

Master of Engineering Management

Year 1, Semester 1

Title	Description	Credits
Engineering Management Science	Mathematical models involving optimization, simulation and forecasting to provide quantitative solutions to engineering management problems; scheduling, distribution, inventory control.	3 credits Term 1
Ethics and Values in Sciences and Technology	Study interrelationships of 20th-century technological change and human values with emphasis on social and ethical aspects of technological progress.	3 credits Term 2

Year 1, Semester 2

Title	Description	Credits
Organizational Behavior	Individual and group behavior in organizations; motivation, performance and rewards, job satisfaction, decision processes, conflict resolution; job and organizational design.	3 credits Term 1
Organizational Learning	Structural, strategic, technical, and ecological approaches, including institutional, resource dependence, and discontinuous improvement models; evaluating and institutionalizing learning.	3 credits Term 2

Year 1, Semester 3

Title	Description	Credits
Economics and Financial Studies for Engineers	Economic feasibility of projects, systems and products. Project budgets, estimation, return on investment, supply and demand, and earned value management.	3 credits Term 1
Engineering for Energy and the Environment	Advances in design, development, and deployment of control and management software for enterprise and production information systems.	3 credits Term 2

Year 2, Semester 1

Title	Description	Credits
Creativity and Problem Solving I	Foundations of individual problem solving including creativity, cognitive style and level, problem-solving processes and techniques, the paradox of structure.	3 credits Term 1
Creativity and Problem Solving II	Theory and practical applications of group problem solving including cognitive gap, coping behavior, agents of change, and managing cognitive diversity.	3 credits Term 2

Year 2, Semester 2

Title	Description	Credits
Decision and Risk Analysis in Engineering	Analysis of engineering decisions under uncertainty; problem identification, formulation, judgment, resolution; mitigation, risk analysis, quantification, and management.	3 credits Term 1
Technical Project Management	Analysis and construction of project plans for the development of complex engineering products taken from a variety of problem domains.	3 credits Term 2

Year 2, Semester 3

Title	Description	Credits
Engineering Management Strategy	Project- and discussion-based capstone to the engineering management program.	3 credits This course spans the entire semester