

PART-TIME MASTERS OF SCIENCE IN ENGINEERING- GENERAL ENGINEERING

Nicole L. Kamm, Program Director

The College of Engineering at the University of Toledo offers a Part-Time Master of Science degree in Engineering with a concentration in General Engineering. This engineering master's degree program is intended for students who are full-time employees seeking a master's degree to facilitate career advancement or achievement of personal educational goals. It is designed for current and future managers and engineers. This cross-disciplinary program combines a study in business management and engineering and presents an alternative to a traditional business management or technical Master of Science degree. To accommodate students who are full-time employees, course work for this degree program may be taken online via distance learning.

Degree Requirements

The Part-Time Master of Science in Engineering with a concentration in General Engineering program requires 30 credit hours at graduate level. The project option requires the completion of a minimum of 24 credit hours of approved graduate course work and 6 hours of a work-related project. The coursework option requires the completion of at least 30 credit hours of approved graduate course work. The student is expected to meet the following general requirements:

- Six hours of engineering core courses to establish a common foundation in engineering. These courses include Management of Projects and Technological Innovation (GNEN 6700), Applied Probability and Statistics in Engineering (GNEN 5700), and Applications of Engineering Analysis (GNEN 5500). The engineering core courses are designed to update computer analysis skills, provide a background in applied statistics and to furnish tools for the management of projects and technological innovation.
- Six hours of business core courses that cover introduction to financial and managerial accounting, analysis of manufacturing and service systems, and business, government and society. These courses include Analysis of Manufacturing and Service Systems (OSCM 5520), Business: Government and Society (BLAW 6100) or Supply Chain Management (BUAD 6600), and Economics for Business Decisions (FINA 5210). The business core is intended to acquaint engineers, scientists and technologists with financial, managerial, and social issues that can help the engineer succeed in today's marketplace.
- Twelve to eighteen hours of engineering elective courses to support the student's focus area. Each elective course is worth three credit hours, so a minimum of four courses are required. Graduate offerings in the bioengineering, chemical engineering, civil and environmental engineering, electrical engineering and computer science, general engineering, or mechanical, industrial and manufacturing engineering departments are eligible for selection as electives.

The project option requires six credit hours of a work-related project (GNEN 6920). The topic and other specifics of the project require prior approval of the program director and should include approval and cooperation of the employer. The project may be completed over two semesters or in one. Students may complete their course requirements in four semesters by taking the recommended two courses, 6 credit hours, per semester.

For transfer credit, students should refer to the general policies of the College of Graduate Studies. No more than nine credit hours toward the Master of Science in engineering may be earned at another university with a grade of B or better, and in no case may the project be satisfied by work already completed at another institution or on the job.

In order to be awarded the Master of Science in Engineering degree, the student must have at least a B average (minimum GPA of 3.0/4.0) for all graduate course credits in the program as well as for the entire graduate transcript. Only credit hours obtained with a letter grade of "C" or higher, or an "S" grade for the limited number of classes offered on a satisfactory or unsatisfactory basis, will fulfill degree requirements.

Admission Requirements

To be admitted to the Part-Time Masters of Science in Engineering program, applicants must have a bachelor's degree in engineering, engineering technology or a closely related field (e.g., one of the mathematical, physical or biological sciences). Applicants must be employed or have experience in private industry, government or nonprofit organizations. Admissions are made on an individual basis and take into account the applicant's previous record, the intended area of study, and the needs and capacity of the College of Engineering.

Applicants should have a minimum grade point average (GPA) of 2.7 in previous undergraduate work from appropriately accredited academic institutions or from an academic institution with high academic standards deemed appropriate and acceptable by the College of Engineering and the College of Graduate Studies. Applicants having a GPA less than 2.7 who demonstrate potential for graduate study may be admitted to the master's program on a provisional or other basis, at the option of the college. Students with an undergraduate GPA below 2.7 must register and take the GRE. Information on the GRE is available on the GRE Web site: <http://www.gre.org>. Students who graduated with a bachelor's degree from The University of Toledo do not need to submit official transcripts. Students who did not graduate from The University of Toledo need to contact the office of the registrar at their undergraduate institution to arrange for transmission of the undergraduate transcripts.

Students entering the program without a B.S. in engineering will be required to have at least: two calculus, through ordinary differential equations (2 semesters), physics (2 semesters) and chemistry and/or engineering materials (1 semester) and any three out of the following six: statics, dynamics, electronics, electric circuits, fluid mechanics and thermodynamics. Students lacking one or more of the above courses must take the necessary courses before entering the program.

Students can apply for non-degree student status and take up to nine credit hours of graduate classes, which may be applied to their graduate degree program. Students with non-degree status can be admitted as regular graduate students at a later date.

For additional information regarding this program, please consult the College of Engineering's website at <http://www.utoledo.edu/engineering/graduate-studies/> for specific program guidelines developed in cooperation with the College of Business and Innovation.