

MARMARA UNIVERSITY
DEPARTMENT OF INDUSTRIAL ENGINEERING

IE 333 OPERATIONS RESEARCH - I
FALL 2009

Instructor: Assist. Prof. Fadime Üney-Yüksektepe

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Class hours: Monday 08:30-11:20

Room: MB242

PS hours: Thursday 13:30-15:20

Room: MB242

Group Web Page: http://groups.google.com/group/mu_ie333

Group e-mail: mu_ie333@googlegroups.com

Textbook: Hamdy A. Taha, *Operations Research: An Introduction*, 8th Edition, Pearson - Prentice Hall, (2007).

Course objectives:

- To introduce the concept of model building
- To teach the basic deterministic operations research techniques
- To explain output analysis of linear programming models

Course Contents: Introduction to Operations Research, Linear Programming Models and Model Formulation, Graphical Solution Procedure, The Simplex Method, M-Method, Two-Phase Method, Sensitivity Analysis, Duality, Primal-dual relationships, Post-Optimal Analysis, Transportation Models, Transshipment Problem, Assignment Problem, Integer Programming

Evaluation

Quizzes	10%
Midterm Exam I	25%
Midterm Exam II	25%
Final exam	40%

Week	Date	Topic
1	September 28	Chapter 1 & Chapter 2 What is OR? Modeling with LP
2	October 5	Chapter 2 Modeling with LP
3	October 12	Chapter 3 The Simplex Method
4	October 19	Chapter 3 M-Method Two Phase Method
5	October 26	Chapter 3 Special Cases in the Simplex
6	November 2	Chapter 3 Sensitivity Analysis
7	November 9	Chapter 4 Duality
	November 16	MIDTERM WEEK
	November 23	MIDTERM WEEK
8	December 7	Chapter 4 Additional Simplex Algorithms
9	December 14	Chapter 4 Post-Optimal Analysis
10	December 21	Chapter 5 Transportation Model
11	December 28	Chapter 5 Assignment Model
12	January 4	Chapter 5 Transshipment Model
13	January 11	Chapter 9 Integer Programming
14	January 18	Chapter 9 Integer Programming