DESCRIPTION: An introduction to applied operations research and the decision-making process.

PREREQUISITE: Linear Algebra (MATH 306) [may be taken concurrently].


SOFTWARE: Microsoft Excel, and Student CD bundled with Text.

Topics* Weeks
Introduction to Operations Research & Modeling (Chapter 1) 1

Introduction to Linear Programming & Applications (Chapter 2) 1

Solution & Sensitivity Analysis: Graphical, Simplex Method (Chapter 3) 2

Duality and Post-Optimal Analysis (Chapter 4) 1

Transportation and Project Scheduling Problems (Chapters 5 and 6) 3

A Matrix View of the Simplex Algorithm & Parametric Programming (Chapter 7) 2

Optional Topics*: Integer Linear Programming, Network Models, Waiting Line Models, Simulation, Markov Processes 2

Tests and Student Presentations 2

*If time permits, other topics from the text may be added, at the instructor's discretion.

EVALUATION
Projects & Homework 40%
Exams 40%
Final Exam 20%

**Graduate students will be assigned special or additional homework/test problems/projects.

NOTE: Once a student has received credit, including transfer credit, for a course, credit may not be received for any course with material that is equivalent to it or is a prerequisite for it.