitive basis. These scholarships are normally renewable three times. Application may be made by applying directly to the Head of the Paper Technology Department, or the Registrar, by March 1.

## **PETROLEUM DISTRIBUTION**

**FARMERS PETROLEUM SCHOLARSHIP PROGRAM**—There are two scholarships offered in an amount not to exceed \$600 each. Apply directly to the Farmers Petroleum or to the Distributive Education Office.

**THE CARL H. KAISER MEMORIAL SCHOLARSHIP**—Given by Helen E. (Kaiser) Wood and Fred Kaiser. This scholarship grants \$700 for two years to any eligible high school graduate from the Port Huron area.

**PURE OIL'S FINANCIAL AID PROGRAM**—Two grants of \$500 each for two years to relatives of Pure Oil Company dealers, jobbers and employees who are high school graduates in the upper half of their

graduating class. Must have participated in extra-curricular activities, exhibited leadership abilities, and shown interest in the distribution of petroleum products. Apply directly to the Pure Oil Company, or to the Distributive Education Department.

## SCIENCE

**GROVER C. BAKER**—A grant of \$100.00 per year is being made available to a freshman, enrolled in Science, and planning to major in Physics (or Science). The recipient should come from a rural high school (or small city school) and be recommended by the physics teacher of his high school.

**COMPETITIVE SCIENCE SCHOLARSHIPS**—In connection with the annual Science Day, a prospective freshman may compete for two scholarships. One is valued at \$150 per year; the other at \$100.00 a year. The scholarships are awarded only when the students actually enroll at Western. They may be renewed annually for the second, third and fourth year, provided the student carries a major in science or mathematics and maintains a satisfactory grade average.

**KALAMAZOO CIVITAN CLUB SCHOLARSHIP**—Recipients must be residents of Kalamazoo County and must have earned a 2.5 average to secure and maintain the award. Major field of study is to be physical sciences with special emphasis on teacher education. Financial need shall be the determining factor in awarding the scholarship and for continuation of the scholarship. It is renewable three times, funds permitting. The award is to be issued to the student in the amount of \$125 for the first semester and \$125 for the second semester.

**JOHN E. AND EDWIN S. FOX SCHOLARSHIP**—Open to beginning freshmen who show promise in the field of physics and who have maintained a 2.5 average in high school. The amount of the award is up to \$500. It is not renewable. Application should be made to the Registrar by April 1 and should be accompanied by a recommendation from the instructor in physics or mathematics.

**JOHNSON FOUNDATION SCHOLARSHIP**—Since September, 1953, the S. C. Johnson and Sons, Inc., of Racine, Wisconsin, has presented to a senior majoring in chemistry a scholarship of \$500. The actual granting of the scholarship is administered by the Chemistry Department.

**UPJOHN COMPANY MERIT SCHOLARSHIP**—The company is sponsoring a minimum of ten merit scholarships. Eight are for students who plan to major in pharmacy, engineering, pre-medicine, or in one of the chemical or biological sciences, including one or more scholarships at Western Michigan University for science students from Southwestern Michigan. Two scholarships are for students who plan to pursue a course of study in any other field.

**SPEECH**

**THEATRE ASSISTANTSHIP**—This assistantship carries a stipend of \$300 per year and is available to a student selected by the Theatre Staff of the Speech Department.

**DEBATE SCHOLARSHIPS**—Four Debate Scholarships are offered to two men and two women participating in debate. These scholarships will pay tuition and student fees. The recipients of these scholarships must be recommended by the Speech Department and are renewable only by further recommendation of this department. Contact the Speech Department.

**STUDENT LOANS AND MEMORIAL FUNDS**

Please address requests for information to the Student Aid Office. All funds are administered by the Committee on Student Loans. Unless otherwise indicated, a semester's residence is required before a loan is made.

**AMELIA BISCOMB MEMORIAL LOAN FUND**—Established in 1939 through the will of Mrs. Biscomb, for over 30 years a teacher of English in Western Michigan University, who provided the sum of \$500 for this purpose.

**EMELIA GOLDSWORTHY CLARK ART FUND**—This fund was established in 1920 by Mrs. Emelia Goldsworthy Clark, former head of the Art Department at Western Michigan University. The fund, as long as money is available, is intended to provide tuition for a year for a gifted Kalamazoo Central High School or University High School Art Student. Recommendations are made by the head of the Art Department.

**DEBATE LOAN FUND**—This loan fund is for the use of Varsity Debaters only.

**DWIGHT B. WALDO MEMORIAL FUND**—Initiated by a group of faculty members at the time of Dr. Waldo's death in 1939. Loans from the fund are available to any worthy student.

**FANNIE BALLOU MEMORIAL FUND**—Founded in 1921 in honor of Fannie Ballou, who was for seven years supervisor of the second grade of the Training School. Loans are awarded to persons of superior ability in the field of elementary education. Preference is given to students in early elementary education who have completed at least one year of resident work in this university.

**FRENCH STUDENT LOAN FUND**—The fund was started in 1944 by Miss Marion Tamin in tribute to the students of French who have made the supreme sacrifice on the battlefields of the world, insuring thus the liberation of France.

**GRAND RAPIDS AND DETROIT PANHELLENIC SOCIETY LOAN FUND**—The Grand Rapids and Detroit Panhellenic Society has established

a permanent Student Loan Fund for emergency or long term loans available to deserving women students to continue their education. It is preferred that this fund be loaned to sorority members but if they have no use for it, it can be loaned to any needy woman student.

**HELEN STATLER FUND**—Established in 1944 by Mrs. Frederick C. Fischer and Frederick C. Statler in honor of their mother and is available to any worthy student.

**JOHN C. HOEKJE LOAN FUND**—Established in 1958 to honor the memory of John C. Hoekje who retired from the university in 1955 after 39 years of service as dean of administration-registrar. The money is loaned to deserving university students on the recommendation of a faculty committee.

**KALAMAZOO VALLEY SECTION, TAPPI, ROTATING LOAN FUND**—For students of paper technology. This fund amounts to \$1,500. Loans are available to students upon recommendation of the head of the department of paper technology. There is no charge for interest while the student is enrolled at Western Michigan.

**LEROY H. HARVEY MEMORIAL LOAN FUND**—Established in 1925 by the student Science Club to honor the memory of Dr. LeRoy H. Harvey, who until his death was the head of the Department of Biology. Loans are made to students whose major interest is in the field of science.

**MICHIGAN LIBRARY ASSOCIATION, CONSTANCE BEMENT SCHOLARSHIP**—A loan fund established to aid a candidate for a degree from a recognized library school or an individual who has shown promise of a definite contribution to the library profession. The maximum grant to any one student is \$300 with repayment beginning one year after employment, one percent annual interest. Application blanks may be obtained from the chairman of the MLA Scholarship Committee through the Department of Librarianship.

**NATIONAL DEFENSE STUDENT LOAN FUND**—Limited funds are available to Western Michigan University students under the National Defense Education Act, Title II. This act is administered by the United States Office of Education. Loans from this National Defense Student Loan Fund shall be made reasonably available to all eligible applicants. An "eligible" applicant is a student who is enrolled or has been accepted for enrollment at the university as a full time graduate or undergraduate student. Has filed an application for a loan from the fund, is in need of the amount of the loan to pursue his course of study, and in the case of an applicant for admission to the university, is capable in the opinion of the university of maintaining good standing in such course of study, or, in the case of a student already attending the university, is in good standing. In the selection of students to receive loans from the fund, special consideration shall be given to students with a superior academic background who express a desire to teach in elementary or secondary schools;

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and to students whose academic background indicates a superior capacity or preparation in science, math, engineering, or a modern foreign language. In the event applications exceed available funds the order of selection will be based on objective criteria as determined by the university. Loans from the fund are granted by WMU only to students who are in need of the amount of the loan to pursue a full time course of study at the university. Such a determination shall include consideration of (1) the income and resources of the applicant's family, (2) any income and assets of the applicant, and (3) the costs reasonably necessary for the student's attendance at the university. Apply to the Student Aid office.

**OCCUPATIONAL THERAPY FUND**—Funds have been provided by the Kellogg and Kalamazoo Foundations for the use of Occupational Therapy students. Loans up to \$300 are available to these students after the completion of one year at Western Michigan University. The purpose of the fund is to defray the cost of clinical affiliation when necessary. The loans are payable within six months after the anticipated graduation date. Applications are to be made to the departmental head.

**PATRICIA ANN PETERSON SCHOLARSHIP**—These scholarships were established in memory of Patricia Ann, a student at Western for four years, by her parents. There are awards of varying amounts for women majoring in art and enrolling in teacher education. The awards are as follows: \$300 per year for a sophomore woman beginning in September, 1961, renewable; \$300 per year each succeeding year for a sophomore woman, renewable. Application should be made to the registrar's office.

**ROTARY STUDENT LOAN**—A short-term loan fund available to foreign students upon recommendation of a faculty committee.

**SIGMA TAU GAMMA MEMORIAL LOAN FUND**—Chi Chapter of Sigma Tau Gamma fraternity established this memorial loan fund to perpetuate the memory of Ode Custer, Elmer Stillwell, Harry Karnemont, Robert Fletcher and Robert Harvey who made the supreme sacrifice in World War II. Loans from this fund may be obtained by any male upper-classman with a point-hour ratio of at least 2.5. The loans are non-interest bearing.

**SOPHIA REED-MARY MOORE HOME ECONOMICS LOAN FUND**—The Home Economics Club of Western Michigan University set up the loan fund in 1953 in honor of Miss Sophia Reed and Miss Mary Moore who served on the home economics faculty for many years. The maximum amount per applicant will be \$50. This is a non-interest loan to be paid back within a year of the recipient's graduation date. Recommendations are made by the staff of the Home Economics Department.

**STATE D.A.R. SCHOLARSHIP LOAN FUND**—Founded in 1934, has grown to a fund of \$500 through gifts made by the State Committee of the Daughters of the American Revolution.

**STONE D.A.R. STUDENT LOAN FUND**—Established in 1932 through

gifts from the Lucinda Hinsdale Stone Chapter of the Daughters of the American Revolution.

**W.M.U. STUDENT LOAN FUND**—In September, 1912, a nucleus of a student loan fund was established by a gift of \$200 from Miss Blanche Hull. This fund has been increased to a total of several thousand dollars. Money is loaned to deserving students on the recommendation of a faculty committee. An interest rate of five per cent is charged, and notes not exceeding one year are accepted.

**WILLIAM McCracken LOAN FUND IN CHEMISTRY**—Established in 1945 through a gift of \$1,000 made by Mrs. William McCracken to honor the memory of her husband, who organized the Department of Chemistry and served as its head (1907-1939). Loans are granted to worthy and needy students majoring in chemistry. Preference will be given students who have proven their ability through courses taken in chemistry at Western Michigan University. Applicants for loans should be presented to the head of the chemistry department.

## *Buildings and Grounds*

### **EAST CAMPUS**

This campus originally included only a hilltop site of 20 acres. Now more than 70 acres are in use, with 15 acres devoted to physical education and recreation. The principal buildings in this area, exclusive of student housing and athletic facilities, are:

**EDUCATION**—University Elementary and High School are housed here, along with the Educational Service Library and School of Education classrooms.

**ELECTRONICS**—Houses classrooms for department of engineering and technology.

**HEALTH SERVICE**—The main floor of this building is devoted to the University health service. Also housed here are the Psycho-Educational and Speech clinics, the Research Division.

**INDUSTRIAL EDUCATION**—Industrial Education department and University Print Shop.

**MAINTENANCE**—Headquarters for university maintenance, building and supply services, safety and security.

**MECHANICAL TRADES**—A 1941 gift from the W. E. Upjohn Unemployment Trustee Corporation of Kalamazoo, this structure houses much of the department of engineering and technology.

*Miscellaneous Information*

**NATURAL SCIENCE**—Occupied in the Fall of 1962 by the School of Education, School of Business, and Industrial Education.

**SCHOOL OF BUSINESS**—The former general library building, now completely remodeled for the School of Business use. A library annex for east campus classes is included in the structure.

**THEATRE**—Center for campus dramatic and speech activities. The auditorium, with a completely equipped stage, seats 350.

**WALWOOD UNION**—East campus student center provides a snack bar, cafeteria, meeting rooms and the ballroom. The Alumni Association and student publications also have their offices here.

**SPEECH ANNEX****WEST CAMPUS**

During World War II, additional land was purchased to increase the campus area by 180 acres. Later additions have extended this area to more than 300 acres. Lying west of the New York Central railroad, the campus provides a hillside panorama of functional, modern buildings exclusive of housing and athletics, they are:

**ADMINISTRATION**—Opened in 1952, this structure houses administrative offices, and classrooms for the social sciences, languages and literature.

**ARCADIA**—The department of occupational therapy is housed here.

**DWIGHT B. WALDO LIBRARY**—This is the main library building, and in addition to its book collection, includes the department of librarianship, the university Audio-Visual Center, and television studios.

**HARPER C. MAYBEE MUSIC HALL**—Besides housing all music activities, studios for WMUK-FM are located here.

**KANLEY MEMORIAL CHAPEL**—This is the campus religious center. It was made possible through a gift from the estate of the late William Kanley, an alumnus, and was opened in 1951.

**UNIVERSITY STUDENT CENTER**—This giant structure on West Michigan avenue was opened in the fall of 1957. Social and recreational facilities are provided here for students, and are made available to other educational ventures, as they can be scheduled. A snack bar, bowling alleys, game room, lounges, ballroom, cafeteria, music room and faculty lounge are included.

**WILLIAM McCracken Hill**—Erected in 1949, this building is the home for the departments of chemistry, physics, art and home economics. In 1957 and 1959 there were added to it other structures for paper technology, the Paper Industry Laboratories.



LESLIE WOOD HALL—Opened partially in February, 1962, and completely in September, 1962, as the new home for biology, psychology, geography and geology, and mathematics. The largest classroom structure on the campus.

## FACULTY AND STUDENT HOUSING

Archie Potter, A.M., Director of Housing.

Between the years 1938 and 1960 the following modern residential structures for students and faculty have been erected:

### EAST CAMPUS

LAVINA SPINDLER HALL—197 women; Mrs. Lilas Blakney, director.

HENRY VANDERCOOK HALL—210 men; Mr. and Mrs. Fred Stevens, directors.

WALWOOD HALL—115 men; James Boynton, director.

### WEST CAMPUS

HOWARD BIGELOW HALL—415 men; Mr. and Mrs. Homer Cox, directors.

BERTHA DAVIS HALL—250 women; Mrs. Helen Eggert, director.

BLANCHE DRAPER HALL—260 women; Mrs. Eunice Bennett, director.

ERNEST BURNHAM HALL—275 women; Mrs. Gladys Hartwick, director.

FRANK ELLSWORTH HALL—415 men; Mr. and Mrs. Robert Dye, directors.

ELMWOOD APARTMENTS—192 units for married students.

ANNA FRENCH HALL—293 women; Mrs. Edith Lake, director.

THEODORE HENRY HALL—415 men; Mr. and Mrs. C. N. VanDeventer, directors.

JOHN C. HOEKJE HALL—415 men; Mr. and Mrs. William Yankee, directors.

HILLSIDE APARTMENTS—32 units for faculty and staff.

GRACE AND MARY MOORE HALL—296 women; Mrs. Lucille Yost, director.

NORTH VALLEY APARTMENTS—96 units for married students.

LYDIA SIEDSCHLAG HALL—260 women; Mrs. Katharine Chapman, director.

SMITH BURNHAM HALL—257 women; Mrs. Mary Friedli, director.

## ATHLETIC FACILITIES

**GATEWAY GOLF COURSE**—Adjacent to the west campus, this 70-acre nine-hole course provides recreational opportunities for students and faculty. It is open to the general public.

**HYAMES FIELD**—One of the finest collegiate baseball layouts in the nation. Permanent seating is provided for 2,500 spectators.

**KANLEY FIELD**—Includes two practice football fields, a baseball field, landscaped park and picnic area. Used by the men's physical education department and intramural leagues.

**FIELD HOUSE**—Opened in the fall of 1957, the field house provides indoor facilities for basketball, track, and practice areas for football, baseball, golf and tennis. The main dirt floor is 160 feet by 312 feet, and seating for basketball is more than 5,000. An eight-lap track is provided.

**EAST CAMPUS GYMNASIUM**—Headquarters for the women's physical education department, this structure can seat 2,500 for basketball, and has a balcony running track.

**PHYSICAL EDUCATION BUILDING**—Opened in 1956, this complete physical education facility has a regulation swimming pool, three handball courts, a basketball court which can be divided by powered doors, wrestling room, special purpose rooms, classrooms and locker facilities; as well as offices for the men's physical education department. Dressing rooms for women are also provided adjacent to the pool. The field house connects to this building.

**TENNIS COURTS**—Twelve lawn-tex courts are provided on the East Campus, along Davis street, and 10 asphalt courts are on the West Campus, behind Ellsworth Hall.

**WALDO STADIUM**—Two concrete stands, each seating 7,500, line this field, and an eight-lane, quarter-mile track with a 220 yard straight-away are included with the football field. A press box rises above the southeast stands.

**CAMPUS SCHOOL GYMNASIUM**—A playing floor of 60 by 119 feet is provided, along with a stage, offices, locker rooms and a swimming pool.

## OTHER FACILITIES

**GEOGRAPHY AND GEOLOGY SUMMER FIELD CAMP**—The camp is located on Round Lake in northwestern Schoolcraft County in Michigan's Upper Peninsula. It offers an ideal setting for study in the areas of field geography, field geology and conservation.

**KLEINSTUECK WILDLIFE PRESERVE**—Given to the University in 1922 by Mrs. Caroline Hubbard Kleinstueck, this 50-acre tract provides instructional space for biological sciences near the campus and inside the city of Kalamazoo.

## *Student Activities and Organizations*

In order to meet the needs of students, opportunity is afforded for participation in many extra-curricular activities. All campus organizations must be chartered by the Student Activities Committee, consisting of both student and faculty members.

### **CHARTERS**

Regulation adopted by the Michigan State Board of Education, September 17, 1952.

Charters of Clubs and Organizations may be granted provided that:

- (1) the aims and functions of such societies and clubs are in harmony with the ideals of the university as now defined, or hereafter defined, by the university authorities and the State Board of Education;
- (2) the aims and functions are in harmony with the American form of government, and are constructive in furthering the American way of life. No organization or its officers, local or national, shall be associated with any subversive groups or so-called fronts; and,
- (3) the purposes and functions of the proposed new organization shall not unnecessarily duplicate organizations already chartered by a university.

### **DISCRIMINATION**

"We recommend that no organization be permitted to come on the campus of Western Michigan University which has either in its constitution or its ritual any restrictions based upon race, creed, or national origin.

"Nothing in the above statement of policy is to be interpreted to prevent a religious organization from requiring affiliation with their particular church as a qualification of membership."

## **GENERAL ORGANIZATIONS**

### **STUDENT ASSOCIATION**

Every student is a member of the Student Association. The organization is governed by the Student Council. The Council conducts two student elections annually, sponsors a Foster Child, Campus Chest, Leadership Conference, Mimeograph Service, Student Research and Opinion, Insurance for Students, School Spirit Committee, World Affairs Week, and audits all organizational books.

### **ASSOCIATED WOMEN STUDENTS**

All undergraduate women at the University are members of A.W.S. Their general purpose is to encourage a richer social life for women

*Miscellaneous Information*

students, to promote leadership opportunities and to encourage scholastic achievement. The Activities Board plans and carries out the social program. The Judicial Board maintains social standards through regulation and discipline.

**MEN'S UNION**

Organized in 1936 the Men's Union includes in its membership all undergraduate men. The Men's Union was organized to promote the social, cultural, and recreational life of the men in the University.

THE MEN'S STUDENT COURT handles all the problems concerning the men on campus.

**RESIDENCE HALLS ASSOCIATION**

Council for 15 residence halls—Davis, Draper, Ellsworth, Ernest Burnham, French, Henry, Hoekje, Moore, Siedschlag, Smith Burnham, Spindler, Vandercook, Walwood, Zimmerman and Bigelow.

**UNIVERSITY CENTER BOARD**

The board sets up policy for the welfare of student activities within the University Student Center, evaluates the existing program of activities, and promotes new programs as they are needed.

**DEPARTMENTAL CLUBS AND PROFESSIONAL ORGANIZATIONS**

Agricultural Club

American Chemical Society

American Society of Tool and Manufacturer Engineers

Athletics:

Men: Physical Education for Majors and Minors

“W” club for varsity lettermen

Women: Phi Epsilon—for Physical Education Majors and Minors

Water Sprites—Swimming Club for Women

University Dancers

Women's Recreation Association

For Men and Women: Cheerleaders

Ski Club

Aviation: Sky Broncos

Sigma Alpha Tau—Honorary in Aviation

Business:

Alpha Kappa Psi—national professional fraternity

American Marketing Association

Industrial Management Society

*Student Organizations*

Pi Omega Pi—honorary in business education  
Sigma Tau Chi—honorary in business  
Society for the Advancement of Management  
Western Honorary Accounting Society

## Class Organizations:

Senior  
Alumni

Economics Club

## Education:

Association of Childhood Education International  
Council for Exceptional Children  
Student National Education Association  
Kappa Delta Pi—Honorary in Education

English Club

Food Distribution Association

Geography—Gamma Theta Upsilon

Graphic Arts Society

History Club

Home Economics Club

## Industrial Education:

Epsilon Pi Tau—International Honorary Industrial Arts  
Industrial Arts Association  
Institute of Radio Engineers, IRE

International Students Club—open to all students

## Language:

French—Le Cercle Francais  
German—Der Deutsche Verein  
Spanish—Ecos Espanoles

Librarianship—Alpha Beta Alpha

## Music:

Phi Mu Alpha Sinfonia—National music fraternity for men  
Sigma Alpha Iota—National fraternity for women in music

Occupational Therapy Club

Pi Theta Epsilon—honorary in O.T.

Paper and Pulp—Ts'ai Lun

Petroleum—Student Petroleum Association

Philosophy Forum

Politics: Young Democrats  
Young Republicans

Publications: Brown and Gold Yearbook

Calliope—biennial literary magazine

Herald—bi-weekly newspaper

Pre-Med Club

Psychology Club

*Miscellaneous Information*

## R.O.T.C.:

- Gun Club (Western Marksmen)
- Judo Club
- Pershing Rifles—national chapter for drill team
- Torch and Blade—local branch of General ROTC fraternity

## Social Work Club

## Social Studies:

- Pi Gamma Mu

## Speech:

- Brown and Gold Fantasies—Original music, drama, and dance
- Speech and Hearing Society
- Tau Kappa Alpha—forensic honorary fraternity—first honorary on this campus, established in 1928

## Vets of W.M.U.

## Western Marksmen

## Western Wives Club

## W.I.D.R.—Inter-residence hall radio station

## Women Living Off Campus—Omega Chi Gamma

## Service: Alpha Phi Omega

## Alpha Interest

## Honor Societies:

- Alpha Lambda Delta—For outstanding freshmen women
- Arista—For senior women
- Beta Beta Beta—Honorary biology
- Epsilon Pi Tau—International honorary in industrial education
- Kappa Delta Pi—National society in education. Beta Iota Chapter
- Kappa Rho Sigma—Mathematics and science
- Omicron Delta Kappa—Honorary for men
- Phi Mu Alpha Sinfonia—National music fraternity for men
- Pi Gamma Mu—National fraternity in social studies
- Pi Omega Pi—National fraternity in business education
- Sigma Alpha Iota—National fraternity for women in music
- Sigma Alpha Tau—Aviation
- Sigma Tau Chi—National fraternity in business
- Tau Kappa Alpha—National forensic fraternity
- Western Honorary Accounting Society

## Fraternities:

- Beta Theta Upsilon—Local colony of Pi Kappa Tau
- Delta Chi—National. Western Michigan chapter
- Delta Sigma Phi—National. Beta Tau chapter
- Delta Upsilon—National. Western Michigan chapter
- Kappa Alpha Psi—National. Gamma Beta chapter
- Sigma Alpha Epsilon
- Phi Sigma Epsilon—National. Phi Gamma chapter
- Sigma Phi Epsilon—National. Michigan Beta chapter
- Sigma Tau Gamma—National. Chi chapter
- Pi Kappa Lambda—Local of Pi Kappa Alpha

Tau Kappa Epsilon—National. Delta Alpha chapter  
 Theta Xi—National

**Sororities:**

Alpha Chi Omega—National. Gamma Xi chapter  
 Alpha Omicron Pi—National. Kappa Rho chapter  
 Alpha Sigma Alpha—National. Beta Psi chapter  
 Chi Omega—National  
 Delta Pi Colony of Phi Mu  
 Delta Sigma Theta—National  
 Delta Theta Colony of Alpha Phi  
 Delta Zeta—National. Gamma Pi chapter  
 Sigma Kappa—National. Gamma Beta chapter  
 Sigma Sigma Sigma—National. Beta Rho chapter

**Religious Organizations:** Religious Council—co-ordinating organization

Baptist Student Fellowship  
 Campus Christian Fellowship  
 Canterbury Club  
 Catholic Student Organization  
 Christian Science Organization  
 Congregational Student Fellowship  
 Disciple Student Fellowship  
 Gamma Delta  
 Geneva Club  
 Hillel  
 Inter-Varsity Christian Fellowship  
 Kappa Phi  
 Liahona Fellowship  
 Lutheran Student Association  
 Presbyterian Student Fellowship  
 Sigma Theta Epsilon  
 Wesley Foundation

## *Miscellaneous Information*

### **ALUMNI**

Western Michigan University has granted degrees and/or certificates to more than 31,000 individuals. An additional 60,000 former students have received part of their educational training here. All are considered alumni and are eligible to membership in the Alumni Association.

Homecoming, dues-raising drives, and other similar ventures are properly attributed to the Alumni Office. Part of the work of the office dictates that the University keep up-to-date with graduates who change addresses, transfer jobs, receive promotions, marry, and initiate the dozens of other personal actions which require records work.

Nearly 25,000 W.M.U. alumni have a current address listed in the Alumni

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Office. Of these, nearly 4,500 are dues-paying members of the Alumni Association.

The Association, with 21 chartered clubs throughout the country, helps gain scholarship loan funds and grants, aids in the recruiting of superior and talented students, and serves as an informed capable body through which the needs and objectives of the University can be interpreted to the citizens of the state and nation. Clubs, on the average, hold twice-a-year social meetings while officers and workers pursue their voluntary efforts on behalf of Western the year-round.

Membership in the Alumni Association includes a subscription to the University News Magazine and Newsletter. The quarterly magazine contains a section devoted to individual and club alumni activities.

The Association Board of Directors and the Alumni Club Officer Council meet on campus several times each year to plan activities and progress for the future.

Graduating seniors receive a year's free membership in the Alumni Association to keep them in close touch with campus events.

About 750 of Western's alumnae are members of Alpha Beta Epsilon. This is a sorority having 18 chapters in various cities of Michigan and Indiana. A chief activity of each chapter is to maintain one or more outstanding students at Western by means of a fine scholarship program.

Alumni plans and programs are studied and put into effect whenever the Alumni Relations Office learns of the need and desire for certain activity.

## ATHLETICS

Athletics consists of two major programs: intercollegiate athletics and intramural athletics.

**INTERCOLLEGIATE**—The University is represented by teams in football, baseball, basketball, indoor and outdoor track, cross country, tennis, wrestling, swimming, and golf. Representative teams from all parts of the country are scheduled in these sports with the emphasis on mid-western teams.

Western Michigan University has been a member of the Mid-American Conference since 1947. The other members of the Conference are Bowling Green, Kent State, Marshall, Miami, Ohio and Toledo. The athletics are governed by an Athletic Board (see page 10), which adheres to the Athletic Code of the Mid-American Conference and the policies and principles established by the National Collegiate Athletic Association. The teams winning Mid-American Conference championships in basketball and baseball qualify automatically for the annual NCAA playoffs.

Western Michigan University is a member of the Central Collegiate Conference. Participation in this conference furnishes competition with a number of the stronger track teams in the middle west.

**INTRAMURAL**—An extensive intramural program provides opportunity for students to engage in competitive sports on campus as members



of clubs, fraternities or independent teams. Sports offered for men include basketball, bowling, hand ball, tennis, volley ball, indoor baseball, outdoor baseball, track, archery, horseshoe pitching, golf and swimming. Any sport in which a sufficient number of students indicate an interest and for which facilities are available may be set up in the intramural schedule.

## CLINICS

### **Psycho-Educational Clinic**

The primary purpose of the Psycho-Educational Clinic is to provide educational and clinical experiences for mature students enrolled at Western Michigan University who are preparing themselves to do educational and psychological work with children and adults. A secondary function of the clinic is to provide educational and psychological services to parents, teachers and college students. Speech activities carried on by the clinic are designed to provide corrective and developmental instruction in reading for children and adults, and to furnish consultative services for teachers and schools in Southwestern Michigan. Furthermore, the clinic provides students in education and psychology an opportunity to see the administration of educational and clinical tests and the procedures employed in interviewing children.

### **Reading Clinic**

University students encountering difficulty in reading or those needing to improve their reading skills may seek assistance in the Psycho-Educational Clinic located in Room 310 of the Health Service Building on the East Campus. Referrals are made by the Student Personnel and Guidance Services and by members of the faculty. After causal factors have been identified, students are generally referred to the course in Adult Reading.

### **Reading Laboratory (Adult Reading)**

Four classes are provided each semester in Adult Reading. The emphasis in these classes is upon instructional and developmental procedures for helping adults improve their reading skills as they do their regular academic or office work. Each class consists of lectures, demonstrations and laboratory periods in which the students do both guided and free reading. Reading as a thinking process is stressed. The student is taught how to add words to his vocabulary, how to read a chapter effectively, how to read for the purpose of solving problems, how to concentrate upon reading activities, how to find and organize information and how to read critically. Measures of reading are administered at the beginning and the end of the course in order that the student may evaluate objectively his reading performance.

### **Speech Clinic**

Among the services provided students are those of the Speech Clinic. Diagnosis and therapy are provided for all individuals with voice, articulation, stuttering, hearing, cleft palate, or foreign accent problems. Individuals unable to carry on their classroom activities or to achieve adequate results in the general speech courses or to do their practice teaching because of speech difficulties are treated in this modern clinic. Student speech therapists use the facilities of the clinic in preparing for their careers.

### **Writing Clinic**

The clinic is for those students recommended by their instructors to receive help in improving organization, expression, and technical competence in written English. The instructor analyzes the particular difficulties of each student and tries to help him establish ways of overcoming them. No credit.

## **DEBATING—FORENSICS—DRAMATICS**

Opportunities are offered for participation in all or any of the following activities: (1) Debate—separate programs for women and men offer experience in debating current issues with other colleges of the state and nation. (2) Forensics—extemporaneous speaking, oratory, discussion and various activities and contests are held on local, state, and national bases. (3) Dramatics—activity in theatre includes the production of at least six major plays per year including two productions for children in addition to an active student studio production program. In none of the above activities is it necessary to belong to an organization or to be enrolled in any classes in the speech curriculum or to be a speech major or minor.

## **EMPLOYMENT FOR STUDENTS**

Students interested in earning money with which to pay, in part, their expenses will be given advice and detailed information upon application to the Student Aid Adviser, Student Personnel Services, Room 208, Administration Building. Employment in Residence Halls or Food Services, limited to students who live on-campus, usually is taken care of by direct application to the directors of those units. Students with point-hour ratios of less than 1.8 are not eligible for campus employment.

## **FIELD SERVICES**

The Division offers educational opportunities to persons who do not participate in the regular full-time undergraduate or graduate program of the University.

Serving primarily the sixteen counties of Southwestern Michigan, Western's offerings provide a variety of courses through extension class and correspondence enrollments. A variety of courses is offered to benefit

teachers in the field and other interested adult students. Course offerings in the sixteen counties are planned in conference with county superintendents, public school superintendents and their teacher committees. Courses are offered on both the undergraduate and graduate levels.

There is also a wide variety of correspondence courses available. These may be taken for credit and applied toward an undergraduate degree within the limitations described in this bulletin.

In the field of adult education the office provides advisory services, speakers, discussion leaders, and persons qualified to handle leadership training programs. Upon request, such services are available to farm groups, labor unions, schools, church organizations, and other organizations.

In-service education programs are planned with schools, business, professional and civic groups. Advisory services are offered, as well as actual training programs.

For details of policy, and further information please write the Division of Field Services.

## HEALTH SERVICE

The purpose of the student health service is to help students develop an appreciation of the essentials of healthful living; to assume the responsibility for intelligent self-direction, and a knowledge of when to ask for expert advice.

### Required Health Examination

Students enrolled for nine hours or more, whether for the first time on campus or after a prolonged absence, must file a health examination report as a part of the registration process. **NO ENTRANCE PHYSICAL EXAMINATIONS ARE GIVEN AT THE STUDENT HEALTH SERVICE.** In order that our records may be uniform, the university health blank will be sent to each student with the acceptance notice from the Records Office. Registration is not complete until the health examination has been received.

### Health Service Facilities

The main clinic and infirmary are located on the east campus in the Health Service Building. Clinic hours are Monday through Friday 8 a.m. to 4:30 p.m. and Saturday from 9 a.m. to 12 noon. The clinic on the west campus is in Room 140 of the Administration building. Clinic hours are 8 a.m. to 12 noon and 1:00 p.m. to 4:30 p.m. Monday through Friday only.

Students registered for nine or more hours are entitled to medical care for minor illnesses and emergencies in the health service clinics and infirmary. In addition to the medical director, the Health Service provides the services of surgical consultants, psychiatrists, a dermatologist, and a dentist as well as a staff of registered nurses. These services are free to the students during the scheduled clinics, but a nominal charge is made for medications.

For more serious conditions requiring elaborate diagnostic study, or

surgery the student will be referred to a private physician of his choice. In addition, if it is necessary for a physician to see a student in a dormitory or rooming house, the student will be charged for the call.

A university approved accident and illness insurance policy (covering major illness and hospitalization) is offered to all students by a private insurance company for a nominal fee. Students and their families are urged to give their serious consideration to this additional protection.

## LIBRARIES

**DWIGHT B. WALDO LIBRARY**—In mid-1958 Western Michigan students were able to use the new Dwight B. Waldo Library, a \$1,500,000 structure just completed on the west campus. Also housed in the building are the department of librarianship and the audio-visual center.

The collection of the main library includes about 160,000 volumes. Currently the library receives 1,700 periodicals, of which nearly 800 are bound for permanent retention.

The main library also conducts a Library Annex in the School of Business building on the east campus. This library contains basic reference works and materials related to east campus courses. Currently more than 100 general and specialized periodicals and newspapers are received. A Music Library is maintained on the second floor of Harper Maybee music hall. A branch of the main library, this unit has about 3,500 volumes devoted to music, 40 periodicals and more than 2,500 phonograph records. Music listening rooms are a part of this library.

**EDUCATIONAL SERVICE LIBRARY.** The Educational Service Library is located in Room 103, Education Building. It provides for students of education a representative collection of the latest editions of text books both in the elementary and secondary fields, texts for each of the common branches and special subjects, books in general education, professional books in the different subject areas, teaching and curriculum aids, source and reference materials, a fine collection of elementary and secondary courses of study in all subject fields.

## MUSIC

The Band rehearses twice a week, three times during the football season, and gives concerts on and off the campus. Any student with adequate playing ability on a band instrument is eligible for membership. The Orchestra meets twice a week throughout the year and presents concerts both on the campus and in other cities of the state. It joins each year with the choral groups to present the Christmas program. Any student with reasonable proficiency in any orchestral instrument is eligible for membership.

An important part in the musical life of the University is played by the Glee clubs and Choirs. The Men's Glee club, Women's Glee club, the University Choir and the University Singers aim to develop and maintain a high standard of choral ensemble singing. They make a number of appearances on the campus, at high schools throughout the state, and with

organizations like the Kalamazoo Symphony Orchestra. The University Singers is designed for students with little choral experience, but many of the students in this organization later find their way into the Glee clubs and the University Choir.

## PLACEMENT SERVICE

Western Michigan University has operated a free placement service for many years. No graduating student can be guaranteed employment; but all graduates have the opportunity to meet prospective employers from the public schools, business, industry, social agencies and governmental services. Active communication is maintained between the university and hundreds of employing officials. Information concerning employment trends and general job opportunities is made available. Alumni are always welcome to use the placement service free of charge. Summer employment contacts for students are also maintained. The Placement Office is located in Room 231, Administration Building.

## PUBLICATIONS

The Brown and Gold is the yearbook written and edited by the students of the University. Policies and control of the publication are handled by the Brown and Gold student-faculty committee. The editor and business manager are appointed and receive remuneration for their work. They are responsible for naming other staff members and carrying the project to completion. Offices are maintained in the Ty House, East Campus.

The Western Herald is the student newspaper, now published bi-weekly through the fall and spring semesters. Policies controlling the publication are set by the Herald student-faculty committee. The editor and business manager are paid positions, appointed by the above committee. Offices are maintained in the Ty House and the paper is printed in the University print shop.

The Student Directory is published during the fall semester each year by the Student Council, with that organization's publicity director charged with responsibility.

The Western Way is published each fall by the Student Council as a guide for students to the campus organizational and social life. Copies are available free for all students at the opening of school.

Calliope, a student authored literary magazine, is published twice each year. Supervision is provided by the English faculty.

## RADIO

WMUK, the FM voice of Western Michigan University, began official broadcasts in April, 1951, operating at 102.1 megacycles with an effective radiated power of 400 watts.

In 1954 a grant of \$7,500 from the Kellogg Foundation made it possible for the station to secure equipment increasing its power to 36,000 watts, effective radiated power. With the power increase WMUK enables the university to serve an area sixty miles in radius.

*Miscellaneous Information*

In addition to broadcasting classroom lectures, special programs from various departments, athletic events, recitals from the Music Department, assembly speakers, and special college events, the station also brings to its service area scores of significant radio series on tape.

WIDR is the student-operated radio station, broadcasting eight hours each day. It can be heard only in University residence halls.

**R.O.T.C.**

The United States Army has established a Reserve Officer Training Corps Unit at Western Michigan University, which offers the student an opportunity to prepare for military service and to occupy positions of leadership in the Armed Forces. Students pursue a General Military Science course including subjects common to all branches of the army.

The first two years of ROTC comprise the Basic Course, and the final two years the Advanced Course. Uniforms and textbooks are furnished. Advanced Course students receive a monetray allowance of approximately \$27 each month.

Upon completion of the four-year course, and summer camp training, students are eligible to apply for appointment as Second Lieutenant, United States Army Reserve or Regular Army. Enrollment in ROTC together with an acceptable scholastic average will entitle a student to apply for a draft deferment so that he may complete his college training without interruption.

Organizations sponsored by the Military Science Department are the Torch and Blade Society, Cadet Rifle Team and the Pershing Rifles, which is a national chapter for drill teams. Membership in these organizations are available to cadets in the ROTC program. The drill team of Pershing Rifles and the Rifle Team compete with other teams representing the various universities and colleges of Michigan and Indiana. The Torch and Blade Society sponsors the annual formal Military Ball for members of the cadet corps.

**TELEVISION**

The University received several grants and gifts during 1961 which have enabled it to construct a closed circuit television facility. At this time some campus classes are taught by closed-circuit television. Also, the University produces television programs for showing on commercial stations.

**MPATI**

With its designation as a resource institution by the Midwest Program on Airborne Television Instruction the University is functioning as a center of promotion, instruction, information and research for this regional experiment in education. The equipping of the Campus School as a demonstration school provides facilities for full participation in the Program and opportunities for observation and training in the classroom use of educational television.

# *The Faculty*

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## 1961 - 1962

- Adams, David W., 1956, Assistant Professor of Education  
B.A., Ohio Wesleyan; M.A., New York
- Adams, Ethel G., 1946, Associate Professor of Music  
B.A., Ball State; M.A., Columbia
- Adams, Sam B., 1946, Associate Professor of Music  
B.A., Kentucky; M.A., Columbia
- Alavi, Yousef, 1958, Assistant Professor of Mathematics  
B.S., M.S., Ph.D., Michigan State
- Allen, Francis W., 1953, Assistant Librarian  
B.S., Colby; A.B.L.S., A.M.L.S., Michigan
- Anderson, Agnes E., 1943, Assistant Professor of Business Education  
B.S., Ferris Institute; M.S., Tennessee
- Anderson, Robert H., 1957, Associate Professor of Chemistry  
B.A., Baker; M.A., Ph.D., Columbia
- Ansel, James O., 1949, Professor and Director of Rural Life and Education  
B.A., Western Michigan University; M.A., Northwestern;  
Ed.D., Columbia
- Anton, Thelma E., 1946, Assistant Professor of English  
B.A., Michigan; M.A., Middlebury
- Arch, Hugh G., 1939, Associate Professor of Education  
B.A., Central Michigan; M.A., Michigan
- Arnold, Dorothea, 1953, Educational Service Library  
B.S., Michigan State
- Asher, Eston J., Jr., 1954, Associate Professor of Psychology  
B.S., Kentucky; M.S., Ph.D., Purdue
- Bailey, Fred, 1958, Coordinator, Muskegon Area Office  
B.S., M.A., Western Michigan University
- Bailey, Keith D., 1955, Assistant Professor, Campus Schools  
B.S., M.A., Western Michigan University
- Baker, Lee O., 1954, Associate Professor and Head, Department  
of Agriculture  
B.S., Wisconsin State, Platteville; M.S., Wisconsin;  
Ed.D., Michigan State
- Bartoo, Harriette V., 1948, Professor of Biology  
B.A., Hiram; Ph.D., Chicago
- Basic, E. Martin, 1960, Assistant Professor of Engineering and Technology  
B.S. (E.E.); B.S. (M.E.), Illinois Institute of Technology

*Faculty*

- Batson, Robert J., 1957, Assistant Professor of Political Science  
B.A., Princeton; M.A., Chicago
- Baxter, Robert, 1959, Assistant Comptroller
- Beals, Edith C., 1944, Assistant Professor, Paw Paw Schools  
B.M., MacPhail School of Music
- Be Beau, Wilfrid L., 1961, Instructor, Paw Paw Schools  
B.A., Northland College
- Becker, Albert B., 1937, Professor of Speech  
B.A., Western Michigan University; M.A., Michigan  
Ph.D., Northwestern
- Bedore, Jo Ann L., 1961, Assistant Professor, Campus Schools  
B.S., M.A., Michigan State
- Beech, George T., 1960, Assistant Professor of History  
B.A., Michigan State; Ph.D., Johns Hopkins
- Beeler, Fred A., 1946, Professor of Mathematics  
B.S., Alaska; M.A., Indiana; Ph.D., Michigan
- Beeler, Isabel, 1946, Associate Professor, Counseling Bureau  
R.N., Ford Hospital, Detroit; B.S., M.A., Michigan
- Beinhauer, Myrtle T., 1957, Associate Professor of Economics  
B.A., M.A., Drake; Ph.D., Minnesota
- Beloof, Elmer R., 1946, Associate Professor of Music  
B.Mus., B.S., Illinois; M.A., Ed.D., Columbia
- Beloof, Margaret Felts, 1946, Assistant Professor of Music  
B.M., Oberlin; M.A., Minnesota
- Bendix, John L., 1955, Associate Professor of Industrial Education  
B.S., Stout State; M.A., Minnesota
- Berger, Owen L., 1947, Assistant Professor of Music  
B.M., M.M., Boguslawski College of Music; B.S., M.A., Columbia
- Berkey, Ada E., 1947, Music Librarian  
B.A., Mount Holyoke; A.B.L.S., Michigan; M.A., Iowa.
- Beukema, Henry J., 1943, Associate Professor of Industrial Technology  
B.S., Western Michigan University; M.A., Michigan
- Birch, Herman, 1961, Assistant Professor of Psychology  
B.A., Roosevelt
- Black, Donald J., 1952, Assistant Professor of Industrial Technology  
B.A., Kalamazoo; B.S.R.E., Valparaiso Technical Institute;  
M.A., Western Michigan University
- Blagdon, Charles A., 1957, Assistant Professor of General Business  
B.A., Kalamazoo; M.A., Michigan State
- Blaha, Lawrence E., 1962, Lecturer, Orientation and Mobility Program  
B.A., Roosevelt
- Blasch, Donald, 1961, Assistant Professor of Education  
B.E., Northern Illinois; M.A., Chicago



- Bodine, Gerald L., 1957, Assistant Professor of Education  
B.S., Wisconsin State, Milwaukee; M.A., Northwestern
- Boles, Harold W., 1961, Associate Professor of Education  
B.S., Indiana State; M.A., Ph.D., Ohio State
- Booker, Gene S., 1960, Assistant Professor of General Business  
B.S., Ball State; M.A., Ph.D., Indiana University
- Boot, Ruth, 1953, Assistant Professor, Paw Paw Schools  
B.S., Illinois; M.Ed., Wayne State
- Borr, Earl, 1957, Assistant Registrar  
B.S., M.A., Western Michigan University
- Bosma, Ruth L., 1953, Assistant Professor, Campus Schools  
B.A., M.A., Western Michigan University
- Bouma, Donald H., 1960, Associate Professor of Sociology  
B.A., Calvin; M.A., Michigan; Ph.D., Michigan State
- Bourquin, Maurice H., 1961, Instructor in Language  
B.A., Connecticut
- Boven, Donald E., 1953, Associate Professor of Physical Education, Men  
B.S., M.A., Western Michigan University
- Bowers, Robert S., 1937, Head, Department of Economics  
B.A., Kansas Wesleyan; M.A., American; Ph.D., Wisconsin
- Boynton, James W., 1924, Associate Professor of Chemistry  
B.A., Western Michigan University; M.S., Michigan
- Bradley, George E., 1951, Professor of Physics  
B.A., Miami; M.S., Ph.D., Michigan
- Brawer, Milton J., 1960, Assistant Professor of Sociology  
B.A., Harvard
- Breed, Sterling L., 1956, Instructor, Counseling Bureau  
B.S., M.A., Western Michigan University
- Breisach, Ernst A., 1957, Associate Professor of History  
Matura, Realgymnasium Knittelfeld and Vienna VII; Ph.D., Vienna;  
Dr. rer. oec., Hochschule fuer Welthandel
- Brewer, Richard D., 1959, Instructor in Biology  
B.A., Southern Illinois; M.A., Ph.D., Illinois
- Breyfogle, William D., 1961, Instructor, Campus Schools  
B.S., Western Michigan University; M.A., Michigan
- Brill, Richard, 1959, Instructor, Paw Paw Schools  
B.A., Western Michigan University
- Brink, Lawrence J., 1940, Associate Professor of Industrial Education  
B.A., Western Michigan University; M.A., Michigan
- Brown, Alan S., 1955, Associate Professor of History and University  
Archivist  
B.A., M.A., Ph.D., Michigan
- Brown, Charles T., 1948, Professor of Speech  
B.A., Westminster; M.A., Ph.D., Wisconsin

*Faculty*

- Brown, Donald J., 1960, Instructor in Chemistry  
B.S., Syracuse
- Brown, Donald R., 1961, Reference Librarian  
B.A., Ursinus College; M.A., Illinois; M.S., Wisconsin
- Brown, Helen, 1947, Assistant Professor of Physical Education, Women  
B.S., M.A., Northwestern
- Brown, Hugh, 1960, Instructor in General Business  
B.A., Park College; M.A., Iowa
- Brown, Russell W., 1951, Assistant Professor of Music  
B.P.S.M., Oklahoma State; M.Mus.Ed., Notre Dame
- Brueckheimer, William R., 1955, Head, Department of Geography and  
Geology  
M.A., Chicago; M.A., Ph.D., Michigan
- Brumels, Gordon K., 1960, Assistant Professor, Campus Schools  
B.A., Hope College; M.A., Western Michigan University
- Brune, Elmer J., 1956, Assistant Professor of Industrial Technology  
B.S., M.A., Western Michigan University
- Brunhumer, Walter J., 1957, Assistant Professor of History  
B.A., M.A., Marquette; Ph.D., Northwestern
- Bryan, Roy C., 1937, Director, Campus Schools and Professor of Education  
B.A., Monmouth; M.A., Ph.D., Columbia
- Buelke, John A., 1949, Professor of Education  
B.S., Wisconsin State, Oshkosh; M.A., Northwestern;  
Ed.D., Cincinnati
- Burdick, William L., 1949, Professor of General Business  
B.A., Milton; M.B.A., Ph.D., Wisconsin
- Burge, Georgiann, 1948, Assistant Professor of English  
B.A., North Texas State; M.A., Michigan
- Burkett, Charles R., 1961, Instructor, Paw Paw Schools  
B.A., Michigan State; M.A., Michigan
- Burt, Newell D., 1959, Superintendent, Paw Paw Schools  
B.A., Kalamazoo; M.A., Michigan
- Bush, Blanche O., 1960, Instructor in Psycho-Educational Clinic  
B.A., Western Michigan University
- Butler, Charles H., 1937, Professor of Mathematics  
B.A., M.A., Chicago; Ph.D., Missouri
- Butler, Herbert, 1960, Assistant Professor of Music  
American Conservatory of Music; Eastman School of Music  
B.M., M.M., Indiana
- Butler, Katharine G., 1961, Instructor in Psychology  
B.S., M.A., Western Michigan University
- Callan, Edward T. O'D., 1957, Associate Professor of English  
B.A., Witwatersrand; M.A., Fordham; D.Litt. et. Phil.,  
University of South Africa

- Carlson, Bernadine P., 1953, Instructor in English  
B.A., M.A., Western Michigan University
- Carlson, Raymond C., 1961, Coordinator, Student Teaching, Muskegon  
B.A., Albion; M.A., Michigan
- Carlson, Theodore L., 1947, Professor of Economics  
B.A., Augustana; M.A., Ph.D., Illinois
- Carter, Elwyn F., 1945, Head, Department of Music  
B.A., Alma; M.A., Ed.D., Columbia
- Carter, Esther M., 1957, Assistant Professor, Campus Schools  
B.A., Earlham; M.S.L.S., Illinois
- Carter, Homer L. J., 1928, Professor of Psychology and Director  
of Psycho-Educational Clinic  
B.S., Wayne State; M.A., Ohio State
- Cassilly, Joan, 1960, Assistant Professor in Home Economics  
B.A., Ohio Wesleyan; M.S., Ohio State
- Castel, Albert E., III, 1960, Assistant Professor of History  
B.A., M.A., Wichita; Ph.D., Chicago
- Chambers, Bill M., 1960, Assistant Professor of Physical Education, Men  
B.A., Kentucky; M.A., Marshall
- Chance, Faye S., 1953, Assistant Professor, Campus Schools  
B.S., M.S., Ball State
- Chiara, Clara R., 1949, Professor of Education  
B.S., Miami; M.A., Western Reserve; Ph.D., Ohio State
- Christensen, Arthur L., 1959, Assistant Professor, Campus Schools  
B.A., Michigan; M.A., Western Michigan University
- Christenson, Elmer J., 1957, Assistant Professor, Campus Schools  
B.A., M.A., Michigan State
- Clark, Edith E., 1927, Periodicals Librarian  
B.A., Western Michigan University; A.B.L.S., Michigan
- Clark, Samuel I., 1948, Professor of Political Science  
B.A., Ph.D., Chicago
- Cleveland, Bernyce, 1949, Assistant Professor, Campus Schools  
B.A., Western Michigan University; M.A., Middlebury
- Clysdale, J. Patrick, 1958, Instructor in Physical Education, Men  
B.S., M.A., Western Michigan University
- Cohen, Martin, 1960, Station Manager, W.M.U.K. and Coordinator,  
Mid-West Program on Airborne Television Instruction  
B.A., Harvard; B.S., Simmons; M.A., Boston Teachers
- Cole, Roger L., 1959, Instructor in Language  
B.A., M.A., Michigan
- Conrad, Maynard M., Special Lecturer, Occupational Therapy  
B.S., Kalamazoo; M.D., Northwestern

*Faculty*

- Cooper, George K., 1948, Associate Professor and Head, Department of Business Education  
B.Ed., Western Illinois; M.B.A., Indiana; Ph.D., Michigan
- Copps, John A., 1959, Associate Professor of Economics  
B.S., Ph.D., Wisconsin
- Cordier, Sherwood S., 1956, Assistant Professor of History  
B.A., Juniata; M.A., Yale
- Crawford, Lewis D., 1922, Associate Professor, Counseling Bureau and Dean of the Chapel  
B.S., Western Michigan University; M.A., Michigan
- Crisman, Golda L., 1947, Assistant Professor, Campus Schools  
B.A., Western Michigan University; M.A., Michigan
- Cröse, Darrell, 1956, Elementary Principal, Paw Paw Schools  
B.A., M.A., Western Michigan University
- Culp, Robert L., 1957, Director of Sports Information  
B.A., Kalamazoo; M.A., Western Michigan University
- Dale, Patsy Ruth, 1961, Instructor in Occupational Therapy  
B.S., Texas Woman's University
- Dales, George G., 1953, Associate Professor of Physical Education, Men  
B.S., Miami; M.A., Michigan
- Dannenberg, Raymond A., 1956, Associate Professor of Distributive Education  
B.S., Western Michigan University; M.A., Michigan
- Davenport, James A., 1957, Assistant Professor of Education  
B.A., M.A., Western Michigan University
- Davis, Donald A., 1959, Associate Professor of Education  
B.A., U.C.L.A., M.A., Southern California; Ph.D., Michigan State
- Davis, Ruth M., 1961, Assistant Professor of Physical Education, Women  
B.S., M.Ed., Bowling Green
- Davis, W. Jackson, 1959, Assistant Professor of Biology  
B.S., Virginia Polytechnic Institute; Ph.D., Kansas
- DeBoer, Marvin E., 1957, Assistant Professor of Speech  
B.A., Franklin; M.A., Northwestern
- DeChaine, Faber B., 1955, Assistant Professor of Speech  
B.S., Oregon; M.A., Michigan State
- Decker, William A., Special Lecturer, Occupational Therapy  
B.S., M.D., Wayne State
- DeFea, Francis W., 1962, Instructor in Business Education  
B.S., Dickinson State Teacher; M.S., North Dakota
- Delforge, Gary D., 1961, Instructor in Physical Education, Men  
B.S., Kansas State
- DeMeyer, Hazel M., 1946, Order Librarian  
B.A., Western Michigan University; B.S.L.S., Columbia

- Denenfeld, Philip S., 1956, Associate Professor of English  
B.A., Wayne State; M.A., Ph.D., Northwestern
- Denison, Ronald H., 1960, Instructor in Speech  
B.A., Western Michigan University; M.S., Ph.D., Purdue
- Derby, Stanley K., 1955, Associate Professor of Physics  
B.S., Chicago; M.S., Ph.D., Michigan
- Deur, Raymond C., 1943, Assistant Professor, Campus Schools  
B.S., Western Michigan University; M.A., Michigan
- DeVoogd, Lawrence R., 1955, Assistant Professor, Campus Schools  
B.A., Hope; M.A., Western Michigan University
- DeWitt, Jacob P., 1957, Associate Professor of Physics  
B.A., Hope; M.S., Iowa
- Diehm, Robert A., 1955, Professor of Paper Technology  
B.S.A., Purdue; M.S., Ph.D., Rutgers
- Dimac, Vlada M., 1960, Instructor in Speech  
B.A., University of Belgrade, Yugoslavia; M.A., Academy of Fine Arts, Yugoslavia
- Divita, Jane, 1961, Instructor in English  
B.A., West Virginia Institute of Technology; M.A., West Virginia
- Dopheide, William R., 1956, Assistant Professor of Speech Correction  
B.S., Western Michigan University; M.S., Pennsylvania State
- Douglass, Eleanor N., 1948, Assistant Professor of Physical Education, Women  
B.S., Sargent; M.A., Western Michigan University
- Dunbar, Willis F., 1951, Head, Department of History  
B.A., Kalamazoo; M.A., Ph.D., Michigan
- Dye, Robert P., 1958, Assistant Professor of Speech and Director of Broadcasting  
B.A., Kalamazoo; M.A., Western Michigan University
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B.S., Michigan; M.A., Western Michigan University
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B.S., Wayne State; B.S., O.T. Certificate, Eastern Michigan;  
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B.S., Denver; M.A., Ph.D., Wisconsin
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B.S., M.A., Ed.D., Missouri
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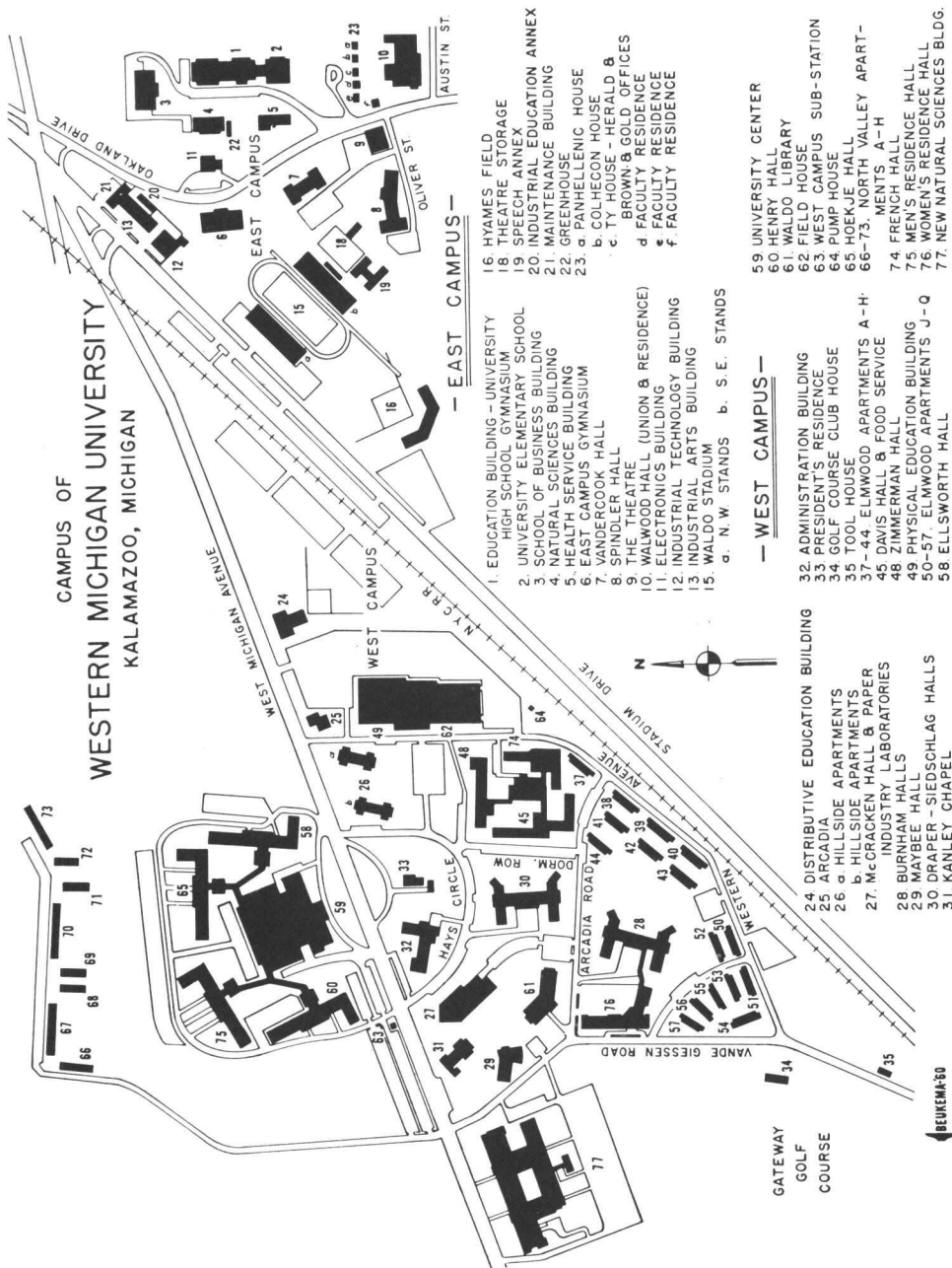
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# CAMPUS OF WESTERN MICHIGAN UNIVERSITY KALAMAZOO, MICHIGAN



## — EAST CAMPUS —

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

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

- a. N.W. STANDS b. S.E. STANDS

## — 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. WATBEE HALL
30. DRAPER - SIEDSCHLAG HALLS
31. KANLEY CHAPEL

59. UNIVERSITY CENTER
60. HENRY HALL
61. WALDO LIBRARY
62. FIELD HOUSE
63. WEST CAMPUS SUB-STATION
64. PUMP HOUSE
65. HOEKJE HALL
- 66-73. NORTH VALLEY APARTMENTS A-H
74. FRENCH HALL
75. MEN'S RESIDENCE HALL
76. WOMEN'S RESIDENCE HALL
77. NEW NATURAL SCIENCES BLDG.

