

# ACADEMIC POLICIES & PROCEDURES

## Undergraduate Policies

For undergraduate policies and procedures, please review the Undergraduate Academics section of the General Bulletin.

## Graduate Policies

For graduate policies and procedures, please review the School of Graduate Studies section of the General Bulletin.

## Master of Science (MS)

Recognizing the different needs and objectives of resident and non-resident graduate students pursuing the master's degree, three different tracks are offered. In all plans, transfer of credit from another university is limited to six hours of graduate-level courses, taken in excess of the requirements for an undergraduate degree, approved by the student's advisor, the department chair, and the dean of graduate studies.

By the end of the second semester of enrollment, all Master of Science degree programs require an approved Planned Program of Study or a defined Academic Requirements Report, hereafter referred to as the student's Academic Program, via the Student Information System. Revisions must be submitted and approved via the Student Information System when any change in the Academic Program occurs.

A cumulative quality point average of 3.0 or above in all courses taken for credit as a graduate student at Case Western Reserve University (excluding grades in thesis research and grades of R) is required for the award of the master's degree.

The University requires all foreign applicants to show English Proficiency by achieving a TOEFL score of at least 90 on the internet-based exam for a thesis-focused or a project-focused track. For a course-focused track, a minimum TOEFL score of 80 is required. If there is any professional student-to-student interaction, e.g. as a teaching assistant, a lab instructor, or a tutor, then a minimum TOEFL score of 90 is required.

### Master's Thesis-Focused Track

Minimum requirements for the degree of Master of Science in a major field under this plan include a total of 30 hours of coursework and thesis work with the:

- a. Completion of at least 18 hours of graduate coursework at the 400 level or higher. The courses must be approved by the department offering the degree.
- b. Completion of at least 9 hours of thesis work culminating in a thesis examination given by at least three professors, plus approval by the chair of the department offering the degree. A student with research experience equivalent to a thesis may petition the Graduate Committee of the Case School of Engineering for substitution of nine hours of coursework for the thesis requirement. In this case, the thesis examination above is replaced by a similar examination covering the submitted research work and publications. Additional requirements may be specified by individual degree programs.

### Master's Project-Focused Track

Completion of 30 hours of approved coursework including three to six hours of Special Problems. At least 18 (21) hours must be at the 400 level

or higher corresponding to a 6 (3) hour Special Problems coursework. Special Problems coursework must consist of an engineering project approved by the chair of the department offering the degree and may be carried out at the student's place of employment with nominal supervision by a faculty advisor or in the school's laboratories under direct supervision. The project must culminate in a written report and examination by at least three professors plus approval by the chair of the department offering the degree. The Special Problems course may be waived for students who have had industrial design or research experience and who submit sufficient evidence of this experience in the form of a publication or internal report. For these students, a minimum of 30 hours of coursework and the final oral examination covering the submitted publications or reports as well as related course material will be required for the master's degree.

### Master's Course-Focused Track

Completion of 30 hours of approved coursework. At least 24 hours must be at the 400 level or higher, satisfactory completion of the culminating course-focused experience, i.e. passing the course ENGR 600 with requirements defined by the student's curricular program, and additional requirements as specified by the program. Students should consult with their academic advisor and/or department to determine the detailed requirements within this framework.

## Doctor of Philosophy (PhD)

The student's PhD program should be designed to prepare them for a lifetime of creative activity in research and in professional engineering practice. This may be coupled with a teaching career. The mastery of a significant field of knowledge required to accomplish this purpose is demonstrated by an original contribution to knowledge embodied in a thesis and by satisfactory completion of a comprehensive course program which is intensive in a specific area of study and includes work in other areas related to, but not identical with, the major field. The necessity for breadth as well as depth in the student's education cannot be overemphasized. To this end, any engineering department may add additional requirements or constraints to ensure depth and breadth appropriate to its field.

No student may be admitted to candidacy for the PhD degree before approval of their Academic Program via the Student Information System. After this approval has been obtained, it is the responsibility of the student's department to notify the dean of graduate studies of their admission to candidacy after the student has fulfilled any additional department requirements.

### Minimal Requirements

Minimal requirements in addition to the university requirements are:

- a. The minimum course requirement beyond the BS level is 36 credit hours of courses taken for credit, at least 18 hours of which must be taken at Case Western Reserve University. The following courses taken for credit will be acceptable for a PhD program of study:
  - i. All 400-, 500-, and 600-level courses
  - ii. Approved graduate-level courses taken at other institutions
- b. The requirement for breadth is normally satisfied by a minimum of 12 semester hours of courses (for credit) outside the student's major area of concentration as defined by the student's department and does not include courses taken to fulfill the basic science requirement.
- c. A minimum of three teaching experiences as defined by the student's department. All programs of study must include departmental 400T,

500T, and 600T courses to reflect this requirement. All students fulfilling teaching duties must complete UNIV 400.

- d. The minimum requirement for research is satisfied by at least 18 hours of thesis (701) credits.
- e. A cumulative quality point average of 3.0 or above in all courses taken for credit as a graduate student at Case Western Reserve University (excluding grades in thesis research and grades of R) is required for the award of the doctoral degree.

### **Qualifying Examination**

The student must pass a qualifying examination relevant to their area of study as designated by the curricular department with which they are affiliated. For students who obtain the MS degree from Case Western Reserve University, the qualifying examination should be taken preferably before the end of the student's fourth semester of graduate study but no later than the end of the fifth semester at the university. For students entering with the master's degree, the examination should be taken no later than the end of the third semester at the university.

### **Program of Study**

Before registering for the last 18 credit hours of the program, all Doctor of Philosophy degree programs require an approved Planned Program of Study or a defined Academic Requirements Report, hereafter referred to as the student's Academic Program, via the Student Information System. Revisions must be submitted and approved via the Student Information System when any change in the Academic Program occurs.

If the student is pursuing the PhD degree without acquiring the MS degree, a petition to waive the requirement of the MS degree should be approved by the departmental advisor and the chair and submitted to the dean of graduate studies. All required courses taken at the university beyond the BS degree should be shown on the Academic Program with the grade if completed. If the requirements are to be fulfilled in ways other than the standard described above, a memorandum requesting approval should be submitted to the dean of graduate studies.

The Academic Program must be submitted within one semester after passing the qualifying examination.