

MATH442/OR442 Operations Research II
Spring 2007

George Mason University
Department of Systems Engineering and Operations Research

Friday 10:30am-1:15pm,
Innovation Hall 132,

Instructor: Yifan Liu
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Email: yliu9@gmu.edu
Office Hour: Thursday 4:30pm-6:30pm or by appointment

TA: TBA.

Text: Wayne. L. Winston, *Operations Research Applications and Algorithms*, Fourth Edition, 2003.

Course Summary: A survey of probabilistic methods for solving decision problems under uncertainty. Topics covered by this class include decision analysis, inventory theory, Markov chains, queueing theory, and simulation.

Tentative Course Schedule (subject to slight change, depending on the pace of the course)

Date	Topic	Chapters
1/26	Introduction and Review of Probability	12.3-12.6
2/2	Decision Making Under Uncertainty	13.1-13.4
2/9	Deterministic Inventory Models (I)	15.1-15.2
2/16	Deterministic Inventory Models (II)	15.4-15.6
2/23	Probabilistic Inventory Models (I)	16.1-16.4
3/2	Probabilistic Inventory Models (II) Review	16.5-16.6
3/9	Midterm	
3/16	(Spring break, no class)	
3/23	Markov Chain (I)	17.1-17.3

Week of 3/30 Markov Chain (II) 17.4-17.5
(**The class needs to be re-scheduled earlier this week**, since I will be out for conference. Exact class time to be discussed with the students.)

4/6	Queueing Theory (I)	20.1-20.3
4/13	Queueing Theory (II)	20.4-20.8
4/20	Queueing Theory (III)	20.9-20.11
4/27	Simulation (I)	21.1-21.6
5/4	Simulation (II), Review	21.7-21.9
5/11	Final Exam	

Grading:

Homework: 20%. Homework will be assigned each week, and due the following week in class. There are 12 homework sets in total. The worst two scores will be dropped, and the rest 10 will each count for 2% in the final grade. Late homework will only be accepted for extreme situations.

Midterm: 40%. In class on 3/9 (Closed book and notes, while formulae are given)

Final Exam: 40%. In class on 5/11 (Closed book and notes, while formulae are given)

(Make-up exams will only be given for extreme situations, and only if I am contacted before the exam is given and full arrangements are established.)