OAKLAND UNIVERSITY ROCHESTER, MICHIGAN

1966-67

GRADUATE BULLETIN
OAKLAND UNIVERSITY

UNIVERSITY CALENDAR

1966-1967

SUMMER SESSION

June 20	Monday	Registration and classes begin
July 4	Monday	Holiday
August 12	Friday	Last day of classes

FALL SEMESTER

September 9	Friday	Registration
September 12	Monday	Classes begin
November 24	Thursday	Thanksgiving recess
November 28	Monday	Classes resume
December 21	Wednesday	Last day of classes

WINTER SEMESTER

January 3	Tuesday	Registration
January 4	Wednesday	Classes begin
March 2	Thursday	Winter recess
March 6	Monday	Classes resume
April 19	Wednesday	Last day of classes

SPRING SEMESTER

April 28	Friday	Registration
May 1	Monday	Classes begin
May 30	Tuesday	Holiday
July 4	Tuesday	Holiday
August 11	Friday	Last day of classes

OAKLAND UNIVERSITY

Oakland University is a state-supported institution which centers its undergraduate program in the liberal arts and sciences. The University also offers professional training in teacher education, business administration, and engineering. The University's academic structure includes a College of Arts and Sciences, a School of Education, and a School of Engineering. In addition, authorization has been given for a School of Business and Economics and a School of Performing Arts.

Graduate Programs

Graduate work leading to the master's degree is offered in selected fields of study. The College of Arts and Sciences offers programs leading to the Master of Arts degree in English and mathematics and to the Master of Science degree in chemistry. The School of Education offers the Master of Arts in Teaching degree in elementary education and in reading instruction. The College of Arts and Sciences and the School of Education jointly offer programs leading to the Master of Arts in Teaching degree in English and mathematics. Additional programs are being planned and may be available for the academic year 1966-1967.

The Three-Semester Plan

Oakland has been among the first institutions in the country to put its entire academic program in year-round operation. Under what is known as the three-semester (or trimester) plan, students may attend classes for three fifteen-week semesters a year. There are advantages for both the student and the University in such a plan: the student may gain time in his productive career, and the University may make the most efficient possible use of its facilities to meet the growing educational demands of society.

The Campus and Buildings

Oakland University is located 25 miles north of Detroit, midway between Rochester and Pontiac. The campus presently occupies the northwest corner of the 1400-acre estate given to establish the University by Mr. and Mrs. Alfred G. Wilson, who also donated funds for its first academic buildings, North and South Foundation Halls in 1957.

In the fall of 1959, with Durward B. Varner as Chancellor and a faculty of 25, the University admitted its first students. Enrollment has grown from 570 that fall to an expected enrollment of 3400 in the fall of 1966. The campus has been expanded to include some 17 major buildings, with several others in the planning stage.

Governance

Oakland University is affiliated with Michigan State University. Both institutions have the same President and Board of Trustees. Oakland has its own Chancellor and University organization responsible for developing its individual role, character, and functions.

THE FACULTY OF DEPARTMENTS OFFERING GRADUATE PROGRAMS

DURWARD B. VARNER *Chancellor*
B.A., Texas A & M; M.S., University of Chicago

DONALD D. O'DOWD *Provost*
A.B., Dartmouth College; M.A., Ph.D., Harvard University

JOHN G. BLAIR *Assistant Professor of English*
B.A., Brown University; M.A., Columbia University;
Ph.D., Brown University

LOUIS R. BRAGG *Professor of History*
Mathematics
B.A., M.A., West Virginia University;
Ph.D., University of Wisconsin

GOTTFRIED BRIEGER *Associate Professor of Chemistry*
B.A., Harvard University; Ph.D., University of Wisconsin

MAURICE F. BROWN *Associate Professor of English*
B.A., Lawrence College; M.A., Ph.D., Harvard University

HAROLD C. CAFONE *Assistant Professor*
of Teacher Education
B.A., Brooklyn College; M.A., Columbia University;
Ed.D., University of Arizona

MELVIN CHERNO *Associate Professor of History*
B.A., Stanford University; M.A., University of Chicago;
Ph.D., Stanford University

GEORGE V. CRIPPS *Associate Professor of Music*
B. Mus., B.Sch. Mus., Baldwin Wallace College;
M.A., Western Reserve University

JAMES E. DAVIS *Assistant Professor of Chemistry*
B.S., Mississippi State University;
Ph.D., Massachusetts Institute of Technology

JOHN W. DETTMAN *Professor of Mathematics*
A.B., Oberlin College;
M.S., Ph.D., Carnegie Institute of Technology

PETER G. EVARTS *Assistant Professor of English*
B.A., Eastern Michigan University;
M.A., University of Michigan

WALTER FEINBERG *Assistant Professor of Education*
A.B., A.M., Ph.D., Boston University

THOMAS FITZSIMMONS *Associate Professor of English*
B.A., Stanford University; M.A., Columbia University

WILLIAM C. FORBES *Associate Professor of Biology*
B.A., M.A., Kent State University; M.A., Ed.D., Columbia University; Ph.D., University of Connecticut

LAWRENCE B. FRIEDMAN *Assistant Professor of Chemistry*
B.A., University of Minnesota (Duluth); M.A., Harvard University

JUNE GABLER *Assistant Professor of Teacher Education*
B.S., M.A., Ed.D., Wayne State University

HARRY T. HAHN *Professor of Education*
B.S., Kutztown State College; M.Ed., Ed.D., Temple University

LASZLO J. HETENYI *Professor of Education; Dean of the School of Education*
B.A., Pennsylvania State University; M.A., University of Michigan; Ed.D., Michigan State University

EDWARD J. HEUBEL *Associate Professor of Political Science; Chairman of Political Science Department*
B.A., Yale University; M.A., Ph.D., University of Minnesota

DONALD C. HILDUM *Associate Professor of Psychology*
A.B., Princeton University; M.A., Ph.D., Harvard University

ROBERT HOOPES *Professor of English; Chairman of English Department*
A.B., Cornell College; A.M., Boston University; A.M., Ph.D, Harvard University; D.Lit. (Hon.), Cornell College

DON R. IODICE *Assistant Professor of French*
A.B., M.A.T., Yale University

G. PHILIP JOHNSON *Professor of Mathematics; Chairman of Mathematics Department*
B.S., M.A., Ph.D., University of Minnesota

JOHN H. LANGER *Assistant Professor of Teacher Education*
Ph.B., M.A., University of Detroit; Ed.D., Wayne State University

DAVID G. LOWY *Assistant Professor of Psychology; Clinical Psychologist*
B.A., Drake University; M.A., City College of New York; Ph.D., University of Tennessee

DONALD G. MALM *Associate Professor of Mathematics*
B.S., Northwestern University; A.M., Ph.D., Brown University

GEORGE T. MATTHEWS *Professor of History; Dean of the College of Arts and Sciences*
A.B., M.A., Ph.D., Columbia University

JAMES McKAY *Professor of Mathematics*
B.A., Seattle University; M.S., Ph.D., University of Washington

STEVEN R. MILLER *Assistant Professor of Chemistry*
B.S., Case Institute of Technology; Ph.D., Massachusetts Institute of Technology

JACK R. MOELLER *Assistant Professor of German*
B.A., Oberlin College; M.A., Ph.D., Princeton University

FREDERICK W. OBEAR *Assistant Professor of Chemistry; Assistant Provost*
B.S., Lowell Technological Institute; Ph.D., University of New Hampshire

JOGINDAR SINGH RATTI *Assistant Professor of*
B.A., M.A., University of Bombay

RODERIC E. RIGHTER *Assistant Professor of Education; Assistant Dean of the School of Education*
A.B., B.S., Ashland College; M.E., Bowling Green State University; Ed.D., Wayne State University

JOEL RUSSELL *Assistant Professor of Chemistry*
B.A., Northwestern University; Ph.D., University of California at Berkeley

WILLIAM SCHWAB *Professor of English*
B.A., Bethany College; M.A., Ph.D., University of Wisconsin

HARVEY A. SMITH *Associate Professor of Mathematics*
B.A., Lehigh University; M.A., Ph.D., University of Pennsylvania

BEAUREGARD STUBBLEFIELD *Associate Professor of Mathematics*
B.S., M.A., Prairie View College; M.S., Ph.D., University of Michigan

SAMUEL B. THOMAS *Assistant Professor of History*
B.S., City College of New York; M.A., Ph.D., Columbia University

PAUL TOMBOULIAN *Associate Professor of Chemistry; Chairman of Chemistry Department*
A.B., Cornell University; Ph.D., University of Illinois

IRVING TORGOFF *Associate Professor of Psychology*
B.A., City College of New York; Ph.D., University of Rochester

GERTRUDE M. WHITE *Associate Professor of English*
B.A., Mt. Holyoke College; M.A., Columbia University; Ph.D., University of Chicago

COMMITTEE ON GRADUATE STUDY

ROBERT HOOPES, Chairman — *Professor of English; Chairman of English Department*

RICHARD M. BRACE — *Professor of History; Chairman of History Department*

HARVEY BURDICK — *Associate Professor of Psychology; Chairman of Psychology Department*

FLOYD CAMMACK — *University Librarian*

LASZLO J. HETENYI — *Professor of Education; Dean of the School of Education*

G. PHILIP JOHNSON — *Professor of Mathematics; Chairman of Mathematics Department*

GEORGE T. MATTHEWS — *Professor of History; Dean of the College of Arts and Sciences*

RALPH C. MOBLEY — *Professor of Physics; Chairman of Physics Department*

TUITION AND FEES

Tuition Charges

Tuition is assessed each semester on the basis of the credit value of the courses carried, as follows:

	Michigan Residents	Non-Residents
1- 3 Credits	$ 40	$103
4- 6 Credits	72	184
7- 9 Credits	109	277
10-11 Credits	135	366
12+ Credits	165	438

(All fees are payable at registration)

Other Fees

A fee of $10 must accompany all applications for admission. This is a processing fee and is not refundable.

Students registering or paying fees after the regular registration date are required to pay an additional, non-refundable fee of $15 for the first day, plus $5 a day until a maximum of $25 is reached.

An additional fee of $5 per credit is charged for all courses repeated.

A fee of $5 per semester is charged each full-time student to cover the use of the student health facility.

Resident Housing

Graduate students interested in dormitory housing should contact the Director of Housing, Oakland University, for further information. Requests for room reservations must be accompanied by a $25 deposit which is refundable up to July 1, if the University is notified. Room and board charges are $445 per semester.

Financial Aid

Oakland University attempts to provide financial assistance to full-time graduate students who do not have sufficient funds to finance their education. This aid is offered in

the form of graduate assistantships, National Defense Education Act loans, and in some cases, campus jobs.

A limited number of graduate assistantships are available to properly qualified graduate students in the departments offering graduate work. All graduate students who receive assistantships are exempt from out-of-state fees, but must pay in-state fees according to the University schedule for the number of credits taken.

Stipends range up to $2400 for two semesters depending on the nature of the assignment and hours of work involved. Application forms may be obtained from the chairman of the department in which the assistantship is desired or from the Office of Admissions. Completed application forms must be submitted to the chairman of the department. Applicants not currently enrolled at Oakland University should also have on file with the Office of Admissions an application for admission to graduate study.

Grades and Grade Point System

Oakland has a numerical grading system ranging in tenths from 0.0 to 4.3. This system is not related to numerical or letter equivalents. Grades from 2.0 to 4.3 are in the range necessary for credit toward a degree, but grades from 0.0 to 1.9 are in the penalty range. The numbers 0.1, 0.2, 0.3 and 0.4 are not used.

Oakland University grades may be described as follows:

4.3 highest grade
4.0 excellent
3.0 good
2.0 satisfactory
0.0 failure; no credit

Grades assigned in graduate courses will follow the same system observed for undergraduate courses, except that no credit for a course with a final grade below 2.0 may be applied toward a Master's degree. To qualify for a Master's degree, a candidate's record must show an average of at least 3.0 in all courses taken at Oakland University as a graduate student.

ADMISSIONS PROCEDURE

Admission to Course

1. The graduate admissions-to-course policy of Oakland University is selective. Admission will be granted upon recommendation of the department concerned on the basis of the applicant's undergraduate record, letters of recommendation and such other evidence as may be required by the department concerned.

2. An applicant must have an approved baccalaureate or its equivalent from an undergraduate institution. The degree must have been conferred within the past ten years, with admission to course possible to applicants with degrees older than ten years by special consent of the department concerned.

3. Application for admission to course must be accompanied by official record of work done at all undergraduate and graduate institutions applicant has attended.

Acceptance into Degree Candidacy

1. Admission to course neither confers nor implies that a student will be accepted into degree candidacy.

2. By the time each student has attempted three courses (12 credits) in graduate standing, he must apply to his sponsoring department for degree candidacy.

3. On the occasion of application to degree candidacy the department will decide:

a. to accept the student as a degree candidate.

b. permit him to pursue further work on a non-matriculated basis.

c. recommend withdrawal from the University.

4. Departmental recommendation will normally be regarded as final, unless a student wishes to enter special petition to the Committee on Graduate Studies.

Special Admissions

Admission on a guest student basis is available to students providing the application is approved by the department in which the applicant wishes to take courses. The Graduate Guest Application must be completed and submitted to the Admissions Office. No transcripts or letters of recommendation are required.

Guest student admissions are intended for those students who plan to attend only one semester at Oakland and then transfer the credit to another university where it is to be used toward the completion of degree requirements. The specific courses the student wishes to take while a guest student at Oakland must be indicated on the application. Admission as a graduate guest student in no way implies admission to course in a regular graduate degree program at the University.

Physical Examinations

All graduate students planning to take eight semester hours of credit or more per semester are required to have a physical examination from their personal physician. The physical examination form will be mailed to the applicant assuming admission is granted. This form must be completed and returned prior to registration.

DEPARTMENT OF CHEMISTRY

Associate Professors:
Paul Tomboulian, Chairman
Gottfried Brieger

Assistant Professors:
James E. Davis
Lawrence B. Friedman
Steven R. Miller
Frederick W. Obear
Joel Russell

THE MASTER OF SCIENCE IN CHEMISTRY

The Department offers both research and non-research options leading to the Master of Science degree. Students receiving the degree will be well prepared to pursue the Ph.D. at another institution, to teach at the junior college or high school level, or to work in industry.

The program leading to the Master of Science degree in chemistry is designed specifically for the full-time students entering in the fall semester. The normally well-prepared student may complete the degree requirements in three semesters (one calendar year).

Requirements

Applicants should have a bachelor's degree with strong undergraduate preparation in chemistry, mathematics and physics. Six graduate level courses in chemistry or related fields are required for graduation. At least twelve graduate level courses in physical, organic, analytical, and biochemistry are taught within the department. Advanced courses in mathematics, physics, and biology may also be taken for graduate credit. All courses offer four semester hours of credit, unless otherwise stated.

Graduate Course Offerings

CHM 513 Coordination Chemistry

A study of the transition metals in complex inorganic compounds with particular emphasis on bonding and structure as derived from spectral and magnetic properties. Inorganic reaction mechanisms and stereochemistry are also discussed.

Prerequisite: CHM 412, or equivalent.

CHM 515 Inorganic Reactions and Structure

An introduction to the modern theory of the chemical bond and to the principles of structural inorganic chemistry followed by a study of the families of elements and classes of compounds from the standpoint of molecular structure and the rates and equilibria involved in chemical reactions.

Prerequisite: CHM 412, or equivalent.

CHM 531 Organic Synthesis

Theory and practice of synthetic and degradative methods of organic chemistry. Applications of modern techniques will be emphasized.

Prerequisite: CHM 235, or equivalent.

CHM 533 Organic Mechanisms

Application of modern electronic theory to the structures and reactions of organic compounds. Preparative reactions from the recent chemical literature will be emphasized.

Prerequisite: CHM 235, or equivalent.

CHM 534 Natural Products

The application of modern synthetic and analytical methods in selected areas of natural product chemistry.

Prerequisite: CHM 235, or equivalent.

CHM 535 Analytical Organic Chemistry

Detailed treatment of instrumental and physical methods as applied to the structural determination of organic compounds.

Prerequisite: CHM 238, CHM 328; or equivalent.

CHM 543 Statistical Thermodynamics

The statistical basis of thermodynamics; ensembles, partition functions, and distribution functions; classical and quantum statistical mechanics; applications to simple physical and chemical systems.

Prerequisites: CHM 245, PHY 252, MTH 258; or equivalent.

CHM 544 Quantum Chemistry

This course will begin with an introduction to the fundamental mathematics of quantum mechanics with applications to problems of atomic structure and spectra, followed by some simple problems in covalent bonding, molecular orbital calculations and interpretation of molecular electronic spectra.

Prerequisites: CHM 245, PHY 252, and MTH 155, or equivalent.

CHM 545 Quantum Chemistry

The quantum-mechanics of molecular energies and structure will be presented, and the interpretation of infra-red, Raman, nuclear magnetic resonance, electron spin resonance and other spectra will be discussed. Applications of spectroscopy to problems of molecular structure, intermolecular forces, and chemical reactions may be studied.

Prerequisites: CHM 544, CHM 543 desirable.

CHM 551 Genetic Biochemistry

The biochemical basis of heredity; structure and genetic functions of DNA, RNA, and proteins; genetic control of cell biochemistry; biochemistry of viruses and bacteria.

Prerequisites: CHM 234, 244, or equivalent. Courses in biology are desirable.

CHM 690 Research (2, 4, 6, 8, 10, or 12 credits)

Directed research and study carried out under the supervision of a faculty member.

Prerequisite: Permission of the department.

SCHOOL OF EDUCATION

Laszlo J. Hetenyi, *Dean*
Roderic E. Righter, *Assistant Dean*

TEACHING FACULTY

Department of Teacher Education

Professors:
- Harry T. Hahn
- Laszlo J. Hetenyi

Assistant Professors:
- Harold C. Cafone
- Walter Feinberg
- June Gabler
- John H. Langer
- Roderic E. Righter

College of Arts and Sciences

Professors:
- G. Philip Johnson
- William Schwab

Associate Professors:
- Melvin Cherno
- George Cripps
- William C. Forbes
- Edward J. Heubel
- Donald C. Hildum

Assistant Professors:
- Peter G. Evarts
- Donald Iodice
- David G. Lowy
- Jack R. Moeller
- Samuel B. Thomas

The School of Education at Oakland University is a genuinely inter-disciplinary body. As the roster of the teaching faculty indicates, scholars from many departments contribute their talents to the education of teachers.

The College of Arts and Sciences and the School of Education jointly sponsor candidates for the Master of Arts in Teaching (M.A.T.) degree in a variety of disciplines for secondary teachers. Currently programs are available in English and mathematics, with additional programs (social science, French, history) projected for the future.

THE MASTER OF ARTS IN TEACHING

The School of Education sponsors candidates for the Master of Arts in Teaching (M.A.T.) degree in Elementary Education with concentrations in classroom teaching and in reading instruction. At some future date the school hopes to offer work in such fields as Special Education, Counselling and Guidance, Administration, as well as in the preparation of School Diagnosticians. These degrees, however, are not yet available.

Degree Requirements—General

Students who wish to enter any M.A.T. program must complete the application procedures for admission to graduate study (see page 9). Admission is selective and the School of Education will consider each applicant's case on its merits. After initial acceptance (admission to course), students are assigned a guidance committee and an adviser to assist in program planning. After completing 12 credits (normally three courses), the committee will evaluate the student's progress and plan the remainder of his program. A grade average of 3.0 or better is expected for academic good standing.

M.A.T. programs consist of 36 credits, of which four (4) are normally reserved for a terminal project. This project may, but need not, be a thesis. The student and his committee will work out the nature and scope of the project appropriate for each individual.

Degree Requirements—Secondary

In general, the bulk of each student's work will be in the discipline area of his major and such cognates as his major department prescribes, but each program will contain four (4) credits chosen from History of Education, Sociology of Education, Philosophy of Education, or Comparative Education; four (4) credits in either Developmental Psychology, or Tests and Measurements; and four (4) credits devoted to problems of teaching the discipline of the major—this last course conducted by the major department.

Degree Requirements—Elementary

As indicated, each student's program will be developed by his guidance committee, so that the patterns listed below should be regarded as typical examples, rather than set prescriptions. In planning the course of study the guidance committee will not only take into account the student's current needs and interests, but will attempt to strengthen or supplement those areas of undergraduate preparation where, either the student shows weakness, or where new data have made further work desirable.

A typical program for the M.A.T. for General Classroom Teachers might contain:

I.	Either:		
	Philosophy of Education	(4)	
	or		
	History of Education	(4)	
	or		
	Sociology of Education	(4)	
	or		
	Comparative Education	(4)	
			4 semester hours
II.	Developmental Psychology	(4)	
	Tests and Measurements	(4)	
	Curriculum Studies (if needed)	(4)	
	Terminal Project	(4)	
			12-16 semester hours
III.	Courses selected by the candidate and the guidance committee to produce a well-rounded program.		
			16-20 semester hours

A characteristic program for the M.A.T. with a concentration in Reading Instruction might contain:

I. Either:
Philosophy of Education (4)
or
History of Education (4)
or
Sociology of Education (4)
or
Comparative Education (4)
4 semester hours

II. Developmental Psychology (4)
Tests and Measurements (4)
Terminal Project (4)
Curriculum Studies (if needed) (4)
12-16 semester hours

III. Diagnosis of Reading Disability (4)
Correction of Reading Disabilities (4)
Problems in Reading Instruction (4-8)
Current Trends in Reading Instruction (if needed) (4)
12-20 semester hours

IV. Courses selected by the candidate and the guidance committee to produce a well-rounded program.
0-8 semester hours

The School of Education reserves the right to expand these typical requirements in order to remove deficiencies from, or bring up-to-date, the preparation of degree aspirants.

The terminal project will be developed by the candidate and his guidance committee. Many types of projects may be approved. One student may decide to write a Master's essay. Another may wish to perform a controlled study on the effectiveness of different instructional techniques. A third may wish to try out an experimental unit, and a fourth may propose the development of some teaching device of novel design. In some instances the student and the committee may decide that a special set of comprehensive or special field examinations might be appropriate. The latitude available to the committee and the student is extremely broad.

Certification

The M.A.T. degree programs are based on the assumption that students already hold (or are eligible for) the Michigan Provisional Certificate in the area of their specialization. Students who either hold no certificate, or wish to change specialization must expect to engage in a longer period of study than is implied by the programs described. Usually, however, combining certification with an M.A.T. program will require a shorter sequence than obtaining certification and the master's degree separately. Those seeking such a combined program should contact the School of Education for assistance in planning their course of study.

Course Offerings

ED 509 The School and the Disadvantaged Child— 2 credits

A study of the difficulties and opportunities arising in the schooling of children from disadvantaged home environments. The course will concern itself with such topics as: clashes between values in school and home environments, communication across sub-cultural barriers, problems of motivation, etc.

Prerequisite: Permission of the instructor.

ED 531 Current Trends in the Teaching of Reading— 4 credits

An intensive examination of current instructional practices, problems, and research in the teaching of reading. Prevailing trends in reading instruction will be evaluated in light of cumulative research findings concerning the development of reading skills.

Prerequisite: Admission to course in any graduate program or permission of the department.

ED 532 Teaching Reading in the Primary Grades— 4 credits

This course is designed to examine principles, practices and research related to early reading instruction. It will include an analysis of the relationship of the various language arts to reading skills and place emphasis upon the developmental skills of pupils starting with kindergarten.

Prerequisite: Admission to course in any graduate program or permission of the department.

ED 533 Teaching Reading in the Upper Grades—4 credits

This course is designed to examine the principles, practices and research related to the teaching of reading in grades four and higher. Emphasis will be placed upon the developmental reading skills in a reading program geared to the individual needs of pupils. Particular emphasis will be placed upon reading in the content areas.

Prerequisite: Admission to course in any graduate program or permission of the department.

ED 601 History of Education—4 credits

A study of the cultural forces (primarily in the West) as they shaped, and were shaped by, the education of the young. Characteristic patterns of educational institutions, changing conceptions of curricula, dominant social and philosophic ideas concerning education, significant contributions by individual educators, represent some of the professional topics which are discussed in their historical settings.

Prerequisite: Admission to course in any graduate program.

ED 602 Philosophy of Education—4 credits

A study of philosophical inquiry in relation to education. Philosophic analysis of educational problems, educational conclusions by systematic philosophers, logical relationships between various philosophical and educational positions are among the topics considered.

Prerequisite: Admission to course in any graduate program.

ED 603 Comparative Education—4 credits

An analysis of education and its relationship to social and economic change in various cultures. Lectures, readings, and discussions will deal primarily with existing educational systems originating in Western culture, such as Great Britain, U.S.S.R., Sierra Leone, Kenya, but the course will also include some study of selected utopian educational systems.

Prerequisite: Admission to course in any graduate program.

ED 611 Problems in Elementary Education—4-8 credits

A study of issues in the curriculum, methodology, organization, and administration of elementary schools. Student needs and preparation determine the specific topics included in a given semester. Students may register repeatedly for this course up to a total of eight (8) credits.

Prerequisite: Admission to course in a graduate program in Elementary Education.

ED 612 Curriculum Studies—4 credits

A study of curriculum theories and practices in light of modern educational research. The course will investigate the sum total of experiences provided for young people in school settings and will challenge established practices on the basis of recent curricular developments.

Prerequisite: Admission to course in a graduate program in Elementary Education.

ED 631 Problems in Reading Instruction—4-8 credits

A study of diagnostic, methodological, organizational, and administrative issues in reading programs. Student needs and preparation determine the specific topics included in a given semester. Students may register repeatedly for this course up to a total of eight (8) credits.

Prerequisite: Admission to course in a program in Education and at least one previous course in reading instruction.

ED 632 Diagnosis of Reading Disabilities—4 credits

A laboratory course concerned with the analysis and study of factors which contribute to or precipitate reading disabilities in elementary and/or secondary school pupils. The course includes selection and administration of both informal and standardized tests and also deals with the preparation and evaluation of case reports.

Prerequisite: Admission to course in a graduate program in Elementary Education and at least one previous course in reading instruction.

ED 633 Correction of Reading Disabilities—4 credits

A laboratory course designed to focus attention on methods, materials, and practices pertaining to the instruction of disabled readers. The course provides opportunities to plan, organize,

and conduct remedial instruction for children under the supervision of the instructor.

Prerequisite: Admission to course in a graduate program in Education and at least one previous course in reading instruction.

ED 699 Terminal Project—4 credits

The planning and execution of a significant research or action project in accordance with the advice of the student's guidance committee.

Prerequisite: Admission to degree candidacy in a graduate program in Elementary Education *and* written approval of the student's guidance committee.

The Department of Psychology does not presently offer a program leading to the Master's Degree although such a course of study is expected to begin within the next year. Certain courses which may be taken for credit by graduate students in the M.A.T. programs are offered by this department and are listed below:

PSY 510 Developmental Psychology—4 credits

Designed for Master's candidates. Description and evaluation of the principles and theories of development from birth to maturity. Maturational processes, learning and emotional disturbances will be some of the issues considered.

Prerequisite: Permission of instructor or acceptance into graduate program.

PSY 520 Tests and Measurement—4 credits

Theories of measurement and evaluation. The concepts of standardization, reliability and types of validity will be considered. Construction, administration and utilization of tests of ability, achievement, interests and objective tests of personality are included.

Prerequisites: Four courses in Psychology including PSY 353 and PSY 361 or acceptance into graduate program.

PSY 620 Individual Testing—4 credits

Designed for Master's candidates. Theory of intelligence testing. Administration and interpretation of Stanford-Binet and Wechsler tests.

Prerequisite: Permission of instructor or acceptance into graduate program.

DEPARTMENT OF ENGLISH

Professors:

Robert Hoopes, Chairman
William Schwab

Associate Professors:

Maurice F. Brown
Thomas Fitzsimmons
Gertrude M. White

Assistant Professors:

John G. Blair
Peter G. Evarts

THE MASTER OF ARTS IN ENGLISH

The programs leading to the degree of Master of Arts in English have been designed to provide training for the student interested in increasing his proficiency in areas of English and American language and literature. Upon program completion, candidates may continue work to the Ph.D. at another institution, or find the degree work useful in teaching and other professional activity.

Requirements for the Degree

Nine courses, three of which are specified: English 680 or 681, English 690, and one graduate seminar in English. The six additional courses shall be chosen in consultation with the student's Program Adviser from additional graduate offerings in English, and from appropriate courses in other graduate programs or in cognate liberal arts fields. A minimum of one cognate course is required. Candidates for the degree will be expected to show proficiency in the reading of a second language (ancient or modern) by examination early in the program.

THE MASTER OF ARTS IN THE TEACHING OF ENGLISH

The program leading to the degree of Master of Arts in the Teaching of English has been designed for students who wish to pursue graduate study to improve their competence as teachers of English and American literature and language. It is sponsored jointly by the Department of English and the School of Education.

Requirements for the Degree

Nine courses, five of which are specified: one graduate seminar in English, English 680 or 681, English 690, one course in the history, philosophy, or sociology of education or in comparative education, and one course in developmental psychology

or in tests and measurements. The remaining four courses shall be chosen in consultation with the student's Program Adviser from graduate offerings in English (limit: twelve additional hours), courses in cognate liberal arts fields (limit: eight hours), and graduate courses in Education (limit: four additional hours).

TYPICAL PROGRAMS

The Master of Arts in English (a typical program)

Semester 1: ENG 680 or 681: Independent Reading
Any 500 level ENG course: period, author, topic, or language course
English or cognate course
(Language examination passed and Acceptance to degree candidacy)

Semester 2: Any 500 level ENG course: period, author, topic or language course
Cognate course or English
Any 600 level ENG course: Seminar
(Project proposal accepted)

Semester 3: English or cognate course
Cognate course
ENG 690: The Master's Project

*The Master of Arts in the Teaching of English (a typical program)**

Semester 1: Any 500 level ENG course: period, author, topic, or language course
ENG 680 or 681: Independent Reading
Any 600 level ED course or any 500 level PSY course: See degree requirements
(Acceptance to degree candidacy)

Semester 2: Any 500 level ENG course: period, author, topic, or language course
Any 500 level PSY course or any 600 level ED course: See degree requirements
Any 600 level ENG course: Seminar
(Project proposal accepted)

Semester 3: Cognate course or English
Cognate course or Education
ENG 690: The Master's Project

**Bachelors of Arts with major in English, applying for the M.A.T. in English and Certification, would take ED 428: Teaching of the Major Field, and ED 455: Internship (8 hours), in a fourth semester. The Graduate Programs Committee may require other undergraduate courses in Education when appropriate.*

GRADUATE COURSE OFFERINGS

Courses in English. Departmental offerings are listed below. All courses offer four semester hours of credit, unless otherwise stated. Some of the courses numbered in the 500-range are joint courses, offered to graduate students and to undergraduate English majors. They are usually lecture and recitation courses enrolling from 30-50 students. A second group of 500 courses are conference courses, offered to graduate students only and numbering up to 30 students. All 500 courses offered in the Summer School are of this nature. Seminar courses, listed in the 600-range and limited to 12 students, are intensive courses, requiring initiative and individual work of a scholarly nature. Course offerings in each semester will vary considerably, and the student should consult a schedule of classes.

English 680 and 681 are independent reading courses, in which the student is asked to assess his strengths and weaknesses at the beginning of graduate study and to identify areas of literature, literary history or critical methodology in which he wishes or needs to read. The courses provide a general introduction to graduate study, to the library, and to problems of research and bibliography.

English 690 involves completion of a modest project of creative, scholarly, or pedagogical nature, proposed by the degree candidate toward the end of his program. Any written work to be submitted in partial or total fulfillment of a project should not exceed a limit of 7500 words. Upon acceptance of a proposal, the Graduate Programs Committee will appoint a faculty member to supervise and evaluate the project. A form for application to enter English 690 is available in the Departmental Office.

Courses in Other Professional and Liberal Arts Areas. Beyond the eight hours required in graduate work in Education and Psychology for the M.A.T. degree, candidates for both degrees who are adequately prepared in English are urged to take work in graduate programs other than English or in advanced courses offered to majors in cognate liberal arts fields. Such course work should be advanced work in a field of some competence, or exploration of relevant but relatively unknown territory. At least one cognate course is required in the M.A. program.

ENG 500 Advanced Topics in Literature and Language

Special topics and problems as selected by the instructor. May be taken for credit more than once, provided the topic is not repeated. Conference Course.

ENG 507 Contemporary Drama

Representative plays of major contemporary writers from Ibsen to Albee. Conference Course.

ENG 510 Literature and Composition

Writing and the criticism of writing. An exploration of relationships among the study of literature, the study of language, and composition. Conference Course.

ENG 512 Myth and Literature

The principle Greek and Roman myths and their uses in classical and postclassical art and literature.

ENG 525 Melville

Intensive study of Melville's works with emphasis on prose fiction, especially *Moby Dick*. Scrutiny of critical cliches about Melville. Conference Course.

ENG 551 Chaucer

The major works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

ENG 565 Shakespeare

Intensive analysis of four or five of the plays, textual and dramatic criticism, sources, and Shakespeare in the theater.

ENG 566 Milton

Selected early poems, including "On the Morning of Christ's Nativity," "Comus," "Lycidas"; some of the sonnets and prose treatises; *Paradise Lost, Paradise Regained,* and *Samson Agonistes*.

ENG 577 Modern English Grammar

A survey of English structure, especially of syntax, with descriptions based on the work of important contemporary scholars.

ENG 583 Transformational Grammar

The goals of generative-transformational theory; detailed analysis of the generative-transformational model; pedagogical applications. Conference Course.

ENG 621 Seminar: American Transcendentalists

Criticism and research in selected topics in the work of Emerson, Thoreau, Parker, Fuller, Brownson, Alcott, and others. Permission of instructor.

ENG 657 Seminar: English Drama to 1590

Medieval liturgical drama and its sources. Craft cycles, moralities, farces. School plays, inns of court plays, the court drama. Early English comedies and tragedies. Plays of Shakespeare's immediate predecessors, especially Marlowe. Permission of instructor.

ENG 660 Seminar: Humanism and Science, 1600-1660

Experience, reason, and authority in the late Renaissance. Anti-scholasticism, anti-Ciceronianism, and mutations of melancholy in Hooker, Bacon, Chapman, Donne, Burton, Browne, Descartes, Hobbes, the Cambridge Platonists, and Milton. Permission of instructor.

ENG 670 Seminar: The Nineteenth-Century English Novel

Intensive reading and discussion of selected masterpieces of fiction and independent work on a topic in the area. Permission of instructor.

ENG 680 Independent Reading I

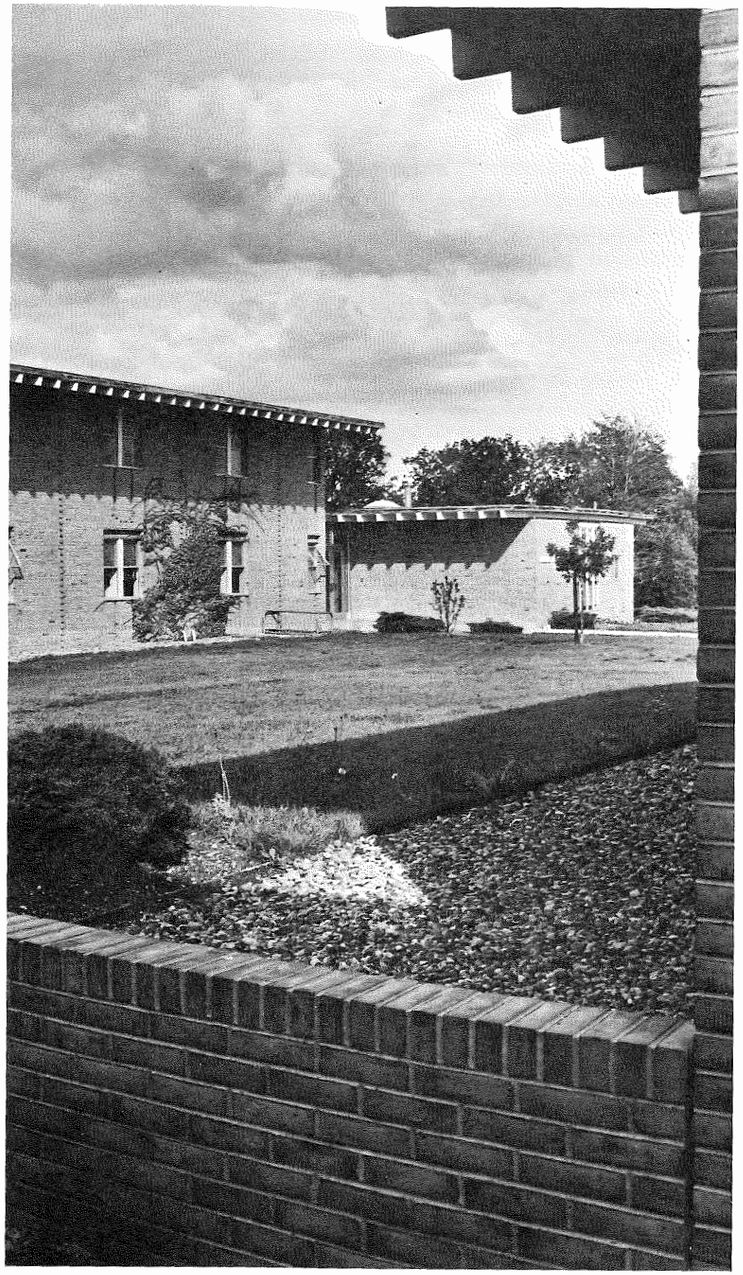
Independent reading in English literature from the beginning to 1800. Reading is selected by student, in conference with instructor. Attention given to problems of bibliography and literary scholarship.

ENG 681 Independent Reading II

Independent reading in English literature from 1700 to the present, and in American literature. A companion course to English 680, it may be taken independently.

ENG 690 The Master's Project

Completion of a modest project of creative, scholarly, or pedagogical nature proposed by the degree candidate. Permission of Graduate Programs Committee.



DEPARTMENT OF MATHEMATICS

The following members of the Department of Mathematics participate in the graduate program, either in teaching courses or in directing study and research.

Professors:
- G. Philip Johnson, *Chairman*
- Louis R. Bragg
- John W. Dettman
- James McKay

Associate Professors:
- Donald G. Malm
- Harvey A. Smith
- Beauregard Stubblefield

Assistant Professor:
- Jogindar Singh Ratti

THE MASTER OF ARTS IN MATHEMATICS

The curriculum for students seeking the M.A. degree in mathematics is designed primarily to be the first part of a Ph.D. program. While some students may elect to proceed directly from their degree work to teaching, government, or industrial jobs, the majority will transfer to other universities to continue work for the Ph.D. A normally prepared and progressing student should be able to satisfy all the requirements and take his M.A. in three semesters (one calendar year), taking three four-credit courses each semester. Because the enrollment is small, students can expect to receive a good deal of individual attention and encouragement from the faculty.

Applicants for the program should have strong undergraduate backgrounds in mathematics. It is highly desirable that their work include two semester courses in elementary real variable theory, a course in linear algebra, and a course in modern algebra. Students with deficiencies in these areas will be asked to register for courses to correct the deficiencies, and it is likely that their degree programs will take somewhat longer than one year to complete.

Teaching assistantships are available in the program. Each carries a stipend of $2400 for two semesters, in compensation for about six hours a week of recitation supervision in calculus. Additional support for the third semester is available on a selective basis.

The bulk of the courses taken in the program is drawn from the following list.

MTH 551-552 Real Analysis—8 credits

Measure theory and integration, differentiation, implicit functions, elements of functional analysis.

MTH 555-556 Complex Analysis—8 credits

The Cauchy Theorem, Laurent expansions, conformal mapping, Riemann surfaces.

MTH 561-562 Topology—8 credits

Homotopy and homology groups, cohomology theory.

MTH 571-572 Algebra—8 credits

Groups, rings, fields, modules, and vector spaces.

Other courses will be added to this list as the need for them arises, and nominally senior level courses can also be taken for graduate credit in limited number. Reading and research for credit is done under the course title MTH 590, *Directed Research*. A total of 36 credits is required for the degree and of these at least 4 must come from MTH 590. With the staff expected for 1966-67, students can satisfy their reading and research requirements in point-set topology, alegbraic topology, group theory, functional analysis, differential equations, complex analysis, probability, graph theory, and applied mathematics. There is necessarily some variation in the curricula undertaken by candidates, but the following is representative.

Fall Semester—MTH 551, MTH 461 (General Topology), MTH 571

Winter Semester—MTH 552, MTH 561, MTH 572

Spring Semester—MTH 555, MTH 562, MTH 590

Each student's program is supervised by a committee of three department members. The committee is charged with passing on the acceptability of the student's performance and with setting a comprehensive examination for him near the end of the program.

THE MASTER OF ARTS IN TEACHING DEGREE IN MATHEMATICS

The primary purpose of this program is to provide a Level IV preparation in mathematics as recommended by the Committee on the Undergraduate Program in Mathematics of the Mathematical Association of America. Graduates should be capable of teaching advanced placement courses in high school (calculus, linear algebra, probability, etc.) or of teaching at the freshman or sophomore level in college.

It is normal practice for students to pursue their M.A.T. work on a part-time basis; during each of the fall and winter semesters they take a single course. Participation during the eight-week summer session, on the other hand, is usually full-time. On this basis the degree requirements can be satisfied in a little less than two and one-half years.

A background of at least 30 semester credits in undergraduate mathematics is required of applicants.

The requirements for the M.A.T. degree consist of 36 credits of graduate work. Normally a candidate will complete seven four-credit courses in mathematics and two in education or psychology. Among his mathematics credits he must include at least 4 credits in independent reading, and he must present to the mathematics department a critical essay based on his reading. A committee of three faculty members will supervise his program and judge the merits of his essay and his overall performance.

The mathematics courses offered for the program include sequences in algebra and analysis, which provide the core of all students' degree work. These sequences are the following.

MTH 514-515 Concepts in Modern Algebra—8 credits

Includes topics from groups, rings, fields, matrices, linear transformations, and vector spaces.

MTH 517-518 Concepts in Analysis—8 credits

Includes a study of real and complex numbers, functions, limits, differentiation, integration, and infinite series with emphasis on careful proofs of theorems.

Other mathematics courses can be taken from the department's offering at the senior level. When such courses are given during the summer session, they are likely to be modified to meet

special interests of M.A.T. candidates. Independent reading is done under the course title MTH 590, *Directed Research.* Schedules for degree work will vary considerably, but the following is typical for a part-time student.

Fall Semester, 1st year	MTH 514
Winter Semester, 1st year	MTH 515
Summer Session, 1st year	MTH 416 (Concepts in Geometry) An Education or Psychology Course
Fall Semester, 2nd year	MTH 517
Winter Semester, 2nd year	MTH 518
Summer Session, 2nd year	MTH 425 (Probability) An Education or Psychology Course
Fall Semester, 3rd year	MTH 590

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