OPRE 3360: Managerial Methods in Decision Making Under Uncertainty
University of Texas at Dallas

Course Syllabus

Disclaimer
The material contained in this syllabus is subject to change upon announcement by the instructor in class.

Course Information

Course Number:	OPRE 3360
Course Title:	Managerial Methods in Decision Making Under Uncertainty
Term:	Spring 2020

Instructor:	Negin Enayaty Ahangar, Ph.D.
Office Information:	JSOM 3.420
Online Office Hours:	Tuesday, 10:00am - 12:00pm
	Thursday, 10:00am - 12:00pm
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Teaching Assistant:	Rushabh Rakesh Shah
Office Information:	JSOM 2.414
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	Wednesday, 1:00pm - 3:00pm
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Course Pre-requisites, Co-requisites and/or Other Restrictions
MATH 1325 or MATH 2413 or MATH 2417

Course Description
Introduces the concept of probability and statistics to managerial decision making. Concepts will be developed in lecture and exercises using software packages. Topics include: summarizing and presenting data, probability theory, sampling, estimation, confidence intervals, hypothesis testing, regression, and ANOVA.

Learning Outcomes
Students are expected to develop skills on problem formulation, identification of appropriate statistical techniques, computer implementations in Excel and manual calculations and written explanations, and interpretation of empirical results. At the end of this course you should be able to:

- Be acquainted with the concept of sample and population.

- Calculate and interpret statistics in context.

- Use statistics to describe samples and test hypothesis to make inferences about populations.

- Present data using Excel as an analytic tool.

Textbook:

Modern Business Statistics with Microsoft Excel (6th Edition)

Authors: Anderson, Sweeney, Williams

You may purchase the textbook from UTD bookstore, Cengage publisher or Amazon.

Software: Microsoft Office Excel
This course uses a laptop, eLearning, Internet access, Microsoft Excel 2007 or higher (no trial versions). You can download and install the newest Excel for free as a UTD student using the link `https://www.utdallas.edu/oit/o365/`.

The Statistics and Math lab
Students enrolled in OPRE 3333 or OPRE 3360 may use the lab in room 2.414 from 10AM - 6PM, Monday through Friday.

Grading Criteria
Grades are assigned based upon the following scale and weighting.

Assignments	20%
Exam 1	20%
Exam 2	30%
Exam 3	30%

97-100	A^+	87-89.99	B^+	77-79.99	C^+	67-69.99	D^+
93-96.99	A	83-86.99	B	73-76.99	C	63-66.99	D
90-92.99	A^-	80-82.99	B^-	70-72.99	C^-	60-62.99	D^-

Course Policy:

1. **General**

    (a) It is your responsibility to read the syllabus and check the eLearning for announcements/changes daily.

    (b) If a student missed a class, then he/she should ask classmates about what was covered in class. There is no need to let me know if you are going to miss a class.

    (c) You must pay close attention to all the due dates from the first day of class and schedule your personal activities around those dates.

    (d) A portion of course material will be presented through course notes and handouts. It is each students responsibility to take appropriate notes during lecture. If a student misses a lecture for any reason, it is his/her responsibility to obtain notes from a classmate.

    (e) UTD eLearning is used to disseminate the materials for this course. Students can visit `https://elearning.utdallas.edu` and login using their net ID and password. Upon successful login, the Managerial Methods in Decision Making Under Uncertainty webpage should be available. Lectures, handouts, data files, and review questions will be available on this webpage. The instructor expects students to keep up with these materials. It is each student's responsibility to check the website before each class and bring that day's lecture to class.

    (f) Students who have questions should make every attempt to consult the instructor and TA during office hours. When this is not possible, the student should email the instructor and TA with a description of the question.

2. **Exams:**

   (a) Exams are closed-book and closed-note.

   (b) On each exam, students will be allowed to use a non-graphing calculator and a formula sheet to be provided by the instructor.

   (c) Exams will not be available to students after submission. However, you have one week, after grades are posted on eLearning, to check your graded exam in the instructor's office hours and have the instructor's feedback.

   (d) There will be NO make-up for any missed exam except for medical emergencies in which a written statement is required for justifying the situation along with the physician's address and phone number.

3. **Assignments:**

   (a) There will be an assignment at the end of almost every chapter.

   (b) These assignments will be assessed using elearning quizzes, which will be made available for the duration of the assignment.

   (c) The two lowest graded assignments will be dropped.

   (d) There will be NO make-up for any missed assignment.

4. **Extra Credit:**

   (a) Extra credit will NOT be offered.

5. **Academic Dishonesty/Cheating:**

   (a) Students are required to read, understand and abide by the university policy on academic honesty.

   (b) Any student who is found responsible for committing an act of academic dishonesty will receive a grade of F or 0 (zero) on that quiz, exam, assignment, project or course.

   (c) The instructor reserves the right to change the grading policy without any notice due to unforeseen circumstances such as dishonesty, cheating, etc.

6. **Mobile Phones, Laptops & Electronic Devices:**

   (a) Taking unauthorized pictures or recording during the lecture/classroom from presented materials with a mobile phone, laptop, camera or any other device is an infringement of privacy rights and is prohibited.

   (b) No use of mobile phones for talking or texting is allowed while in classroom. If you must make a call, then please step outside of the classroom.

Comet Creed
This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

As a Comet, I pledge honesty, integrity, and service in all that I do.

UT Dallas Syllabus Policies and Procedures
The information contained in the following link constitutes the University's policies and procedures segment of course syllabus. Please go to `https://go.utdallas.edu/syllabus-policies` for these policies.

The following is a tentative schedule, which will be followed as closely as possible. However, should any changes become necessary, it will be announced in the class or via eLearning. It is your responsibility to keep track of announcements regarding changes to this schedule.

Course Calendar

Week	Date	Topic	Book	Assignment
1	Tuesday, January 14	Data and Statistics/Descriptive Statistics	Chapters 1, 2	
1	Thursday, January 16	Descriptive Statistics: Numerical Measures	Chapter 3	
2	Tuesday, January 21	Descriptive Statistics: Numerical Measures	Chapter 3	
2	Thursday, January 23	Descriptive Statistics: Numerical Measures	Chapter 3	Assignment 1 (Chapters 1, 2, 3)
3	Tuesday, January 28	Introduction to Probability	Chapter 4	
3	Thursday, January 30	Introduction to Probability	Chapter 4	
4	Tuesday, February 4	Introduction to Probability	Chapter 4	Assignment 2 (Chapter 4)
4	Thursday, February 6	Discrete Probability Distributions	Chapter 5	
5	Tuesday, February 11	Discrete Probability Distributions	Chapter 5	
5	Thursday, February 13	**Exam 1 (Testing Center)**	**Chapters 1, 2, 3, 4**	
6	Tuesday, February 18	Discrete Probability Distributions	Chapter 5	Assignment 3 (Chapter 5)
6	Thursday, February 20	Continuous Probability Distributions	Chapter 6	
7	Tuesday, February 25	Continuous Probability Distributions	Chapter 6	
7	Thursday, February 27	Continuous Probability Distributions	Chapter 6	Assignment 4 (Chapter 6)
8	Tuesday, March 3	Sampling and Sampling Distributions	Chapter 7	
8	Thursday, March 5	Sampling and Sampling Distributions	Chapter 7	
9	Tuesday, March 10	Sampling and Sampling Distributions	Chapter 7	Assignment 5 (Chapter 7)
9	Thursday, March 12	Interval Estimation	Chapter 8	
10	Tuesday, March 17	**Spring Break**		
10	Thursday, March 19	**Spring Break**		
11	Tuesday, March 24	**Spring Break**		
11	Thursday, March 26	**Spring Break**		
12	Tuesday, March 31	**Exam 2 (Taken Remotely)**	**Chapters 5, 6, 7**	
12	Thursday, April 2	Interval Estimation	Chapter 8	Assignment 6 (Chapter 8)
13	Tuesday, April 7	Hypothesis Tests	Chapter 9	
13	Thursday, April 9	Hypothesis Tests	Chapter 9	
14	Tuesday, April 14	Hypothesis Tests	Chapter 9	
14	Thursday, April 16	Hypothesis Tests	Chapter 9	Assignment 7 (Chapter 9)
15	Tuesday, April 21	Simple Linear Regression	Chapter 14	
15	Thursday, April 23	Simple Linear Regression	Chapter 14	Assignment 8 (Chapters 14)
16	Tuesday, April 28	Simple Linear Regression	Chapter 14	
16	Thursday, April 30	**Exam 3 (Taken Remotely)**	**Chapters 8, 9, 14**	