

UIC Department of Mechanical and Industrial Engineering
IE 471 - Operations Research I
Fall 2011

Instructor

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Office hours (lecture questions): Monday and Wednesday 12pm–1pm or by appointment.

Teaching Assistant

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Office hours: 3287 SEL, times TBA

Meeting times

The class meets for lecture on Mondays, Wednesdays and Fridays at 11–11:50am in 3290 SEL. Please arrive on time and turn your cell phones off during the lectures.

Catalog Description

3 OR 4 hours. Introduction to operations research, formulation of linear programming problems, simplex methods, duality theory, sensitivity analysis, network models, and integer linear programming. 3 undergraduate hours. 4 graduate hours. Prerequisite(s): MATH 310.

Textbook

Hillier and Lieberman, *Introduction to Operations Research*, 9th Edition, Mc Graw Hill, 2010. Topics to be covered: Chapters 1-9 (partial coverage).

Web page

Course-related information announcements, and homework assignment and solutions can be found on Blackboard.

Homework

Homeworks are assigned on Blackboard at least a week in advance of the due date, and are due by 11am on the due date. You may submit your assignment electronically on Blackboard or in person as a hard copy at the lecture. A homework turned in by someone else or a late homework will not be accepted. Students with documented medical reasons may be excused. The homework solutions will be posted on Blackboard on the due date or shortly after. Graded homeworks will be returned in class the following week. Collaboration with other students is encouraged: you may discuss with your classmates possible approaches to solving the problems in the homework, but **each student should write her/his solution independently**. Computer use will be necessary for certain assignments.

Grading

Homeworks, midterms and final exams are graded numerically. The course grade will be determined as follows:

Homework and class participation	10 %
Midterm I	30 %
Midterm II	30 %
Final Exam	30 %

The homework and class participation grade is evaluated based on class attendance, class participation, and the average of all homework grades except the lowest one.

Tentative course outline

Week 1	Aug. 22–26	Intro.–Chapter 3(1)	HW 1 assigned on 8/26
Week 2	Aug. 29–Sept. 2	Chapter 3 (2)	HW 1 due; HW 2 assigned on 9/2
Week 3	Sept. 7–9	Chapter 4 (1)	HW 2 due; HW 3 assigned on 9/9
Week 4	Sept. 12–16	Chapter 4 (2)	HW 3 due; HW 4 assigned on 9/16
Week 5	Sept. 19–23	Chapter 5	HW 4 due on 9/23
Week 6	Sept. 26–30	Chapter 6 (1)	Midterm I; HW 5 assigned on 9/30
Week 7	Oct. 3–7	Chapter 6 (2)	HW 5 due; HW 6 assigned on 10/7
Week 8	Oct. 10–14	Chapter 7.1	HW 6 due; HW 7 assigned on 10/14
Week 9	Oct. 17–21	Chapter 8 (1)	HW 7 due; HW 8 assigned on 10/21
Week 10	Oct. 24–28	Chapter 8 (2)	HW 8 due on 10/28
Week 11	Oct. 31–Nov. 4	Chapter 9 (1)	Midterm II; HW 9 assigned on 11/4
Week 12	Nov. 7–11	Chapter 9 (2)	HW 9 due; HW 10 assigned on 11/11
Week 13	Nov. 14–18	Chapter 9 (3)	HW 10 due on 11/18
Week 14	Nov. 21–23	Chapter 11 (intro.)	HW 11 assigned on 11/23
Week 15	Nov. 28–Dec. 2		HW 11 due on 11/30
	Dec. 8, 10:30–12:30pm		Final exam