

OAKLAND UNIVERSITY

GRADUATE STUDY
GENERAL INFORMATION BULLETIN
1971-1972



ROCHESTER, MICHIGAN

This bulletin of general information is an abridgement of the graduate catalog and contains a detailed description of the Special Education program for teachers of the emotionally disturbed, a degree program not yet available when the 1970-71 graduate catalog was published. Persons desiring additional information not included in this publication may request a copy of the official *Graduate Bulletin*. Other information may also be obtained from the Office of Graduate Study, Oakland University, Rochester, Michigan 48063.

Oakland University affirms that an Assurance of Compliance with Title VI of the Civil Rights Act of 1964 has been executed and is fully applicable to the policies and practices of this University. Specifically, admission to the University or employment by the University is provided to qualified persons without discrimination on the grounds of race, creed, color, or national origin.

All announcements in this bulletin are subject to revision at the discretion of the University.

December, 1970

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UNIVERSITY CALENDAR

1970-1971 Fall Semester

September 8, 9	Tuesday, Wednesday	Registration
September 10	Thursday	Classes begin
November 26-29	Thursday-Sunday	Thanksgiving recess
November 30	Monday	Classes resume
December 16	Wednesday	Classes end
December 17	Thursday	Final Examinations begin
December 22	Tuesday	Final examinations end

Winter Semester

January 4, 5	Monday, Tuesday	Registration
January 6	Wednesday	Classes begin
March 4-7	Thursday-Sunday	Winter recess
March 8	Monday	Classes resume
April 15	Thursday	Classes end
April 16	Friday	Final examinations begin
April 21	Wednesday	Final examinations end
April 24	Saturday	Commencement

Spring Session

April 27	Tuesday	Registration
April 28	Wednesday	Classes begin
May 28	Friday	Holiday
June 17	Thursday	Classes end
June 18, 19	Friday, Saturday	Final examinations

Summer Session

June 21	Monday	Registration
June 22	Tuesday	Classes begin
July 2	Friday	Holiday
August 11	Wednesday	Classes end
August 12, 13	Thursday, Friday	Final examinations

This calendar is subject to revision.

UNIVERSITY CALENDAR

1971-1972

Fall Semester

September 7, 8	Tuesday, Wednesday	Registration
September 9	Thursday	Classes begin
November 25-28	Thursday-Sunday	Thanksgiving recess
December 16	Thursday	Classes end
December 17	Friday	Final examinations begin
December 22	Wednesday	Final examinations end

Winter Semester

January 3, 4	Monday, Tuesday	Registration
January 5	Wednesday	Classes begin
March 2-5	Thursday-Sunday	Winter recess
March 6	Monday	Classes resume
April 13	Thursday	Classes end
April 14	Friday	Final examinations begin
April 19	Wednesday	Final examinations end
April 22	Saturday	Commencement

Spring Session

April 26	Wednesday	Registration
April 27	Thursday	Classes begin
May 30	Tuesday	Holiday
June 16	Friday	Classes end
June 19, 20	Monday, Tuesday	Final examinations

Summer Session

June 21	Wednesday	Registration
June 22	Thursday	Classes begin
July 4	Tuesday	Holiday
August 11	Friday	Classes end
August 14, 15	Monday, Tuesday	Final examinations

This calendar is subject to revision.

ACADEMIC STRUCTURE

Oakland University, an institution supported by the State of Michigan, offers programs in liberal arts and sciences and professional training in economics and management, engineering, teacher education, and the performing arts. The University comprises the College of Arts and Sciences, the School of Economics and Management, the School of Education, the School of Engineering, and the School of Performing Arts. Diversified non-credit courses are given by the Division of Continuing Education.

GRADUATE PROGRAMS

The College of Arts and Sciences offers programs leading to the degree of Master of Arts in English, mathematics, and psychology and to the degree of Master of Science in chemistry and physics. The School of Education offers programs of instruction leading to the degree of the Master of Arts in Teaching in elementary education, reading instruction and special education — emotionally disturbed children. The College of Arts and Sciences and the School of Education jointly offer programs leading to the degree of the Master of Arts in Teaching in English and in mathematics. The School of Engineering offers work leading to the degree of Master of Science in engineering, with concentrations in systems engineering, energy engineering, and electromagnetic and optical engineering.

ADMISSION, DEGREE CANDIDACY, AND GRADING

REQUIREMENTS FOR ADMISSION

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

An applicant must have an acceptable baccalaureate or its equivalent from an accredited undergraduate institution. The degree should have been conferred within the past ten years; occasionally applicants with degrees awarded more than ten years ago will be admitted.

APPLICATION FOR ADMISSION BY FOREIGN STUDENTS

A foreign student should write to the Office of Graduate Study, Oakland University, Rochester, Michigan 48063, at least six months prior to the date he hopes to enter the University. He will be sent instructions and application forms, which he should complete and return promptly. If his application is approved, he will receive a certificate of permission to enter the University. Foreign students are normally required to submit scores from the Graduate Record Examination Aptitude Test prior to admission, and scores from one or more Advanced Tests of the Graduate Record Examination may be required in addition at the discretion of the departments or schools concerned. Scores from the Test of English as a Foreign Language or a comparable examination are also required.

Prior to a student's official registration, proof of adequate medical insurance must be on file in the University's Health Center.

ADMISSION TO COURSE

Application for admission to course must be accompanied by an official record of work done at undergraduate and graduate institutions.

Admission to course neither implies nor precludes admission to degree candidacy.

DEGREE CANDIDACY

A student must apply for admission to degree candidacy upon completion of 12 credits at Oakland University unless he is registered under Special Graduate Status. Application forms are available in the department or school in which the student is enrolled.

When the student applies for degree candidacy the sponsoring department or school will:

- (1) accept him as a degree candidate, or
- (2) permit him to continue on a non-matriculated basis, or
- (3) recommend that he withdraw from the University.

The recommendation of the department or school will be regarded as final unless the student wishes to make special petition to the Graduate Council.

TRANSFER OF CREDIT

A graduate student wishing to transfer credit from other colleges or universities must have such credit approved by his academic

adviser. The credit to be transferred will be included on the Application for Admission to Degree Candidacy. A maximum of 12 semester hours or 16 quarter hours will be accepted toward a graduate degree, assuming the credit is approved by the academic adviser and the Dean of Graduate Study. Conversely, 24 semester hours constitute the normal minimum residence requirement. After approval, transfer credit will be recorded on the student's official transcript in the Office of the Registrar.

SPECIAL GRADUATE STATUS

Special Graduate Status may be granted a student who wishes to take graduate courses but not to work toward a degree. An applicant wishing to strengthen his background prior to admission to a graduate degree program, or to work toward permanent teacher certification may apply for admission under this status.

Credit earned under Special Graduate Status will be officially recorded and may be applied toward degree requirements if a student later chooses to seek a degree. However, admission under Special Graduate Status in no way implies admission to a degree program. A Special Graduate Status student who wishes to apply for admission to course or degree candidacy must file a request for change of status with the Office of Graduate Study. Approval of this request is at the option of the academic department or school.

Although admission under Special Graduate Status may be granted prior to the receipt of transcripts and letters of recommendation, an official transcript verifying receipt of a baccalaureate or its equivalent from an accredited undergraduate institution must be on file before the end of the student's first semester on campus or re-enrollment will not be allowed.

Students attending under Special Graduate Status are normally limited to a maximum of 12 credits of graduate work at Oakland University.

TEACHER CERTIFICATION

A student who has his baccalaureate and wishes to work toward provisional teacher certification should apply as a Post Bachelors student. The application must be filed, and official transcripts from each undergraduate or graduate college or university attended must be submitted. Assuming admission is granted, the student will be referred to an appropriate faculty member who will assist the student in developing a certification program.

ACADEMIC ADVISING

Every student admitted to a graduate degree program is assigned an adviser upon admission. The adviser will be a faculty member in the school or department in which the student is enrolled. Only those students enrolled in degree programs are assigned advisers. Students admitted under Special Graduate Status are encouraged to contact the Office of Graduate Study if advice regarding course selection is required.

PHYSICAL EXAMINATION

All graduate assistants and those graduate students who plan to take more than 9 credits in a semester are required to offer evidence of a physical examination. The physical examination form will be mailed to the applicant if admission is granted. The form must be completed and returned before registration.

COURSE NUMBERING SYSTEM

Courses numbered 100 to 299 are introductory or intermediate undergraduate courses. Courses numbered 300 to 499 are advanced courses primarily for undergraduates. Courses numbered 500 and above are primarily for graduate students. A department or school at its discretion may authorize or refuse to authorize graduate credit for any course numbered 300 to 499.

TUITION AND FEES

GENERAL POLICY

The Board of Trustees of Oakland University reserves the right to change any and all rates of charge at such times as conditions or circumstances may make change necessary. All charges are assessed and payable in U.S. dollars. Checks and money orders should be made payable to Oakland University. To cover the cost of required expenses at registration, students are urged to use checks or money orders rather than cash. If those checks or money orders are in excess of the required payments, the balance will be paid to the student.

COURSE FEES AND TUITION

Course fees and tuition for each semester are assessed on the basis of the credit value of the courses taken. All fees must be paid in full at registration. One credit hour is the equivalent of one semester hour.

TUITION CHARGES

Credits	Michigan Residents		Out-of-State Residents	
	Per Credit	Total	Per Credit	Total
21	\$19.50	— \$409.50	\$46.50	— \$976.50
20	19.50	— 390.00	46.50	— 930.00
19	19.50	— 370.50	46.50	— 883.50
18	19.50	— 351.00	46.50	— 837.00
17	19.50	— 331.50	46.50	— 790.50
16	19.50	— 312.00	46.50	— 744.00
15	20.50	— 307.50	48.50	— 727.50
14	21.50	— 301.00	50.50	— 707.00
13	22.50	— 292.50	52.50	— 682.50
12	23.50	— 282.00	54.50	— 654.00
11	24.50	— 269.50	56.50	— 621.50
10	25.50	— 255.00	58.50	— 585.00
9	26.50	— 238.50	60.50	— 544.50
8	27.50	— 220.00	62.50	— 500.00
7	28.50	— 199.50	64.50	— 451.50
6	29.50	— 177.00	66.50	— 399.00
5	30.50	— 152.50	68.50	— 342.50
4	31.50	— 126.00	70.50	— 282.00
3	32.50	— 97.50	72.50	— 217.50
2	33.50	— 67.00	74.50	— 149.00
1	34.50	— 34.50	76.50	— 76.50

PROCESSING FEE

A fee of \$10 must accompany an application for admission to a program. This is a processing fee and is not refundable.

LATE REGISTRATION FEE

Students registering or paying fees after the regular registration date are required to pay an additional, non-refundable fee of \$1 per credit hour on the first day and \$2 per credit hour on the second and subsequent days.

STUDENT HEALTH FEE

A fee of \$10 per semester to cover the use of the student health facility is charged graduate students enrolled for 10 or more credits.

OAKLAND CENTER FEE

A fee of \$15 per semester to assist in the financing of the Oakland Center is charged graduate students enrolled for 10 or more credits.

PARKING FEE

Parking of automobiles on campus is regulated by the University's Department of Public Safety. A yearly parking fee of \$16 is payable at the time of registration by those students who will find it necessary to park on campus before 5:00 p.m.

RESIDENT HOUSING: RESERVATIONS, DEPOSIT, FEES

Graduate students interested in University housing can procure information from the Director of Housing, Oakland University. 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 \$525 per semester.

OUT-OF-STATE TUITION RULES

1. A resident of Michigan (except for aliens) is defined as a person who has resided in this State for six months immediately preceding his first enrollment.
2. No one may gain or lose the status of a resident while a student at the University.
3. The residence of a minor shall be the same as that of his legal guardian except where guardianship has been established in this State for the purpose of evading the fee.
4. Aliens who have secured their Declaration of Intent papers and have otherwise met the residence requirements shall be considered residents.
5. The residence status of any person other than a parent or legal guardian who may furnish funds for the payment of University fees shall in no way affect the residence status of the student.

FINANCIAL AID

Oakland University seeks to make a variety of financial aids available to full-time graduate students. Teaching and research assistantships are awarded selectively at the discretion of the various departments and schools; graduate fellowships are awarded on a competitive basis to students nominated by the various academic departments and schools. Inquiries concerning other kinds of financial aid, such as National Defense Education Act Loans and employment under the College Work Study Program, should be directed to the Financial Aid Office as early as possible before registration.

A limited number of graduate assistantships are awarded to qualified students in the departments and schools of the University offering graduate programs. These assistantships are unrestricted as to citizenship; foreign students are therefore eligible to apply. Graduate students who receive assistantships may also be awarded fellowships. The 1970-71 stipends for graduate assistants ranged up to \$2,500 for two semesters, depending on the nature of the assignment and on the hours of work. The 1971-72 stipends are likely to be somewhat higher. Inquiries and applications for assistantships should be addressed to the chairman of the department or the dean of the school in which the assistantship is desired. An official University application form must be filled out and submitted. The student must apply for admission to graduate study, however, before he can be considered for an assistantship.

COLLEGE OF ARTS AND SCIENCES

DEPARTMENT OF CHEMISTRY THE MASTER OF SCIENCE IN CHEMISTRY

The program leading to the degree of Master of Science in chemistry is designed especially for full-time students, but provision is made for part-time students who wish to pursue an advanced degree during the daytime. The program is arranged so that the well-prepared full-time student should be able to finish in one calendar year (including the Spring and Summer Sessions). All graduate students must receive approval of the departmental graduate program adviser before enrolling in courses.

Admission to Course

An applicant for admission to the Master of Science program should have received a bachelor's degree within the past five years from an accredited institution. He should have completed not fewer than 36 credits in chemistry (including all major areas), 12 credits in mathematics (calculus and above), and 8 credits in physics. Students with deficiencies in these areas may be asked to correct these deficiencies, and their graduation may thus be delayed. A grade point average of at least 2.75 (on a 4.0 scale) in these courses is usually required, but applicants will be considered on their individual merits upon recommendation of persons familiar with the applicant's educational background. The Graduate Record Examination may be required.

Any of the above requirements may be waived by the Department.

Requirements for the Degree

The candidate for the degree of Master of Science in chemistry must complete the following minimum requirements: 30 credits in courses carrying graduate credit, of which 24 credits must be in chemistry. Of these 24 credits, 16 must be from four of the following areas: biochemistry, inorganic chemistry, organic chemistry, physical chemistry, and analytical chemistry. Of the remaining 8 credits in chemistry, a minimum of 6 credits must be in CHM 690. The candidate must have demonstrated accomplishment or made satisfactory progress in research and must present a master's thesis. He must pass a final master's examination, and he must demonstrate reading proficiency in a foreign language.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

CHM 312	Inorganic Chemistry	(4 credits)
CHM 317	Inorganic Chemistry Laboratory	(1 credit)
CHM 324	Analytical Chemistry	(2 credits)
CHM 328	Analytical Chemistry Laboratory	(2 credits)
CHM 344	Physical Chemistry	(4 credits)
CHM 345	Physical Chemistry	(4 credits)
CHM 348	Physical Chemistry Laboratory	(2 credits)
CHM 351	Biochemistry	(4 credits)
CHM 357	Biochemistry Laboratory	(1 credit)
CHM 371	Environmental Chemistry	(3 credits)
CHM 400	Seminar	(1 credit)
CHM 405	Selected Topics	(2, 4 or 6 credits)
CHM 413	Advanced Inorganic Chemistry	(4 credits)
CHM 422	Advanced Analytical Chemistry	(4 credits)
CHM 426	Instrumentation	(3 credits)
CHM 434	Advanced Organic Chemistry	(4 credits)
CHM 444	Advanced Physical Chemistry	(4 credits)
CHM 448	Spectroscopy Laboratory	(2 credits)
CHM 452	Advanced Biochemistry	(4 credits)
CHM 487	Advanced Preparations	(2 or 4 credits)

Chemistry courses on the 500 level are graduate courses available to well-prepared undergraduate students with permission of the Department. These courses may be offered as reading courses on a tutorial basis or as small lecture courses.

CHM 512, 513	Topics in Inorganic Chemistry	(4 credits each)
CHM 523, 524	Topics in Analytical Chemistry	(4 credits each)
CHM 531, 532, 533	Topics in Organic Chemistry	(4 credits each)
CHM 543, 544	Topics in Physical Chemistry	(4 credits each)
CHM 552, 553	Topics in Biochemistry	(4 credits each)

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

The Department of English offers programs leading to the degree of Master of Arts in English and Master of Arts in Teaching in English. The latter program is jointly sponsored by the Department of English and the School of Education.

Admission to Course

Admission to course in either of the Department's advanced degree programs is selective. Chief qualifications are the degree of Bachelor of Arts from an accredited institution, academic ability as indicated by past record, capacity to meet standards of advanced scholarship as estimated by informed referees (e.g., undergraduate professors), and interest in continued study of letters. An English major, as such, is not regarded as indispensable background, but a substantial number of undergraduate English courses will normally be expected to appear in the applicant's record. Evidence of additional reading in the literature of history, philosophy, and theology is welcome; prior study in linguistics and philology is also recommended.

Undergraduate course work in language and literature should show a grade point average of no less than 3.0 (on a 4.0 scale). Superior performance in these areas during the latter part of a student's undergraduate career, together with strong letters of recommendation, may in the Department's judgement counterpoise a cumulative GPA in all courses as low as 2.75. An applicant expecting consideration for admission must, however, have a cumulative GPA no lower than 2.75.

When a student of specially recommended ability, but with insufficient background — in extent or balance of previous studies — is admitted, he will be advised concerning improvement of his preparation and will usually be asked to take an appropriate number of departmental undergraduate courses before commencing graduate work. His degree program, accordingly, may require a proportionately longer period to complete.

Students in either the M.A. or M.A.T. program whose undergraduate record shows no course in English language or linguistics will be asked to include one such course among their graduate undertakings.

THE MASTER OF ARTS IN ENGLISH

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

Requirements for the Degree

Nine courses (36 credits) are required, three of which are specified: ENG 690 and two graduate seminars in English. The six additional courses are to be chosen in consultation with the student's program adviser. Within the 36 credits required for the degree, a student may be permitted to take one course in a cognate liberal arts field, or ENG 510 in lieu of a cognate, but only with specific approval of his adviser. Candidates for the degree will be expected to show competence in the reading of a second language (ancient or modern) by examination early in the program. They will not be accepted to degree candidacy or allowed to continue course work beyond 12 credits until they have satisfied the language requirement. (See also the Master of Arts with English language concentration below.)

THE MASTER OF ARTS WITH ENGLISH LANGUAGE CONCENTRATION

The program leading to the degree of Master of Arts with English language concentration is not a separate degree program but a concentration within the existing Master of Arts in English program. The Master of Arts with English language concentration is provided for those students who wish to study the structure and history of the English language on the graduate level.

Admission to Course

Any student duly admitted into the M.A. program may, in consultation with his adviser, arrange a program with English language concentration. The only added prerequisite for this program is any one of the following three courses: ENG 376, History of the English Language; ENG 377, Modern English Grammar; or ENG 382, Old English. The equivalent of any one of these will also be accepted.

Requirements for the Degree

Nine courses (36 credits) are required, six of which are specified: the two undergraduate courses from the above list (ENG 376, 377, 382) which were not taken as prerequisite; ENG 534, Language History; ENG 642, Studies in Old and Middle English Literature; ENG 647, Studies in the Structure of English; and ENG 690, The Master's Project. The other three courses will be elected from graduate offerings in English literature. The language requirement for the Master of Arts in English is also applicable to this concentration.

THE MASTER OF ARTS IN TEACHING IN ENGLISH

The program leading to the degree of Master of Arts in Teaching in English addresses itself to the same ends as those of the program leading to the Master of Arts in English, but is designed more particularly 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 (36 credits) are required, five of which are specified: ENG 510, ENG 690, one graduate seminar in English; one course chosen from the following group of four alternates: ED 601, ED 602, ED 603, or ED 604; and one course chosen from the following group of two: PSY 510 or PSY 520. The remaining four courses in English are to be chosen in consultation with the student's program adviser.

Classification of Course Offerings

The graduate programs of the Department of English offer three kinds of courses:

(1) Undergraduate Courses (300 level)

The student may take a maximum of two undergraduate courses to be chosen from regular department 300-level offerings. Such courses are deemed useful principally in preparing the student to take seminars in areas of language and literature with which he is not familiar. No more than five graduate students may enroll in any 300-level course. Enrollment for all undergraduate courses is subject to the approval in writing of the student's adviser.

(2) Core Courses (500 level)

Core courses are designed to familiarize the student with principal approaches to language and literature and to methods and tools

appropriate to those approaches. The Department considers these courses to be central to the graduate program and recommends that the student take at least three of them. They should be considered as helpful aids in coping with the more specialized work of the seminars. Each of these courses will be offered at least once during the year. (ENG 500 and 510, as noted below in the list of course offerings, are specialized courses, not core courses.)

(3) Seminars and the Master's Project (600 level)

(a) Seminars

The purpose of the graduate seminar is to allow the student to do independent work in an area in which the instructor has special sophistication, at the same time to gain criticism and support from other students working in the same area. Classes will consist mainly of the reading and discussion of papers prepared by the students on topics specified by the instructor. The instructor will prescribe the particular subject matter of each course during any given term. First-term students may not enroll in a seminar without permission of the Department Committee on Graduate Programs. Seminars are limited to twelve students.

(b) ENG 690 The Master's Project

ENG 690 involves completion of a modest project of creative, scholarly, or pedagogical nature, proposed initially by the candidate. Any written work to be submitted in partial or total fulfillment of a project should not exceed 7,500 words. Upon acceptance of a proposal, the Department Committee on Graduate Programs will appoint a faculty member to supervise and evaluate the undertaking. An application form for ENG 690 is available in the Department office. It must be used by the student in submitting a conspectus of his project and seeking approval to proceed.

Cognate Courses (M.A. Program)

A student in the M.A. program may, with the written approval of his program adviser, offer one course from another department of this University for credit toward his degree. Such a course should be advanced work in a field relevant to the student's special interests in English language or literature.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

ENG 500	Advanced Topics in Literature and Language	(4 or 8 credits)
ENG 510	Literature and Composition	(4 credits)
ENG 531	Literary Kinds	(4 credits)
ENG 532	Literary History	(4 credits)

ENG 533	Formal Analysis	(4 credits)
ENG 534	Language History	(4 credits)
ENG 600	Studies in Language and Literature	(4 credits)
ENG 640	Studies in American Literature	(4 credits)
ENG 641	Studies in American Literature	(4 credits)
ENG 642	Studies in Old and Middle English Literature	(4 credits)
ENG 643	Studies in Renaissance Literature	(4 credits)
ENG 644	Studies in Eighteenth Century Literature	(4 credits)
ENG 645	Studies in Nineteenth Century Literature	(4 credits)
ENG 646	Studies in Modern Literature	(4 credits)
ENG 647	Studies in the Structure of English	(4 credits)
ENG 648	Studies in Literary Theory	(4 credits)
ENG 690	The Master's Project	(4 credits)

DEPARTMENT OF MATHEMATICS

The Department of Mathematics offers programs leading to the degrees of Master of Arts in mathematics and Master of Arts in Teaching in mathematics. The latter program is jointly sponsored by the Department of Mathematics and the School of Education.

THE MASTER OF ARTS IN MATHEMATICS

The curriculum leading to the degree of Master of Arts in mathematics is designed primarily to be the first part of a doctoral program. Nearly half of the program's graduates to date have transferred to other universities to continue work for the degree of Doctor of Philosophy. Of the remainder, who have gone to positions in teaching, government, or industry, or have entered the armed services, the majority expect eventually to seek that degree. A normally prepared and progressing student can, while holding a teaching assistantship, satisfy all the requirements for the degree of Master of Arts in four semesters by taking an average of nine credits per semester. Because enrollment in the graduate program is small, students can expect to receive a good deal of individual attention and encouragement from the faculty.

Admission to Course

Applicants for the program should have strong undergraduate backgrounds in mathematics. It is highly desirable that their preparation include two courses in elementary real variable theory or advanced calculus, a course in linear algebra, and a course in abstract algebra. A course in general topology is also recommended. Students with deficiencies in these areas will be asked to correct the deficiencies early in the graduate program.

Requirements for the Degree

A total of 36 credits is required for the degree. Of this total, a maximum of 12 credits may be in 400-level courses; the remainder must be in 500-level courses. Each student must take at least 4 credits in problem seminars (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 program and with setting a comprehensive examination for him near the end of the program.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

MTH 451-452	Analysis	(4 credits each)
MTH 461	General Topology	(4 credits)
MTH 475-476	Abstract Algebra	(4 credits each)
MTH 511-512	Mathematics for the Elementary School Teacher	(4 credits each)
MTH 513	Topics in Elementary School Mathematics	(4 credits)
MTH 525-526	Probability and Statistics	(4 credits each)
MTH 541-542	Applied Mathematics	(4 credits each)
MTH 551-552	Real Analysis	(4 credits each)
MTH 555-556	Complex Analysis	(4 credits each)
MTH 561-562	Topology	(4 credits each)
MTH 565	Topological Algebraic Structures	(4 credits)
MTH 571-572	Algebra	(4 credits each)
MTH 590	Directed Reading and Research	(2, 4, 6, or 8 credits)

THE MASTER OF ARTS IN TEACHING IN MATHEMATICS

The program leading to the degree of Master of Arts in Teaching in mathematics is jointly sponsored by the Department of Mathematics and the School of Education. 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. Students in the program have the opportunity to increase significantly their knowledge of mathematics and its teaching, and graduates are qualified for teaching advanced placement courses in high school (calculus, linear algebra, probability, etc.) or for teaching at the freshman or sophomore levels in college.

Students normally pursue work for the Master of Arts in Teaching on a part-time basis. During each of the Fall and Winter Semesters they take a single course which meets in the late afternoon to afford minimum disruption to the schedules of those engaged in high school teaching. Participation in 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.

Admission to Course

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

Requirements for the Degree

The requirements for the degree of Master of Arts in Teaching are 36 credits of graduate work. Normally a candidate will complete seven 4-credit courses in mathematics, one 4-credit course chosen from ED 601, ED 602, ED 603, or ED 604, and one 4-credit course chosen from PSY 510 or PSY 520. Among the mathematics credits must be included at least 4 credits in independent reading, and the candidate must present to the Department of Mathematics a critical essay based on his reading. A committee of three faculty members is charged with passing on the acceptability of the student's program and with setting a comprehensive examination for him near the end of the program.

COURSE OFFERINGS

Mathematics courses offered for the program include the following sequences in algebra and analysis, which provide the core of most students' degree work. (One credit hour is equal to one semester hour.)

MTH	514-515	Concepts in Abstract Algebra	(4 credits each)
MTH	517-518	Concepts in Analysis	(4 credits each)
MTH	590	Directed Reading and Research	(2, 4, 6, or 8 credits)

Other Courses

Other mathematics courses can be taken from departmental offerings at the senior and graduate levels. When such courses are given during the Summer Session, they are likely to be modified to meet special interests of candidates for the degree of Master of Arts in Teaching.

DEPARTMENT OF PHYSICS THE MASTER OF SCIENCE IN PHYSICS

The program leading to the degree of Master of Science in physics consists of courses, research, seminar participation, and a final research report or critical essay. A formal thesis is not required. Students receiving the degree will be prepared to work toward the degree of Doctor of Philosophy in physics, to teach at the junior college or secondary school level, or to work in industry.

The average candidate entering in the Fall Semester will usually require two academic years to complete the degree. A very well prepared candidate could complete the required courses and research credits in three semesters. Each student's program will be adjusted to his interests and background. PHY 673, research, and a seminar are the only fixed course requirements.

Admission to Course

An applicant for admission to the Master of Science program should have a bachelor's degree from an accredited institution or proof of equivalent achievement. The Graduate Record Examination may be accepted in lieu of a formal degree. The applicant's background should be strong in physics and mathematics.

Requirements for the Degree

The basic degree requirement is successful completion of 36 credits of graduate courses distributed as follows: 4 credits of PHY 673: Quantum Mechanics II; 22 credits of 400-, 500-, or 600-level courses approved by the Department; 8 credits of research, including a final written report or critical essay; 2 credits of seminar.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

Selected 400-Level Courses Which May Carry Graduate Credit		
PHY	417-418	Advanced Laboratory (2 credits each)
PHY	421	Thermodynamics (4 credits)
PHY	472	Quantum Mechanics I (4 credits)
PHY	482	Electricity and Magnetism II (4 credits)

Graduate Courses

PHY	542	Advanced Electronics (4 credits)
PHY	548	Advanced Electronics Laboratory (2 credits)

PHY 562	Mechanics II	(4 credits)
PHY 573	Nuclear Physics	(4 credits)
PHY 574	Introduction to Solid State Physics	(4 credits)
PHY 600	Seminar	(1 credit)
PHY 673	Quantum Mechanics II	(4 credits)
PHY 674	Quantum Mechanics III	(4 credits)
PHY 690	Research	(2 to 12 credits)

DEPARTMENT OF PSYCHOLOGY THE MASTER OF ARTS IN PSYCHOLOGY

The primary purposes of the program leading to the degree of Master of Arts in psychology are to train students at the intermediate professional level and to initiate students into advanced scholarship in preparation for additional graduate study at other institutions. The areas in which a student may concentrate are clinical psychology, developmental psychology, and general psychology.

Admission to Course

An applicant for admission to the program leading to the degree of Master of Arts in psychology should have a bachelor's degree from an accredited institution or proof of equivalent achievement. While an undergraduate major in psychology is not required, students are expected to be acquainted with the field. Those who are not may be asked to take a core undergraduate curriculum as a prerequisite for admission to the program.

Requirements for the Degree

Nine courses (36 credits) are required, including satisfactory completion of a research project. All students, regardless of program, must take PSY 610 and 611.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

PSY 510	Developmental Psychology	(4 credits)
PSY 515	Theories of Development	(4 credits)
PSY 520	Tests and Measurements	(4 credits)
PSY 525	Psychopathology of Childhood	(4 credits)
PSY 530	Advanced Abnormal	(4 credits)
PSY 540	Behavior Theory and Learning	(4 credits)
PSY 561	Advanced Statistics	(4 credits)

PSY 570	Social and Personality Development	(4 credits)
PSY 571	Perceptual and Cognitive Development	(4 credits)
PSY 572	Psychology of Adolescence and Aging	(4 credits)
PSY 595	Special Topics	(4 credits)
PSY 610	Pro-Seminar	(4 credits)
PSY 611	Research Methods and Project	(4 credits)
PSY 620	Individual Testing	(4 credits)
PSY 621	Projective Tests	(4 credits)
PSY 630	Clinical Psychology	(4 credits)
PSY 670	Applied Developmental Psychology	(4 credits)
PSY 682	Practicum I and II	(8 credits)
PSY 690	Research Project	(4 credits)

SCHOOL OF EDUCATION

THE MASTER OF ARTS IN TEACHING

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

The School of Education sponsors candidates for the degree of Master of Arts in Teaching in elementary education, in reading instruction, and in special education (emotionally disturbed children). At a later date the School expects to offer degrees in counseling and guidance, in administration, and work in the preparation of school diagnosticians.

Requirements for the Degree: General Requirements in All Programs

Students who wish to enter any Master of Arts in Teaching program must complete application procedures for admission to graduate study. Admission is selective, and the School of Education will consider each applicant's case on its merits. After initial acceptance (admission to course), the student is assigned a guidance committee and an adviser to assist in program planning. After the student has completed 12 credits (normally three courses), the committee will evaluate the student's progress and plan the remainder of his program. A grade point average of 3.0 or better is expected for good

academic standing. In addition, two grades below 3.0 or one grade below 2.0 render a student subject to suspension from the degree program.

The School of Education reserves the right to expand typical requirements in order to correct deficiencies or to bring up to date the preparation of degree aspirants.

The Master of Arts in Teaching programs consist of 36 credits, of which 4 are normally reserved for a terminal project. This project may, but need not, be a thesis. The student and his committee will plan the nature and scope of the project appropriate for each individual. Many types of projects may be approved. One student may decide to write a master's thesis. Another may wish to do a controlled study on the effectiveness of various instructional techniques. A third may wish to try out an experimental unit, and a fourth may propose the development of a teaching device of novel design. In some instances the student and committee may decide that a special set of comprehensive or special field examinations might be appropriate. The latitude permitted is extremely broad.

School of Education Requirements for the Degree of Master of Arts in Teaching in English and in Mathematics

In general, most of the student's work will be in the discipline area of his major, with such cognates as his major department prescribes, but each program will contain 4 credits chosen from History of Education (ED 601), Philosophy of Education (ED 602), Comparative Education (ED 603), or Sociology of Education (ED 604); 4 credits in either Developmental Psychology (PSY 510) or Tests and Measurements (PSY 520); and 4 credits devoted to problems of teaching the discipline of the major (in courses conducted by the major departments).

Requirements for the Degree of Master of Arts in Teaching in Elementary Education

Each student's program will be developed by his guidance committee. 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 preparation in which the student may be deficient or in which new data have made further work desirable.

Requirements for the Degree of Master of Arts in Teaching in Reading Instruction

The degree program in reading instruction includes a group of courses required for most students and an area of flexibility designed to adjust requirements to the needs and previous preparation of each student.

CERTIFICATION

Programs leading to the degree of Master of Arts in Teaching are based on the assumption that students already hold (or are eligible for) at least the Michigan Provisional Certificate in the area of their specialization. Students who hold no certificate or who wish to change specialization must expect a longer period of study than is implied by the programs described. Usually, however, combining certification with a Master of Arts in Teaching program will require a shorter sequence of preparation than that involved in obtaining certification and the master's degree separately. Those interested in a combined program should ask the School of Education for assistance in planning a course of study.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

ED 509	The School and the Disadvantaged Child	(2 or 4 credits)
ED 511	Interaction Analysis	(4 credits)
ED 521	Education of Exceptional Children	(4 credits)
ED 522	Behavior Modification Techniques for Classroom Management	(4 credits)
ED 523	Education Procedures for Children with Learning Disabilities	(4 credits)
ED 524	Perception in the School Setting	(4 credits)
ED 530	Advanced Topics in Literature for Children	(4 credits)
ED 531	Current Trends in the Teaching of Reading	(4 credits)
ED 532	Teaching Reading in the Primary Grades	(4 credits)
ED 533	Teaching Reading in the Upper Grades	(4 credits)
ED 534	Language Arts Instruction in the Elementary Schools	(4 credits)
ED 535	The Perceptually Handicapped in Reading	(4 credits)
ED 536	Teaching Reading to the Special Child	(4 credits)
ED 555	Practicum for Teachers of the Rural-Urban Disadvantaged	(4 credits)
ED 560	Special Problems in Guidance and Personnel Work	(2, 4, 6, or 8 credits)
ED 561	Guidance and Counseling of Children	(4 credits)
ED 562	Workshop in Guidance and Personnel Services	(2, 4, 6, or 8 credits)

ED 581	Teaching About Black Africa in the Public School	(4 credits)
ED 590	Special Problems in Education	(2, 4, 6, or 8 credits)
ED 591	Ecology of the Classroom	(4 credits)
ED 592	Research Techniques in Education	(4 credits)
ED 601	History of Education	(4 credits)
ED 602	Philosophy of Education	(4 credits)
ED 603	Comparative Education	(4 credits)
ED 604	Sociology of Education	(4 credits)
ED 611	Problems in Elementary Education	(4 or 8 credits)
ED 612	Curriculum Studies	(4 credits)
ED 621	Management and Curriculum for Emotionally Disturbed Children	(4 credits)
ED 622	Practicum in the Education of the Emotionally Disturbed	(6 credits)
ED 623	Seminar in the Education of the Emotionally Disturbed	(2 credits)
ED 624	Directed Teaching in Special Education	(6 credits)
ED 630	Seminar in Reading	(4 credits)
ED 631	Problems in Reading Instruction	(4 or 8 credits)
ED 632	Diagnosis of Reading Disabilities	(4 credits)
ED 633	Correction of Reading Disabilities	(4 credits)
ED 662	Assessment of Children	(4 credits)
ED 663	Group Procedures in Guidance	(4 credits)
ED 664	Consultation in Pupil Personnel Work	(4 credits)
ED 699	Terminal Project	(4 credits)

Related Courses

Certain courses offered by the Department of Psychology are of special interest to graduate students preparing for a Master of Arts in Teaching degree: PSY 510, PSY 520, PSY 525, PSY 620.

Other related courses appropriate for the Master of Arts in Teaching program are:

MTH 511	Mathematics for the Elementary School Teacher I	(4 credits)
MTH 512	Mathematics for the Elementary School Teacher II	(4 credits)
MTH 513	Topics in Elementary School Mathematics	(4 credits)
SCI 505	Basic Concepts and New Developments in Science	(4 credits)
SS 570	Social Studies in the Elementary School	(4 credits)

THE MASTER OF ARTS IN TEACHING IN SPECIAL EDUCATION (EMOTIONALLY DISTURBED CHILDREN)

Approval for the Master of Arts in Teaching degree in special education (emotionally disturbed children) was given following printing of the 1970-71 official Graduate Bulletin. For that reason the program description is more detailed in this publication than is the description for each of the other degree programs.

This program will prepare teachers in special education for work with emotionally disturbed children. Upon successful completion of all requirements, the School of Education will sponsor students for the Master of Arts in Teaching degree and for certification as special education teachers for emotionally disturbed children.

Admission to Course

Requirements for admission to course are those currently in effect for other M.A.T. programs in the School of Education. Admission to degree candidacy includes those requirements currently in effect in other M.A.T. programs in the School of Education plus the following:

Students may receive the degree of Master of Arts in Teaching in special education (emotionally disturbed children) only after they have presented evidence of satisfactory full-time teaching of one year or more in a regular grade placement. This requirement may not be waived, but equivalencies may be accepted at the discretion of the program director. This requirement may be fulfilled at any time during the student's graduate course work, but must be completed prior to the granting of the M.A.T. degree.

The following courses are required for completion of the M.A.T. special education program:

ED 521 Education of Exceptional Children (4 credits)

The course is devoted to the special provisions, remedial procedures, care, treatment, education, and rehabilitation of several types of exceptional children. These include emotionally disturbed, mentally retarded, gifted, blind, deaf, physically handicapped and other health-impaired children. Site visits to clinical and hospital as well as educational settings are included.

Prerequisite: Admission to a Master of Arts in Teaching program, or permission of the instructor.

PSY 510 Developmental Psychology (4 credits)

Description and evaluation of the principles and theories of development from birth to maturity. Maturation processes, learning, and emotional disturbances will be some of the issues considered.

Prerequisite: Permission of the instructor or acceptance into the Master of Arts in Teaching program.

ED 591 Ecology of the Classroom (4 credits)

The course deals with the ecological context for learning in classroom, school and community. The primary task will be to describe, to analyze, and to make inferences about the structure of the ecological environment. These findings will then be related to pupil learning. Prerequisite: Permission of the instructor or acceptance into a master's program.

PSY 520 Tests and Measurements (4 credits)

Theories of measurement and evaluation. Construction and examination of tests of ability, achievement, interests, and special aptitudes. Objective tests of personality.

Prerequisite: Permission of the instructor or acceptance into the Master of Arts in Teaching program.

ED 621 Management and Curriculum for Emotionally Disturbed Children (4 credits)

A study of the diagnosis and treatment, curriculum development, methods and materials, and classroom procedures in programs for emotionally disturbed children in educational and clinical settings. The use of video tapes, role play, demonstrations, as well as direct observation of emotionally disturbed children will be included.

Prerequisite: ED 521 and one graduate course in psychology.

PSY 525 Psychopathology of Childhood (4 credits)

The psychodynamics of abnormal behavior in children. Syndromes, current issues, and research.

Prerequisite: Permission of the instructor or acceptance into the Master of Arts in Teaching program.

ED 536 Teaching Reading to the Special Child (4 credits)

A general discussion of the reading process as it relates to slow learners, emotionally disturbed, handicapped, but also gifted children. A study of remedial instructional materials is included.

Prerequisite: ED 521 or permission of the instructor.

***ED 622 Practicum in the Education of the Emotionally Disturbed (6 credits)**

A specialized laboratory experience, including educationally related work in an interdisciplinary treatment setting with emotionally disturbed children. Observation, tutoring, diagnostic and prescriptive teaching on a one-to-one basis and in group instruction are part of the course. ED 623 must be taken concurrently.

Prerequisite: Completion of all other requirements for the Master of Arts degree in special education, or permission of the instructor.

***ED 623 Seminar in the Education of the Emotionally Disturbed (2 credits)**

The study and interpretation of psychological information, development of understanding of psychiatric intervention, the use of case study, and educational relevance of case materials in dealing with the emotionally disturbed. Must be taken simultaneously with ED 622.

ED 624 Directed Teaching in Special Education (6 credits)

A supervised full-time teaching experience in classrooms corresponding to the student's concentration in special education. Those qualifying for exemption from the supervised teaching requirement in the certification code may not take this course.

Prerequisite: Acceptance to degree candidacy in a master's program in special education and approval by the director of the special education program.

*It should be noted that the M.A.T. in special education (emotionally disturbed children) does not include ED 699 (Terminal Project). The

planning and execution of a significant research or action project will be undertaken as part of course requirements of the joint Practicum-Seminar in the Education of the Emotionally Disturbed (ED 622, ED 623).

ELECTIVE COURSES

Under special circumstances, i.e., previous experience in the field, undergraduate degree in special education, advanced graduate status, transfer credit from other institutions, it may be possible to substitute any of the following courses for those required for the degree. These may be elected only with permission of the special education adviser.

ED 511 Interaction Analysis (4 credits)

The course seeks to improve effectiveness of instruction through a study of pupil-teacher interaction. Techniques of observation, methods of gathering data and analyzing behavior in both the affective and the cognitive fields are emphasized. Techniques will include video tapings of teachers and pupils, projects including observational schedules, and preparation and analysis of specific teaching situations.

Prerequisite: Admission to course in a graduate program or permission of the instructor.

ED 522 Behavior Modification Techniques for Classroom Management (4 credits)

This course will introduce teachers to the principles and application of behavior modification techniques. It will include specific methods for changing children's behavior in the classroom with emphasis on the child displaying learning or conduct problems.

Prerequisite: Current teaching experience.

ED 523 Educational Procedures for Children with Learning Disabilities (4 credits)

This course will offer brief, concise and objective reviews of various theories of learning disabilities, and describe the major remedial methods advocated. Among the educational procedures to be discussed will be perceptual motor, developmental, neuro-physiological and linguistic approaches to education of children.

Prerequisite: One year's teaching experience.

ED 524 Perception in the School Setting (4 credits)

This course will deal with the process of perception, its relationship to learning and its application in the classroom; diagnosis and remediation of perceptual problems in the classroom; classroom programming emphasizing the theories of Piaget, Gesell Institute and others.

Prerequisite: Graduate standing.

ED 535 The Perceptually Handicapped in Reading (4 credits)

A study of theories of perception and their impact on the reading process. Identification of reading difficulties and implementation of corrective measures in the classroom will receive special emphasis.

Prerequisite: Permission of the instructor.

ED 561 Guidance and Counseling of Children (4 credits)

This course covers principles, practices and basic techniques of guidance and counseling which teachers may use in the classroom. Purpose of the course is to provide teachers with knowledge to help children develop in areas such as self understanding, positive self concept, ability to adjust and work with others, and attainment of self direction.

Prerequisite: Admission to a Master of Arts in Teaching program or permission of the instructor.

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 Master of Arts in Teaching program and at least one previous course in reading instruction.

SCHOOL OF ENGINEERING

THE MASTER OF SCIENCE IN ENGINEERING

The School of Engineering offers work leading to the degree of Master of Science in engineering, with concentrations in systems engineering, energy engineering, and electromagnetic and optical engineering. Minor concentrations in related fields of physics and mathematics are also available. Students whose special interests cross the boundaries of these areas may arrange interdisciplinary courses of study. Programs ordinarily do not require a thesis; emphasis is rather placed on a design project carried out by the individual or by a small group. The object of the Master of Science program is to provide participants with a broad training in an area of engineering rather than a narrow apprenticeship in a specific research area. Highly specialized and narrowly defined research is perhaps more appropriately delayed for doctoral thesis preparation.

Some courses are arranged in the late afternoon and early morning for the convenience of students employed in industry. Such part-time students should be aware, however, of the very real demands placed on them by graduate studies and should keep outside work commitments within reasonable bounds.

Admission to Course

The program leading to the degree of Master of Science in engineering is designed to accommodate students with a wide variety

of undergraduate backgrounds. A bachelor's degree in physics, mathematics, or any recognized field of engineering represents excellent preparation; a degree in any other field of science is also acceptable, but a student presenting such a degree should plan to spend additional time in residence in order to gain proficiency in the fundamentals of engineering. Each entrant consults individually with the faculty to plan a program of courses which best suits his background and interests.

Admission to graduate study in engineering is selective; applicants should have upper-quartile rank. In addition to his bachelor's degree, an applicant should present academic transcripts and recommendations from two members of his undergraduate department who are familiar with his level of accomplishment and promise. These recommendations form a most important part of the admission credentials.

Requirements for the Degree

The master's degree in engineering is never conferred for completing a random selection of courses; a planned program is essential. The basic degree requirement is successful completion of 32 credits of graduate courses in engineering and related areas of the sciences and mathematics, the whole to form an integrated program of study proposed by the student and approved by the chairman of his Master's Committee.

Students are encouraged to propose programs which best suit their special interests, subject only to the following general requirements.

(1) Each candidate for the degree of Master of Science shall be required to demonstrate proficiency in independent design or research by successfully completing a master's thesis or project. Ordinarily this requirement is satisfied by completion of 4 to 12 credits in EGR 509. In special cases, a student may be exempted from EGR 509, but he must still satisfy the design-research requirement. In such cases the burden of proof of satisfaction of this requirement shall rest with the student, the manner of which is outlined in paragraph (3) below.

(2) It is required of each student taking EGR 509 to submit to his project director two copies of an engineering report describing all facets of the investigation. One copy shall remain with the project director; the other copy will be placed in a central file maintained by the Dean of the School of Engineering for perusal by any interested party. Detailed information concerning the format of the report is available in the Office of the School of Engineering. In addition, a project director will usually require a student to deliver a short

oral presentation of his work before interested faculty and students.

(3) In some instances, a candidate may feel that he has already demonstrated proficiency in independent research or design at the master's level by virtue of a project completed previously while he was employed as a practicing engineer. Such a student should submit to his Master's Committee for its consideration a detailed report of the project, with reprints of any related publications. If the project was a joint effort, the report should clearly indicate the extent of the candidate's role in the undertaking. If the Master's Committee judges the effort to be of a magnitude and at a level commensurate with standards set for work leading to the degree of Master of Science in engineering at Oakland University, it may then certify the candidate as having satisfied the design-research requirement. As an aid in its deliberations, the Committee may wish to request of the student additional substantiation of his case. (Graduate credit for project work is awarded only for participation in a satisfactorily completed undertaking directed by a faculty member of Oakland University.)

(4) Of the 32 credits required for the degree, at least 20 must be earned in courses offered by the School of Engineering. Graduate credits are awarded only for courses numbered 500 and above.

(5) A student may request transfer credits, not to exceed 12, for work done at another institution. A petition, endorsed by the Master's Committee, should be submitted to the Engineering Graduate Committee, and transcripts and catalog descriptions of the courses for which credit is requested should accompany the petition. In all cases, it shall be the responsibility of the candidate to demonstrate that the work done is relevant and complementary to his Oakland program.

(6) Full-time students may register for as many as 13 credits per semester, and students holding half-time assistantships in the School of Engineering may register for as many as 9 credits per semester. Students with high academic standing may be permitted to register for an additional course by special petition. (See paragraph 7 below.)

(7) In extraordinary cases, a student may petition to be relieved of a degree requirement. A petition form should be obtained from the Office of the Dean of the School of Engineering; it should then be presented to the Master's Committee for endorsement and submitted to the Engineering Graduate Committee for action.

COURSE OFFERINGS

(One credit hour is equal to one semester hour.)

EGR	500	Graduate Seminar	(1 credit)
EGR	505	Special Topics in Engineering	(4 credits)

EGR	509	Engineering Design Project	(2 to 12 credits)
EGR	510	Engineering Fields	(4 credits)
EGR	520	Analysis and Synthesis of Linear Control Systems	(4 credits)
EGR	521	Optimization Theory and Applications	(4 credits)
EGR	530	Introduction to Random Signals and Systems	(4 credits)
EGR	535	Large Scale Systems	(4 credits)
EGR	540	Electromagnetic Signals and Waves	(4 credits)
EGR	550	Coherent Optics	(4 credits)
EGR	551	Convective Transport Phenomena	(4 credits)
EGR	552	Thermal Transport Phenomena	(4 credits)
EGR	555	Energy and Information Systems	(4 credits)
EGR	580	Digital Computer Methods in Engineering	(4 credits)
EGR	581	Hybrid Computation and Simulation	(4 credits)
EGR	585	Switching Theory	(4 credits)

Related Courses

MTH	531	Mathematical Methods in Engineering I	(4 credits)
MTH	532	Mathematical Methods in Engineering II	(4 credits)

CORRESPONDENCE DIRECTORY

Mailing address: Oakland University, Rochester, Michigan 48063.

Officers of the University will be pleased to answer questions. For prompt attention address specific inquiries to the officers listed below.

Admissions Information and Bulletins

Dean of Graduate Study

Business Matters

Vice President for Business Affairs

Career-oriented and Graduate Placement

Director, Placement Office

Continuing Education

Dean of Continuing Education

Educational Program, Transcripts, Academic Reports

The Registrar

Loans and On-Campus Employment

The Financial Aid Officer

Scholarships and Grants

Dean of Graduate Study

Graduate Student Affairs and Services

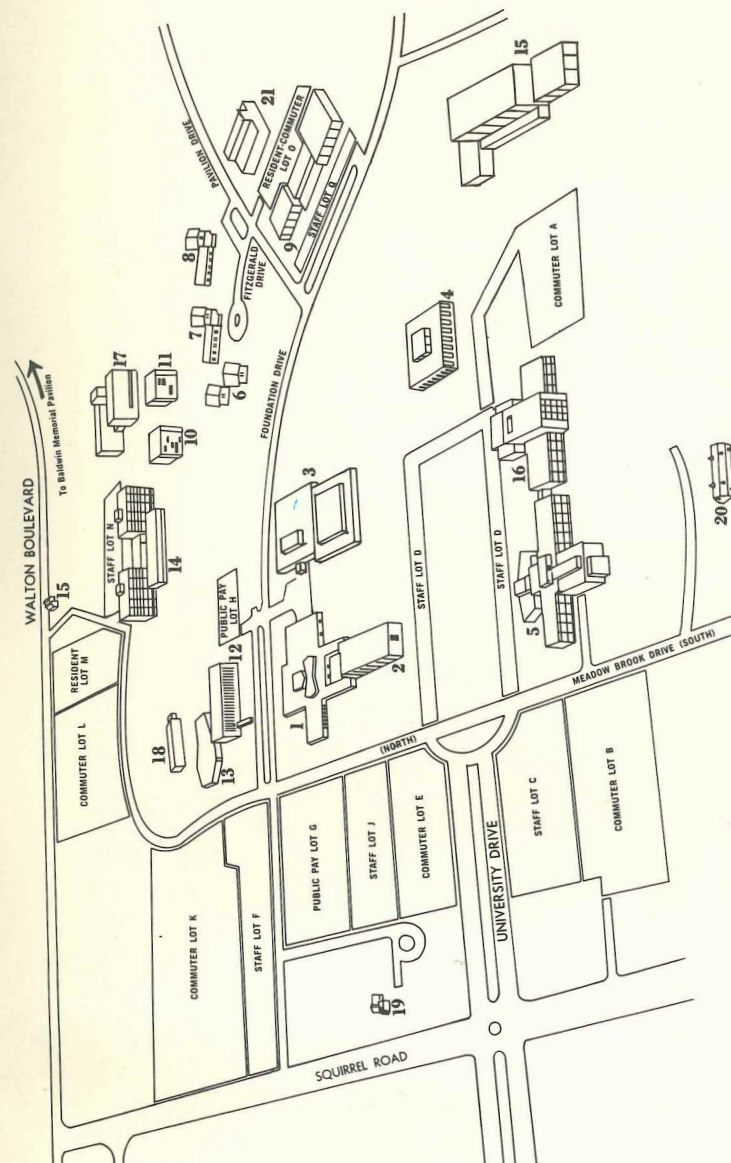
Dean of Graduate Study

Student Housing

Director of Residence Halls

Telephone: Area Code 313 377-2000

Office of Graduate Study, Extension 3093



OAKLAND UNIVERSITY

15. Performing Arts
16. Dodge Hall of Engineering
17. Hamlin Hall
18. Graham Health Center
19. Gate House
20. S.E.T. Barn Theatre
21. Central Heating Plant

8. Pryale House
9. Sports and Recreation Building
10. Hill House
11. Van Wagoner Hall
12. Matilda R. Wilson Hall
13. Meadow Brook Theatre
14. Vandenberg Hall

1. North Foundation Hall
2. South Foundation Hall
3. Oakland Center
4. Kresge Library
5. Hannah Hall of Science
6. Fitzgerald House
7. Anibal House