Engineering Management, MSEM—Online

The Online Master of Science in Engineering Management offers graduate students an opportunity to develop both technical expertise and management and business competence highly sought after by technology-driven employers. Whether you are planning to change your career path or start a career in technical management, this program provides you with the right skills. The blend of technical proficiency and management skills fostered in this program is designed to prepare graduate students to excel across a wide range of careers in technology-driven industries as well as government organizations.

The program offers students instruction in how to assist companies in taking products from conception to market. They may play a crucial role in forming and managing teams for assessing cost-effectiveness, designing strategies to improve production, or analyzing supply chains. Most of these projects require an integrated set of skills that require managerial decision making on the one hand and engineering expertise on the other. This skill set enables graduates of this program to serve as technical liaisons within different levels of the organization, often paving the way to senior management roles.

The program curriculum includes four core courses required of all students, designed to establish the essential foundations in economic decision making, quantitative decision modeling, and project management. In addition to these core courses, students can tailor their studies through a wide range of electives, allowing them to pursue either a broad-based path or a more specialized plan of study. For instance, some students may elect to refresh or enhance their technical skills in engineering-based courses such as data analytics and information systems, while others may prefer to broaden their knowledge base by selecting coursework in management subjects such as organizational leadership, financial management, supply chain, lean design, or strategic planning.

Program Requirements

Complete all the core requirements listed below unless otherwise indicated.

Code	Title	Hours
Core Requirements		
EMGT 5220	Engineering Project Management	4
EMGT 6225	Economic Decision Making	4
IE 6200	Engineering Probability and Statistics	4
OR 6205	Deterministic Operations Research	4
Electives		
Complete 16 semester hours of elective coursework.		16
Recommended Electives		
EEBA 6406	Managing Operational Disruption in Healthcare	
ENTR 6250	Lean Design and Development	
FINA 6318	Financial Management	
HRMG 6318	Managing the Organization	
IE 6400	Foundations for Data Analytics Engineering	
IE 6600	Computation and Visualization for Analytics	
IE 6700	Data Management for Analytics	
INFO 6245	Planning and Managing Information Systems Development	
INFO 7245	Agile Software Development	
INFO 7260	Business Process Engineering	
SCHM 6318	Managing Operations and the Supply Chain	
STRT 6318	Strategic Planning for the Future	
Other Elective Options		
Any INFO course in range 5000—7999		
Any IE course in range 5000—7999		

Program Credit/GPA Requirements

32 total semester hours required
Minimum 3.000 GPA required