Duke | THOMAS LORD DEPARTMENT of MECHANICAL ENGINEERING & MATERIALS SCIENCE

MEng Degree Requirements at Duke MEMS

The Master of Engineering Degree in the MEMS Department is a flexible degree that prepares you for a career in industry. The main requirements are as follows:

1. **Ten** graduate-level courses (30 credits), represented as follows:
    a. **Two** business courses, MEng 540 and MEng 570, in no specific order
    b. An industry internship (full-time for 8 weeks) counted as MEng 550 and MEng 551. These are zero-credit courses that will appear on your transcript.
    c. **Eight** courses in engineering, the physical sciences, computation, or mathematics that define your concentration.
        i. These courses must be graded, 3-credits each.

Learn more about this degree at mems.duke.edu/masters. A typical three-semester schedule for an MEng student is shown here for reference.

A unique aspect of this program is the level to which students can personalize their program in order to better market themselves for the career they want. This process of course selection is performed through **required advisement** with the Director of Master's studies during course registration and enrollment.

MEng Degree Requirements

MEng Degree = 30 Credits Course Work + Internship (*zero-credit)

MEng Degree	Fall 1	Spring 1	Summer	Fall 2
Industry Preparation	MEng 570: Business Fundamentals	MEng 540: Leadership & Management	MEng 550: Internship or Applied Research Project MEng 551: Internship or Project Assessment (Automatically enrolled in both)	Job Applications, Interviews
Concentration	Core	Math		Core
	We recommend three courses during first term!	Core		Core
Elective	Elective	Elective		Elective

Duke ENGINEERING

A master's student pays tuition for three full semesters. The full-semester tuition (for ≥ 9 credits) is a flat rate.
A master's student must complete 10 graded courses. Each gray box represents a 3-credit course.

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Industry Preparation

An MEng student must complete two business courses, **MEng 540** and **MEng 570**, in no specific order. These courses are typically taken in the first academic year.

An MEng student is also required to complete an **industry internship**. The internship and follow-up evaluation are noted as zero-credit courses on the student's transcript. The student is automatically registered for these courses, **MEng 550** and **MEng 551**, in their Summer semester. In lieu of an industry internship however, an applied research project may be conducted at a Duke laboratory with ***prior*** DMS approval.

Concentrations

An MEng student has the option to select a focus area in their program, known as a concentration. The four departmental concentrations are:

1. Autonomous, Intelligent Machines and Systems,
2. Energy, Propulsion, and Structures for Earth and Space,
3. Multi-scale, Advanced, and Bio-Inspired Materials, and
4. Optimal Design of Physical and Virtual Systems.

A course-concentration map is continuously updated at the following website:

https://mems.duke.edu/masters/concentrations

By choosing a concentration, the student demonstrates sufficient technical depth by completing **five** core courses within their chosen focus. One of the core courses must be a graduate-level mathematics or computation course. The remaining four courses can be chosen from one of the departmental concentrations, and could potentially be offered by any other department within the Pratt School of Engineering.

One strength of the MEng degree is its flexibility. Student also have the option of **defining their own concentration** through close advisement with the Director of Master's Studies. In so doing, the student can further refine their career goals and personalize their degree plan more precisely or leave options for more breadth in learning.

Elective Courses

An MEng student must complete **10 *graded, graduate-level* courses (30 credits)**. Aside from the 5 departmental core courses and two required business courses mentioned earlier, the **three remaining courses are free electives**. These free electives can be any graduate-level courses related to engineering or business. Occasionally, graduate courses in other disciplines (e.g. law) can count as electives with *prior* DMS approval. All language courses are excluded.

Of the three electives, up to two can be independent studies. Only one independent study course will be approved in a particular semester. Contact the master's program coordinator to set up the independent studies.

Master's Tuition

A master's student is required to pay three full semesters of tuition (unless a 4+1 student). A full semester consists of 9 credits or more of graduate course work. The full-semester tuition is a flat rate, e.g. it costs the same tuition to register 9 or 12 credits in a particular semester. (DMS approval is required to take more than 12 credits per semester.) Beyond the three semesters of full-time enrollment, tuition is charged on a per-credit basis. However, an MEng student is expected to graduate by the end of the third semester, after all the degree requirements have been fulfilled. *Any deviation from a three-semester plan must seek prior approval*. See Appendix B for a sample study plan.

Students in the 4+1 program may be able to count up to four graduate courses taken in their senior year toward the master's degree, as long as those courses are not double-counted in their BS degree.

Departmental Contacts
Please contact us with any questions. Include your program (MEng or MS) and the semester you first enrolled in the program.

Master's Program Coordinator
Stacey Traister: stacey.traister@duke.edu
Director of Master's Studies
Dr. George Delagrammatikas: george.delagrammatikas@duke.edu

Academic Calendar
The Academic Calendar is a vital source for you to plan your life at Duke. Mark important dates on your own calendar to avoid conflicts. Pay attention to Drop/Add deadline to each semester.

Academic Integrity
All Duke Students must abide by the Duke Community Standard. Never engage in prohibited behavior defined as Academic Dishonesty and/or Plagiarism.