**ENGINEERING MANAGEMENT, MASTER OF SCIENCE**

http://engineering.jhu.edu/msem/

The Master of Science in Engineering Management (MSEM) degree program combines advanced course work in highly-specialized technical fields with a professional education in innovation, entrepreneurship, and management practices. Graduates of the program will be provided with the educational background to pursue professional management roles in industry.

**Facilities**

The MSEM program has a dedicated seminar room housed in Wyman. Students are able to study, conduct research and build prototypes within this space.

**Graduate Requirements**

*Please consult directly with the MSEM program director or MSEM program administrator to confirm the below requirements; changes may have occurred since this annual publication.*

Students in the MSEM program take the following to fulfill degree requirements:

- Five advanced courses in the engineering technical track (15 credits, with a minimum of 3 credits per course)
- Three full-semester fall management courses, a fall and spring MSEM Seminar course, and two half-semester required courses in the spring. Plus, students may choose from a list of approved half-semester courses to complete their elective, in addition to EN.662.643, The Practice of Consulting, taken during the intersession. Students also have the option to complete an internship (student-sourced) in conjunction with satisfactory enrollment in the MSEM internship course that will count towards an elective (with prior advisor and program approval).
- No grade lower than C may be applied to the program (and only one C is permitted)
- Courses must be at the graduate level (600-level or higher)
- Departments sponsoring technical tracks may impose stricter requirements for course work within the track.
- Students are additionally required to complete EN.500.603 Graduate Academic Ethics, and the Responsible Conduct of Research which do not count towards the degree requirements above.

At the discretion of the student’s advisors, a Johns Hopkins MSEM student may be permitted to double-count up to two JHU courses, or apply graduate courses taken at JHU but not applied to a degree, in accordance with conditions in the WSE Policy on Double-Counting Courses.

**Advising**

MSEM students will receive advising on the technical track from a designated faculty member affiliated with that track. MSEM students will be advised regarding the management track by members of the Center for Leadership Education faculty.

**Faculty**

Faculty members teaching the technical track courses are listed in their respective engineering departments elsewhere in this catalogue. Faculty members teaching the management track courses are listed in the Center for Leadership Education section of this catalogue.

**Program Requirements**

**Management Track**

The Center for Leadership Education has constructed a program tailored to the needs of future engineering managers. MSEM students will participate in a cohort program, which begins each fall, where all students in an entering class will take a suite of management courses together.

*Fall semester*: a cohort-based management curriculum consisting of three required courses and seminar: Strategies: Accounting & Finance, Strategies: Innovation and Growth and Professional Presentations.

*Immersion*: The Practice of Consulting during the January term.

*Spring Semester*: Two-half semester courses and seminar: Managing People and Resolving Conflicts, Leading Change

All MSEM students are required to attend the MSEM Seminar (fall & spring semesters) EN.662.811 M.S. in Engineering Management Seminar/EN.662.812 MSEM Seminar) course while enrolled in the program. This will meet monthly and addresses three important content areas: Innovation and design thinking; personal skills and development especially in the communication arena; and talks with practicing engineering managers. The Engineering Management program reserves the right to change the list of eligible courses at its discretion. MSEM students are also required to complete a half-semester management elective course (EN.663.xxx).

**Technical Tracks**

In addition to fulfilling the management track requirements, MSEM students must complete the requirements for one of the technical tracks (5 courses, 15 credits total/3 credits per course). Technical Tracks do not appear on the transcript or diploma. These are:

- Biomaterials
- Chemical & Biomolecular Engineering/Chemical Product Design
- Civil Engineering
- Computer Science
- Cybersecurity
- Data Science
- Energy
- Environmental Systems Analysis, Economics and Public Policy
- Electrical and Computer Engineering
- Fluid Mechanics
- Innovation and Design
- Materials Science and Engineering
- Mechanical Engineering
- Mechanics and Materials
- Nano-Biotechnology
- Nanomaterials and Nanotechnology
- Operations Research
- Probability and Statistics
- Systems Engineering
Engineering Management, Master of Science

- Space Systems Engineering, Engineering for Professionals
- Sustainability Leadership

Please note: the course requirements listed are a general guide and are subject to change frequently. For degree requirements, please refer to the program manager and the technical track advisor. For individual track requirements, please refer to the website (https://msems.engineering.jhu.edu/academics/technical-track/).

For current faculty and contact information go to http://eng.jhu.edu/wse/cle/page/our_people (http://eng.jhu.edu/wse/cle/page/our_people/)