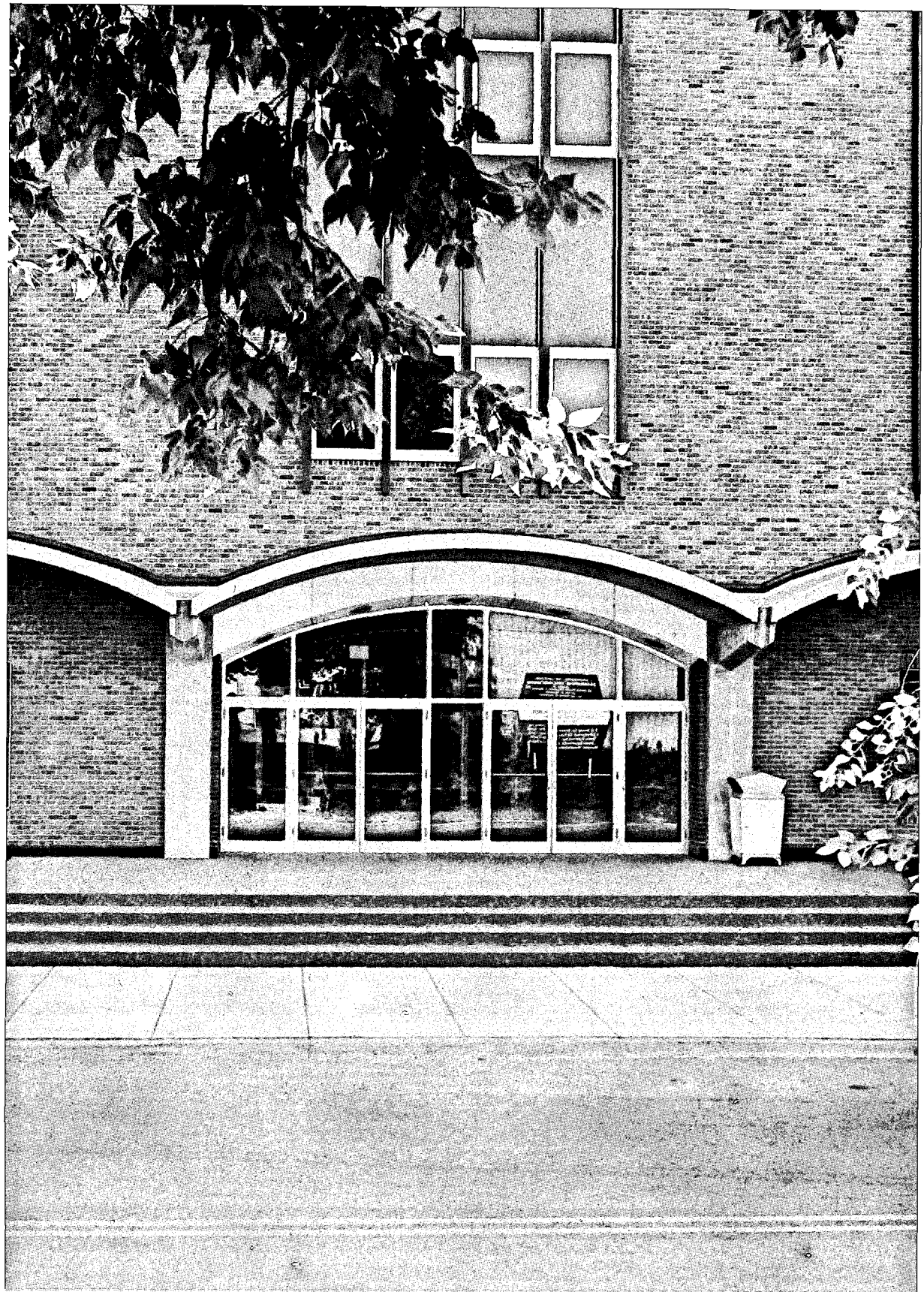

VII School of Engineering

FOREWORD

The specific purpose of the graduate program in the School of Engineering is to provide the best possible education at the graduate level. This purpose is achieved through the development of the special capacities and capabilities of the student, thereby enabling him to become a thoroughly competent professional in his chosen field.

The graduate engineering programs are designed to meet the professional needs of the engineer and they also represent a preparatory step toward the Ph.D. degree.

The School of Engineering currently offers graduate programs leading to the following Master's degrees:

Master of Science in Engineering
Master of Science in Chemical Engineering
Master of Science in Civil Engineering
Master of Science in Electrical Engineering
Master of Science in Engineering Management
Master of Mechanical Engineering

ADMISSIONS

Refer to Page 11 for status classification for students accepted for graduate study. Graduate Record Examination results should be included in the supporting data for admission, if available.

GENERAL DEGREE REQUIREMENTS

The requirements for the Master's degree are the following:

1. Meet the requirements for a bachelor's degree.
2. Earn a minimum cumulative grade-point average of 3.00 and successfully complete all courses in an approved program of studies. At the discretion of the advisor, an oral or written examination may be required to confirm the student's ability to complete the program satisfactorily.
3. Submit an acceptable thesis or project report where specified. The grade for the thesis or project report becomes part of the total cumulative average. Joint authorship is not permissible. The thesis or project report should be prepared in accordance with the general format, outlined in the Guide for Preparation of Thesis or Project Report, copies of which are available in the departmental offices and in the Engineering Administration Office. If a proprietary aspect is involved, due to completion of the investigational work at the student's place of employment, the confidential nature of the information will be respected and arrangements will be made to delay public disclosure, subject to written permission from the organization involved. Students who have completed registration in all courses, but who have not completed the thesis or project report, must request approval for continuance in the graduate program by means of a Graduate Student Program Approval form each term until graduation. A regular grade will be assigned upon satisfactory completion of the thesis or project report and will be included in the final cumulative grade point average. Prior to completion, cumulative averages will be calculated only on the basis of course performance, and a grade of "P" will be given for the thesis or project.
4. Pass satisfactorily an oral thesis or project report examination. The examination will be conducted by a department advisory committee under the direction of the advisor as chairman. The approved thesis or project report topic must be selected in the major engineering area. The procedure for the examination is outlined in the Guide for Preparation of Thesis or Project Report.

In fulfilling the requirements for the degree programs, certain specified conditions prevail and should be noted carefully.

1. Transfer Credits

   All Engineering Master's Programs with the exception of the Engineering

Management Program, will permit transfer credit for two courses, completed at recognized institutions, providing a grade of "B" (3.00) or better has been achieved. The Engineering Management Program permits the transfer of three courses. All transfer credits must be approved by the advisor.

2. Course Load

   A part-time student may not register for more than six credit hours per term unless permission is gained from the Director of Engineering Graduate Programs.

3. Use of Advanced Undergraduate Courses

   Certain undergraduate level courses may be used, if approved by student's advisor, see page 11.

THE GRADUATE PROGRAM

After admission, each student will be assigned to the appropriate department representing the student's major interest. Assignment of a permanent advisor will be made. He will guide the student in the development of a program of studies deemed best for his particular interest and objectives. Amendments to the program may be made with the approval of the advisor. A change in advisor must be filed in writing with the Director.

FINANCIAL AID

Assistantships and industrial fellowships are available at the University of Dayton for the encouragement of graduate work and the promotion of research. These are administered by the academic departments. Detailed information relative to application may be secured from the Director of Engineering Graduate Programs.

THE MASTER OF SCIENCE IN ENGINEERING PROGRAM

The Program of Study leading to the degree of Master of Science in Engineering must include a minimum of 30 credit hours of the following:

1. 12 credit hours in major area;
2. 12 credit hours of electives;
3. 6 credit hours of research on an approved project.

MAJOR IN MATERIALS SCIENCE IN ENGINEERING

Courses:

1. Major Field

   12 credit hours to be selected from the following courses:

MEE 501	MEE 511
MEE 502	MEE 515
MEE 503	MEE 551
MEE 504	MEE 597
MEE 505	ELE 524
MEE 506	ELE 525

2. Electives

   12 credit hours to be selected from current course offerings which best suit the student's requirements.

3. Research Project six credit hours

   With the approval of the faculty advisor and chairman, the student who can provide evidence of previous research of acceptable quality may substitute 6 credit hours of additional course work for the research project.

Examinations:

A final examination at the completion of the project is required.

THE MASTER OF SCIENCE IN ENGINEERING MANAGEMENT PROGRAM

The Program of Study leading to the degree of Master of Science in Engineering Management is inter-disciplinary and is offered by the School of Engineering with the cooperative participation of the School of Business Administration and the College of Arts and Sciences. It must include a minimum of 36 credit hours consisting of the following:

1. 18 credit hours in Industrial Engineering;
2. 9 credit hours in Business Administration;
3. 9 credit hours in electives.

Courses:

1. Industrial Engineering

   18 credit hours to be selected from the graduate level Industrial Engineering courses. The student will be required to choose twelve credit hours

from either Option A, Systems Engineering or Option B, Operations Research.

Option A—12 credit hours to be selected from the following courses:

INE 501	INE 517
INE 502	INE 518
INE 503	INE 524
INE 504	INE 541
INE 506	INE 542
INE 507	INE 543
INE 508	INE 590
INE 516	INE 598
	*INE 599

Option B—12 credit hours to be selected from the following courses:

INE 501	INE 524
INE 502	INE 525
INE 503	INE 528
INE 504	INE 530
INE 508	INE 531
INE 515	INE 544
INE 516	INE 590
INE 518	INE 598
INE 521	*INE 599
INE 522	

2. Business Administration

Six credit hours, two courses, to be selected from the following list:

MBA 520	MBA 550
MBA 530	MBA 560
MBA 540	

Three credit hours, one course, to be selected from the following list:

MBA 581
MBA 582
MBA 583

3. Electives

Nine credit hours of electives from graduate courses approved by the advisor and selected from Business Administration, Engineering, Science and Mathematics.

*If a student so elects, a thesis may be substituted for six credit hours of course work.

EXAMINATIONS:

A final examination at the completion of the thesis is required.

THE MASTER OF SCIENCE IN CHEMICAL ENGINEERING PROGRAM

The Program of Study must include a minimum of 30 credit hours consisting of the following:

1. 3-6 credit hours in Basic Sciences;
2. 15 credit hours in Chemical Engineering;
3. 3-6 credit hours of electives;
4. 6 credit hours on an approved thesis project.

Courses:

1. Basic Sciences
   3-6 credit hours to be selected from the basic sciences taught by the Mathematics and Science Departments.
2. Chemical Engineering
   15 credit hours to be selected from the graduate level Chemical Engineering courses. CME 507, CME 521, and CME 581 must be included in the 15 credit hour requirement.
3. Electives
   3-6 credit hours of electives as approved by the advisor and department chairman.
4. Thesis
   CME 599 6 credit hours on an approved thesis project.

EXAMINATIONS:

A final examination at the completion of the thesis is required.

THE MASTER OF SCIENCE IN CIVIL ENGINEERING PROGRAM

The Program of Study must include a minimum of 30 credit hours consisting of the following:

1. 3-6 credit hours in Basic Sciences;

2. 18-21 credit hours in Civil Engineering, Engineering Mechanics or thesis related subjects;
3. 6 credit hours on an approved thesis project.

Courses:

1. Basic Sciences
   3-6 credit hours are to be selected from the general basic science group taught by the Mathematics and Science Departments.
2. Civil Engineering, Engineering Science, or Thesis Supporting Courses
   18-21 hours to be selected from the following courses:
   Civil Engineering graduate level courses.
   Engineering Mechanics
   Engineering Mechanics courses as approved by the student's advisor.
   Thesis Supporting Courses
   Thesis Supporting Courses approved by the student's advisor.
3. Thesis
   Cie 599 6 credit hours on an approved thesis project.

Examinations:

A final examination at the completion of the thesis is required.

THE MASTER OF SCIENCE IN ELECTRICAL ENGINEERING PROGRAM

The program of study must include a minimum of 30 credits hours consisting of the following:

1. 6 credit hours in Basic and Engineering Sciences;
2. 12 credit hours in Electrical Engineering;
3. 6 credit hours in Thesis Supporting Courses approved by the student's advisor;
4. 6 credit hours on an approved thesis project.

Courses:

1. Basic and Engineering Sciences

   6 credit hours are to be selected from either the general basic science group taught by the Mathematics and Science Departments, or from appropriate courses listed in the Master of Science in Engineering Program. It is permissible to combine three credit hours from each program. Selected courses must meet with the approval of advisor.

2. Electrical Engineering

   12 credit hours to be selected from the graduate level Electrical Engineering courses.

3. Thesis Supporting Courses

   6 credit hours in Thesis Supporting Courses approved by the student's advisor.

4. Thesis

   Ele 599 6 credit hours on an approved Thesis Project.

Examinations:

A final examination at the completion of the thesis is required.

THE MASTER OF MECHANICAL ENGINEERING PROGRAM

The Program of Study leading to the degree of Master of Mechanical Engineering with major areas of study in Thermal Engineering, Fluid Mechanics and Mechanical Design must include a minimum of 30 credit hours consisting of the following:

1. 12-15 credit hours in Mechanical Engineering;
2. 6 credit hours in Mechanical Engineering Project;
3. 9-12 credit hours of electives.

Courses:

1. Mechanical Engineering

   12-15 credit hours to be selected from the following courses:

   Material Science — MEE 501, MEE 502, MEE 503, MEE 504, MEE 505, MEE 506.

   Thermal Engineering — MEE 511, MEE 512, MEE 513, MEE 514, MEE 515, MEE 516, MEE 517, MEE 518.

Fluid Mechanics — MEE 521, MEE 522, MEE 523, MEE 524, MEE 525.

Mechanical Design — MEE 531, MEE 532, MEE 533, MEE 534, MEE 535, MEE 536, MEE 537, MEE 538, MEE 539.

2. Mechanical Engineering Project

   Mee 550 Mechanical Engineering Project one to six credit hours

   With the approval of the Chairman, the project may be replaced by 6 credit hours of course work when the student can provide evidence of previous engineering research of acceptable quality.

3. Electives

   Electives from other Engineering Departments and from Science may be taken with the approval of the Faculty Advisor and the Department Chairman.

Examinations:

A final examination at the completion of the project is required.