

ENGINEERING MANAGEMENT (MEM)

Degree: Master of Engineering Management

Major: Engineering Management

Required Courses for Major

Code	Title	Hours
INEN 5369	Engineering Management	3
INEN 5380	Project Management	3
ACCT 5315	Financial & Managerial Accounting Foundations	3
Electives		21
Total Hours		30

Concentrations

The MEM degree is typically tailored to meet the desired educational objectives of each individual student in consultation with an advisor. The following are examples of typical program options. Substitutions and/or modifications to the courses on each of these programs can be accomplished with the approval of the student's advisor.

- MEM for Industrial Engineering
- MEM for Quality Management
- MEM for Construction Project Management
- MEM for Environmental Management
- MEM for Chemical Engineering
- MEM for Electrical Engineering
- MEM for Industrial Project Management
- MEM for Mechanical Engineering

Elective Courses

Business Administration - 6 to 18 hours of 5000-level courses from ACCT, BCOM, BULW, ECON, FINC, MKTG, MGMT, previously approved by the program advisor. Enrollment in some courses could require pre-approval by the offering department or instructor.

Technical Discipline - 6 to 18 hours of 5000-level courses in ENGR, CVEN, CHEN, ELEN, INEN, MEEN, MISY, COSC, CMGT previously approved by the program advisor. Enrollment in some courses could require pre-approval by the offering department or instructor.

Other

Must satisfactorily complete a final, comprehensive exam.

Pre-requisites

For students in the MEM program with non-engineering backgrounds, the following pre-requisite courses are mandatory and must be completed in addition to their corresponding program of study:

- Calculus I
- A math course beyond Calculus I (Calculus II, Differential Equations, or Linear Algebra)
- Computer programming course or experience programming in a computer language (C++, Java, Visual Basic, or similar) or, one

probability and/or statistics course or, one semester of Calculus-based Physics

- Two additional courses with significant math, programming, science, or engineering material. Examples of courses to satisfy this requirement include Physics II, any computer programming courses, statics or mechanics, circuits, upper-division physics courses, Operations Research, any upper-division chemistry course, upper-division engineering courses, Quantitative Finance, Econometrics, any courses with a Calculus pre-requisite, and human factors/ergonomics courses. Approval of these courses is based on the admission committee's recommendation. Most students with STEM undergraduates will satisfy this requirement without additional courses.

Additional Pre-requisites

Additional prerequisite courses might be assigned by the admission committee based on the student's area of study and background. Any courses taken as pre-requisites will not count towards the hours of the degree.

For students of the Master of Engineering Management, the academic departments offering courses in specific technical areas (Electrical engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering) could require additional undergraduate courses before enrolling in graduate-level courses. non-engineering background MEM students will request authorization to enroll from each academic department as needed.

Course Work Requirements

Students with non-engineering backgrounds must also take a design course (CIMS or other). Students without engineering background may be admitted into the MEM program if the pre-requisite courses have been taken in their previous degrees. If the prerequisites have not been taken, students without an engineering background may be admitted into the MEM program with a contingency on these pre-requisites passed with a minimum of Grade B during the graduate study. The final interpretation of the pre-requisite courses is the privilege of the MEM admission committee.

Online MEM Program Option

The MEM online program is designed for students to complete their program of studies through online education. All the above-stated requirements are the same for the online MEM program option. The MEM online program at Lamar University has the following courses available online.

Code	Title	Hours
ACCT 5315	Financial & Managerial Accounting Foundations	3
BULW 5300	Legal Environment of Business	3
ECON 5300	Foundation of Economics	3
FINC 5300	Foundations of Finance & Econ	3
INEN 5312	Quality Improvement	3
INEN 5316	Industrial Management	3
INEN 5320	Stat Decision Making	3
INEN 5350	Prod & Invent Control	3
INEN 5354	Lean Manufacturing	3
INEN 5357	Supply Chain Management	3
INEN 5363	Six Sigma	3

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INEN 5369	Engineering Management	3
INEN 5370	Operations Research	3
MISY 5340	ERP Overview	3
MISY 5360	Business Intelligence	3

The list of the courses online is constantly being revised and updated. Please consult with the program academic advisor for the most recent list of courses available online.

Up to 6 credit hours of graduate-level coursework (5000 level) taken as part of B.S. engineering programs at Lamar University can be counted toward the 30-hour degree requirement. These courses shall receive prior approval by the department chair or his/her designee.