Elective Course Options for MSE Degree in Systems Engineering
Current as of July 2020

EN.520.447 Introduction to Information Theory and Coding
EN.520.629 Networked Dynamical Systems
EN.491.691 Learning Theory I
EN.550.636 System Identification and Likelihood Methods
EN.550.661 Foundations of Optimization
EN.550.664 Modeling, Simulation, and Monte Carlo
EN.550.690 Neural Networks and Feedback Control Systems
EN.553.600 Mathematical Modeling and Consulting
EN.553.602 Research and Design in Applied Mathematics: Data Mining
EN.553.613 Applied Statistics and Data Analysis
EN.553.633 Monte Carlo Methods
EN.553.636 Introduction to Data Science
EN.553.653 Mathematical Game Theory
EN.553.661 Optimization in Finance
EN.553.663 Network Models in Operations Research
EN.553.665 Introduction to Convexity
EN.553.667 Deep Learning in Discrete Optimization
EN.553.671 Combinatorial Analysis
EN.553.673 Introduction to Nonlinear Dynamics and Chaos
EN.553.694 Applied and Computational Linear Algebra
EN.553.753 Commodities and Commodity Markets
EN.553.761 Nonlinear Optimization I
EN.553.762 Nonlinear Optimization II
EN.553.763 Stochastic Search and Optimization
EN.553.766 Combinatorial Optimization
EN.553.783 Reliability Analysis
EN.560.601 Applied Math for Engineers
EN.560.618 Probabilistic Methods in Civil Engineering and Mechanics
EN.560.445 Advanced Structural Analysis
EN.560.608 Multilevel and Multiobjective Optimization
EN.560.641 Equilibrium Problems in Systems Engineering
EN.560.645 Integer and Robust Optimization
EN.560.650 Operations Research

EN.560.653 An Introduction to Network Modeling
EN.560.658 Natural Disaster Risk Modeling
EN.560.740 Optimization and Learning
EN.570.607 Energy Policy and Planning Models
EN.570.608 Uncertainty Modeling for Policy & Management Decision Making
EN.570.616 Data Analytics in Environmental Health and Engineering
EN.570.695 Environmental Health and Engineering Systems Design
EN.570.697 Risk and Decision Analysis
EN.575.611 Econ Fdns, Public Decision Making
EN.580.618 Probabilistic Methods
EN.580.750 Surgineering: Systems Engineering and Data Science in Interventional Medicine
EN.601.633 Intro Algorithms
EN.601.636 Algorithmic Game Theory
EN.601.675 Machine Learning
EN.601.676 Machine Learning: Data to Models
EN.601.682 Machine Learning: Deep
EN.663.617 Storytelling with Data
EN.663.667 Decision Analytics Fundamentals
PH.140.644 Statistical Machine Learning: Methods, Theory, and Applications
PH.646-649 Essentials of Probability and Statistical Inference I-IV
PH.221.604 Case Studies In Management Decision-Making