Masters Degree – Engineering Management
Progressive Degree Option

The MS in Engineering Management program (MSEMT) is designed for students with undergraduate degrees in engineering or related sciences to prepare them for management responsibilities. As an MSEMT student, you will learn how to lead technology projects as well as manage teams, engineering functions, and companies. In addition, you will gain an understanding of the economic decision making processes. More than just theory, the MSEMT program offers real-world examples provided by instructors who have years of relevant industry experience, covering topics such as technology creation, management of invention, information systems, managerial accounting, and quantitative methods.
This is also a suitable program to help prospective technical entrepreneurs understand the enterprise creation process.

Required Courses (18-20 Units)

- ISE 500 Statistics for Engineering Managers Units: 3 (Fa, Sp)
- ISE 515 Engineering Project Management Units: 3 (Fa, Sp, Su)
- ISE 544 Leading and Managing Engineering Teams Units: 3 (Fa, Sp, Su)
- ISE 561 Economic Analysis of Engineering Projects Units: 3 (Fa, Sp, Su) (ISE500 pre-requisites)

Analytics Course Select one.

- DSCI 552 Machine Learning for Data Science Units: 4 (Fa, Sp)
- ISE 529 Predictive Analytics Units: 3 (Fa, Sp)
- ISE 530 Optimization Methods for Analytics Units: 3 (Fa, Sp)
- ISE 534 Data Analytics Consulting Units: 3 (Sp) (ISE529 & ISE530 pre-requisites)
- ISE 562 Decision Analysis Units: 3 (Fa, Sp)

Technology Course Select one.

- CE 576 Invention & Technology Development Units: 4
- ISE 545 Technology Development and Implementation Units: 3 (Fa)
- ISE 585 Strategic Management of Technology Units: 3 (Fa, Sp)

Select One Course from One of the Following Tracks (3-4 units)

Management Track

- CE 502 Construction Accounting, Finance and Strategy Units: 4 (Fa, Sp)
- ISE 506 Lean Operations Units: 3 (Fa, Sp)
- ISE 527 Quality Management for Engineers Units: 3 (Fa, Sp)
- ISE 585 Strategic Management of Technology Units: 3 (Fa, Sp)
- MOR 557 Strategy and Organization Consulting Units: 3 (Fa, Sp)

Analytics Track

- DSCI 552 Machine Learning for Data Science Units: 4 (Fa, Sp)
- ISE 529 Predictive Analytics Units: 3 (Fa, Sp)
- ISE 530 Optimization Methods for Analytics Units: 3 (Fa, Sp)
- ISE 533 Integrative Analytics Units: 3 (Sp) (ISE529 & ISE530 pre-requisites)
- ISE 534 Data Analytics Consulting Units: 3 (Fa) (ISE529 & ISE530 pre-requisites)

- ISE 543 Enterprise Business Intelligence & Systems Analytics Units: 3
- ISE 562 Decision Analysis Units: 3 (Fa, Sp)

Innovation and Technology Commercialization Track

- BAEP 556 Technology Feasibility Units: 3 (Fa)
- BAEP 557 Technology Commercialization Units: 3 (Sp)
- CE 576 Invention & Technology Development Units: 4
- ISE 545 Technology Development and Implementation Units: 3 (Fa)
- ISE 585 Strategic Management of Technology Units: 3 (Fa, Sp)

Supply Chain and Operations Track

- DSO 581 Supply Chain Management Units: 3 (Fa, Sp)
- DSO 583 Operations Consulting Units: 3 (Sp)
- ISE 513 Inventory Systems Units: 3 (Sp)
- ISE 514 Advanced Production Planning and Scheduling Units: 3 (Fa, Sp)
- ISE 583 Enterprise Wide Information Systems Units: 3 (Fa, Sp, Su)

Custom Track

Select one course from Industrial and Systems Engineering or Business in consultation with an adviser.

Total units required for the degree: 21-23

Courses cannot be double counted

(term offerings in parenthesis are expected but not guaranteed)

USC Viterbi
School of Engineering
Daniel J. Epstein Department of Industrial and Systems Engineering