

Masters Degree – Mechanical Engineering/Engineering Management Progressive Degree Option

AME Required Courses: **(18 units)**

Approved graduate-level course work in AME

ISE Required Courses: **(24 units)**

Required Courses (18-19 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-requisite)

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 562 Decision Analysis Units: 3 (Fa, Sp)

Technology Course **Select one.**

- ISE 545 Technology Development and Implementation Units: 3 (Fa)
- ISE 555 Invention and Technology Development Units: 3
- 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 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_

- ISE 545 Technology Development and Implementation Units: 3 (Fa)
- CE-576 Invention and Technology Development Units: 3
- 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.

Select One ISE Elective

Total ISE units required for the degree: 24

****Courses cannot be double counted****

(term offerings in parenthesis are expected but not guaranteed)

Total Units Required for the Dual PDP degree: 42

