PROGRESSIVE DEGREE PROGRAM
COURSE PLAN TEMPLATE

Masters Degree – Industrial & Systems Engineering
Progressive Degree Option

The MS in Industrial & Systems Engineering (MSISE) program is designed for engineers and related technical professionals aspiring to achieve the highest levels of responsibility and leadership in the workplace. As an MSISE student, you will be broadly educated in all aspects of technical enterprises.

The MSISE program is excellent preparation for industrial engineering program graduates who want to acquire substantial depth with respect to industrial engineering methods and the theory of the firm. This degree is also relevant if you are a graduate from another technical area and intend to leverage your existing skills toward the pursuit of responsibility for the profitability and growth of your organization.

Required Courses (12 units)

ISE 513 Inventory Systems Units: 4
ISE 514 Advanced Production Planning and Scheduling Units: 4
ISE 515 Engineering Project Management Units: 4

Select two courses from Group A, B or C (8 units)

Group A

ISE 530 Optimization Methods for Analytics Units: 4
ISE 536 Linear Programming and Extensions Units: 4
ISE 538 Performance Analysis Using Markov Models Units: 4
ISE 539 Stochastic Elements of Simulation Units: 4
ISE 580 Performance Analysis with Simulation Units: 4

Group B

ISE 506 Lean Operations Units: 4
ISE 525 Design of Experiments Units: 4
ISE 527 Quality Management for Engineers Units: 4
ISE 583 Enterprise Wide Information Systems Units: 4

Group C

ISE 561 Economic Analysis for Engineering Projects Units: 4
ISE 562 Decision Analysis Units: 4
ISE 564 Performance Analysis Units: 4
ISE 570 Human Factors in Engineering Units: 4

*Minimum Number of Units Required for the PDP degree: 20

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

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