Master of Engineering

Graduate Student Handbook

College of Engineering & Applied Science
Graduate Office
665 Baldwin Hall

Revised August 2013
MASTER’S of ENGINEERING (MEng) DEGREE

The Master of Engineering program provides a graduate degree that focuses on the practice of engineering in order to better serve working professionals. Rather than culminate in a research experience and a thesis, the Master of Engineering curriculum provides skills and expertise that enhance the individual's ability to contribute to the technical workforce.

The program provides advanced training to students interested in expanding their knowledge and expertise. Depending on a student's interest, the degree could add significant depth to an individual's understanding of the practice of engineering or the program could be constructed to focus on greater inter-disciplinary breadth if that is the educational objective of the student.

In today's competitive technology environment, industries need to have highly skilled practicing engineers who are flexible in their professional capabilities. The MEng program is a practice oriented, focused degree and caters to this need. Graduates will contribute significantly to the technical competitiveness of business and industry.

The program also provides registered professional engineers an academically-based program to obtain the continuing education requirements to maintain licensure.

MEng Program Options

- Aerospace Engineering
- Biomedical Engineering
- Civil Engineering
- Electrical Engineering
- Computer Engineering
- Computer Science
- Environmental Engineering
- Chemical Engineering
- Material Science Engineering
- Mechanical Engineering

Admission Requirements

Admissions are controlled by the School in which the prospective student wishes to focus their program of study.

Individuals with the following qualifications will be admitted into the MEng program:

- Must hold a BS degree from an ABET accredited college (or equivalent if from an international university) in a corresponding engineering or engineering technology discipline and must provide transcripts from the institution where the degree was obtained;
- Minimum undergraduate grade point average (GPA) of 3.0;
- Submit GRE scores (waived for domestic students)
- 2 letters of recommendation;
- Statement of purpose.

International students are required to submit TOEFL scores. Students must meet minimum requirements established by the University.

Individuals may request a waiver of some of the above requirements (e.g., undergraduate GPA less than 3.0, or undergraduate degree not in engineering) and admission to the program if they provide sufficient evidence to the graduate program director that they have had sufficient experience to warrant a waiver. It is up to the program to accept or decline this request.
Advising

The College Director of the Master of Engineering programs is available to meet with students for academic planning and to recommend courses. MEng students will also be assigned an advisor in the appropriate program. The advisor will provide guidance on appropriate courses to meet the student’s educational objectives and the sequence of these courses. Since the structure of the MEng program is more flexible than most graduate programs, it is very important that the advisor meet with the student and work with the student to establish the program of study.

Students in the MEng program do not complete a thesis. Rather, there is a capstone project that is to be completed. The student should meet with the advisor or capstone course instructor regarding the project to seek guidance commensurate with the academic requirements. It is not the responsibility of the advisor to identify a project for each student.

Changes or exceptions to program requirements including course substitution, special topics, and credit hour distribution between core and track areas must be approved by the Program MEng advisor or Graduate Program Director and the College Director of MEng programs.

The Department’s Graduate Studies Director or the College Director of MEng Programs is required to sign off on graduation certifications for MEng students approving that they have met the MEng requirements for graduation.

Obtaining the Degree

The degree will be based on the successful completion of a minimum of 30 credits of graduate-level course work and does not require a thesis. The curriculum is structured to provide a foundation of advanced engineering topics while allowing students flexibility to meet their specific educational objectives. The curriculum includes:

- **Program core courses** taken by all Master of Engineering students regardless of which track they pursue (3 courses providing 6-9 credit hours). The core provides skills in the effective practice of engineering recognizing that for experienced practitioners, effectiveness includes technical skills, project and task management skills, and interpersonal skills.

- **Track required courses** from the discipline of interest (4-5 courses providing 10-15 credit hours depending upon the track)

- **Elective courses** which permit breadth, depth, or interdisciplinary focus depending on student educational objectives (number of course credit hours required depends upon the track)

- **Capstone project** demonstrates applications of skills and synthesis of knowledge (0-4 credit hours depending on the options described below). If additional credit hours are taken they do not count towards a course requirement. With the program advisor’s approval, students can choose: 1) to complete a project, 2) a final comprehensive exam, 3) to perform an internship or 4) to prepare a written paper under the supervision of the advisor. Depending on the program the capstone can be Pass / Fail or for a traditional letter grade.
o Project - The capstone project is focused on the application of principles and the practice of engineering and is not meant to be a mini-thesis. The capstone projects provide a mechanism to demonstrate a synthesis of knowledge and the application of advanced concepts learned in class to a specific problem. A project includes a written report and a presentation. The report will be read by the Program MEng advisor and a representative from the Office of the Associate Dean for Research and Graduate Studies. If the project is performed in conjunction with work duties, the report and presentation should also be given to the student's employer.

o Exam – With permission of the Program's Graduate Studies Director students can elect to take a comprehensive exam that covers the coursework completed as part of the MEng program, including both the core and track courses. The exam itself is not a course with any credit hours (0 credit capstone) so students taking this option must ensure that they meet the minimum program requirements for credit hours completed.

o Internship - Students can choose to perform an internship if this furthers their learning and career goals. The internship must be related to the student's degree area. Students selecting this option will also prepare a report and give a presentation to the Program advisor that describes knowledge gained through the work experience and how this furthered their career goals. Internships will be approved for 3 months and can be extended for an additional 3 months with the approval of the advisor. International students can be approved for CPT to participate in an internship. Additional documentation is needed for the extension if requested. CPT cannot be done until two semesters of study are completed. CPT can only be done prior to or up until a graduation date. CPT will be terminated upon graduation.

o Paper – A written paper can be completed under the supervision of the Program advisor. The paper will address a topic related to the discipline (track) and require the integration of multiple topics within that discipline.

Students should register for their Capstone Project in the spring term and can complete the project in the summer or fall term if needed. If the capstone project is not completed in the spring term the student will receive an "NG" (no grade) grade until it is complete. Upon completion the “NG” will be changed by the advisor to a letter grade.

<table>
<thead>
<tr>
<th>Program Core</th>
<th>Track Required Courses</th>
<th>Elective Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 courses (6-9 cr hrs)</td>
<td>4-5 courses (10 – 15 cr hrs)</td>
<td>1-3 courses (2-9 cr hrs)</td>
</tr>
<tr>
<td>Capstone</td>
<td>0-4 credit hours</td>
<td></td>
</tr>
</tbody>
</table>

- Seminar cannot count towards course requirements. If you take seminar it will be in addition to the 30 course credit hours required for the degree.

- **Special Topics** can only count for a maximum of 3 course credit hours toward the degree. Additional course credit hours of Special Topics will be in addition to the 30
course credit hours required for the degree. Students wishing to apply 3 credit hours of Special Topics toward the degree must get approval by completing the Master of Engineering Special Topics Form. The faculty sponsoring the Special Topics must indicate on this form the topics to be covered and verify the credit hours covered by the course.

Typical Schedule for Full-Time MEng Program

<table>
<thead>
<tr>
<th></th>
<th>Fall Semester</th>
<th>Spring Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Courses</td>
<td>Core Course #1</td>
<td>Core Course #3</td>
</tr>
<tr>
<td></td>
<td>Core Course #2</td>
<td></td>
</tr>
<tr>
<td>Track Required Courses</td>
<td>Track Course #1</td>
<td>Track Course #3</td>
</tr>
<tr>
<td></td>
<td>Track Course #2</td>
<td>Track Course #4</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>Elect Course #1</td>
<td>Elect Course #2</td>
</tr>
<tr>
<td>Capstone Project</td>
<td></td>
<td>Capstone Project</td>
</tr>
<tr>
<td>Credit Hours</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

1. Discipline specific course
2. At the discretion of the program, student and the advisor

Transfer From MEng to M.S. or Ph.D.

Students will be allowed to transfer from MEng status to M.S. or Ph.D. status only after one full year of residency as an MEng student and with the proper written approval as follows:

- A written application indicating the proposed objectives of the transfer
- Signature from a faculty member who will serve as graduate thesis advisor
- Signature of the departments Graduate Program Director

Graduation Requirements

Students must complete all the academic requirements of the program to graduate including:

- Minimum of 30 credit hours with no grades below a C
- Capstone project
- Minimum of 3.0 gpa

In addition, students must complete the following forms, have them signed and return to the CEAS Graduate Office (665 Baldwin):

- Final program of study for
- Capstone Completion form
Students must apply online for graduation [http://grad.uc.edu/student-life/graduation.html](http://grad.uc.edu/student-life/graduation.html) and pay the graduation fee even if a student does not intend to attend graduation ceremonies.

**MEng Miscellaneous**

- Master of Engineering students may be eligible for partial tuition scholarships
- The number of students in a School's MEng program can be capped by the School.
- Students must be registered every academic year until they graduate or go on approved OPT.