

22-QA-703
Optimization Models for Managers
2credits
Room 110
T,H 10:00-11:15

Instructor: Professor Michael Magazine
mike.magazine@uc.edu

Lindner 522
513.556.7191

Text: Albright, S.C, Winston, W.L. and C.J. Zappe, Data Analysis and Decision Making with Microsoft® Excel, 3rd edition, published by South Western Cengage Learning, 2009

Course Objectives:

- To provide an understanding of optimization modeling and how it may be used to assist in business decisions and analysis.
- To develop skills in formulating optimization models and interpreting and applying outcomes.
- To provide experience using decision technology for optimization.

Grading Policies:

Two Exams: 50% each

Assigned Problems. We will be going over problems in each class that are assigned in the syllabus. It is understood that we have not yet covered the material for these assignments but the goal is to have you think about them before you come into class. My experience is that you will be able more easily to participate in discussion and will find studying for the exams much easier.

Missed Exams. Make up examinations will be given for excused absences only. An excused absence will be granted only if both of the following conditions are met: 1) the instructor has been informed in advance and 2) the instructor has provided his written approval to miss the exam. Written approval will not be granted until the instructor and student have agreed on how the exam will be made up. Unexcused absences from examinations will result in an exam grade of zero. It is the student's responsibility to produce a written approval if any disagreements arise concerning the enforcement of this policy.

Incomplete Policy. The university policy will be followed. The I grade will be given only if a student, through no fault of his/her own, is unable to complete the course and has an excused absence from the instructor. Students receiving an I grade must contact their instructor during the first week of the immediately following quarter to arrange a procedure for completing the course.

Out of Class Assignment. It will be your responsibility to learn one of the modules of the class, Goal Programming, on your own. I will provide some basics on Bb and other information is readily available. You will also have some problems to try and possibly hand-in. In addition, there will be one question on your exam on Goal Programming.

Timetable

Problems

Readings

Timetable	Problems	Readings
Class 1 March 31	Class Introduction, Lindholm example	Lindholm example
Class 2 April 2	LPModels, Ch14:26,51; Ch15:73,75,80 (note-I only am looking for the algebraic model)	Chapter 14 Chapter 15, through section 3
Class 3 April 7	Linear Programming solutions: graphical, solver, <i>Additional Lindholm questions</i>;	
Class 4 April 9	Interpreting Solver Solutions; <i>Handouts</i>	
Class 5 April 14	Networks, Ch15:	Chapter 15 sections 4-6
Class 6 April 16	Exam 1	
Class 7 April 21	Integer Programming, Ch15:	Chapter 15 section 7
Class 8 April 23	Non-linear Programming, Ch 15:	Chapter 15 section 8
Class 9 April 28	Review for exam, Goal programming	
Class 10 April 30	Exam 2	