	Engineering Optimization ENME 610	Multidisciplinary Optimization ENME 625	Operations Research in Engineering ENME 741	Stochastic Programming ENME 725	Equilibriuim Programming ENME 722
Linear Optimization Models/Theory					
Network LP Models					
Energy Network LP Models					
AHP LP Models					
CPM LP Models					
LP Duality Theory					
Post Optimality Anal.					
Integer LPs					
Total unimodularity					
Project management models					
Nonlinear Optimization Models/Theory					
Unconstrained optimality conditions					
Constrained optimality conditions (non-KKT)					
Constrained optimality conditions (KKT)					
Nonlinear post-opt. analysis					
Convexity (simple)					
Generalized convexity					
Game Theory/Equilibrium Problems					
Mixed Complementarity Problems					
Two-level optimization					
Nash Equilibria					
generalized Nash Problems					
Math. Programs with equilibrium constraints					
Stochastic/Robust Optimization					
Recourse problems					
Chance constraints					
Stochastic Dynamic Programming					
Robust Optimization					
Scenario-reduction methods					
Risk Measures					
Multiobjective Optimization					
Classical					
Linear					
Nonlinear					
Quality metrics for Pareto solutions					
Non-Classical (Heuristics)					
Nature-based models and methods, e.g.,					
Multi-objective genetic algorithms					
Optimization (linear/nonlinear)					
Single-Objective Decomposition Methods					
Benders (LPs)					
generalized Benders (MINLP)					
Dantzig-Wolfe Algorithm (LP)					
Multisubsystem optimization methods					
Multisubsystem post optimality sensitivity					
NLP Duality Theory					
Single-Objective non-Decomposition Methods					
Simplex Method (LP)					
Single-variable unconstrained					
Multi-variable unconstrained					
Multi-variable constrained					
Branch-and-Bound					
Genetic Algorithms (single obj.)					
Multi-objective non-Decomposition Methods					
Gradient-based					
non Gradient-based					
Approximations					
Design of experiments					
Surrogate modeling					
Verification and validation					