

OPRE 3360: Managerial Methods in Decision Making Under Uncertainty
University of Texas at Dallas
Summer 2020

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 3360.0U1
Course Title: Managerial Methods in Decision Making Under Uncertainty
Term: Summer 2020
Days and Time: Tuesday and Thursday 12:45 AM – 2:45 PM, JSOM 2.717, **Online**
Instructor: Fariba Farajbakhsh Mamaghani, Ph.D.
Office: JSOM 3.424
Office Hours: By appointment, **Online**
Email: fxf150430@utdallas.edu

Course Pre-requisites, Co-requisites and/or Other Restrictions

MATH 1326 or MATH 2414 or MATH 2419

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 and regression. Emphasis will be given to modeling and solving business problems in Finance, Marketing, Accounting, and Operations Management.

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)

You have two options to purchase the textbook:

1. Through UTD Bookstore
2. Through Cengage.

Software: Microsoft® Office Excel

This course uses a laptop, eLearning, Internet access, Microsoft Excel 2007 or higher (no trial versions), Data Analysis Activated (this comes with Excel). If you are using a Mac, it is recommended to install a Windows Virtual machine, such as Parallel Desktop, or VMWare Fusion 4 which will then allow the use of Windows within the Mac Operating System.

The Statistics and Math lab offers assistance to undergraduate students for OPRE 3333 and OPRE 3360. The schedule is 10am-6pm Monday to Friday and it is located in room 2.414.

Course Notes/Handouts

A portion of course material will be presented through course notes and handouts. It is each student's 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.

Communication

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. Presentation slides, handouts, data files, homework assignments, 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, examples, and homework materials to class.** The instructor will also post helpful links to supplementary content that may be helpful in learning the required material. 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.

Quizzes

1. There is a quiz at the end of almost every chapter.
2. The quiz will cover chapters taught previous weeks. This means you are expected to attend every class, carefully follow the lectures, and actively participate in discussions.
3. The **one quiz** with the lowest grade will be dropped.
4. Please be advised, there is no need to provide any documents (like doctor note) or justifications or emails to me in case of absence. You may miss one quiz and still no points will be deducted from your overall grades. This means there will be **no make-up (no justifications) for a missed class under any circumstances**. This is a policy with no exception, so PLEASE do not ask to reschedule a quiz/for a make-up quiz when you miss any class. I will not violate the course policy.
5. I strongly advise you do not skip classes/quizzes.
6. Quizzes will **NOT** be returned to students. However, you have one week, after grades are posted on eLearning, to check your graded quiz in my office hours and have the feedback. When this is not possible, you should email to me to schedule another time.
7. To challenge a quiz grade, a student must email the instructor with a description of the grading error.
8. Graphing calculators are **NOT** allowed for the quizzes.

Exams

1. Three tests are given during the semester.
2. Tests are not cumulative.
3. Tests will **NOT** be returned to students. However, you have one week, after grades are posted on eLearning, to check your graded test in the instructor's office hours and have the instructor's feedback. When this is not possible, the student should email the instructor to schedule another time.
4. To challenge a test grade, a student must email the instructor with a description of the grading error.
5. Graphing calculators are **NOT** allowed for the tests.

Course Policy

1. The quizzes will be **online**
2. Announcements/changes will be through the eLearning. It is your responsibility to check it at least once a day.
3. If you missed a class, then please ask your classmates about what was covered in class.
4. There will be **NO make-up exam** except for extenuating circumstances with prior permission only. In such circumstances, student will be required to provide justifying documents.
5. There will be **NO extra credit** in this course under any circumstances.
6. Students in this course suspected of academic dishonesty are subject to disciplinary proceedings, and if found responsible, the following minimum sanctions will be applied:
 - Quizzes – Zero for the Quiz
 - Tests – F for the course

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.

Class Participation

Attendance at each session is important for your success in this course. Because of that, attendance is 5% of your final grade. It is also important to come to class prepared, so I expect that you have read the day's material, solved the practice questions, and completed the quizzes. You are allowed one "free" absence.

I expect that you remain engaged and treat others with respect. When the instructor or your fellow students are speaking, I expect you to pay attention to them. This specifically means that the use of phones, tablets or laptops is forbidden during the class, and you will print out the slides before class and use the printed version in class.

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.

Grading

Grades are assigned based upon the following scale and weighting.

Quizzes	25%
Exam 1	25%
Exam 2	25%
Exam 3	25%

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 ⁻

Once a graded item has been returned, a student has 48 hours to challenge the grade. To challenge a grade, a student must submit a typed description of the grading error to the grader (tests: instructor). This description

must include the student's name and e-mail address. The grader responds to a challenge within 48 hours of its receipt.

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 Blackboard. It is your responsibility to keep track of announcements regarding changes to this schedule.

Course Calendar

Date	Topic	Book	Quiz
Tuesday, May 26	Introduction to OPRE 3360 & Descriptive Statistics	Chapter 1 & 2	
Thursday, May 28	Descriptive Statistics: Tabular and Graphical Display	Chapter 2	
Tuesday, June 2	Descriptive Statistics: Numerical Measures	Chapter 3	
Thursday, June 4	Descriptive Statistics: Numerical Measures	Chapter 3	Quiz 1 (Ch 1, 2 & 3)
Tuesday, June 9	Introduction to Probability	Chapter 4	
Thursday, June 11	Exam 1: Chapter 1,2, and 3		
Tuesday, June 16	Discrete Probability Distributions	Chapter 5	
Thursday, June 18	Discrete Probability Distributions	Chapter 5	Quiz 2 (Ch 4)
Tuesday, June 23	Continuous Probability Distributions	Chapter 6	
Thursday, June 25	Continuous Probability Distributions	Chapter 6	Quiz 3 (Ch 5 & 6)
Tuesday, June 30	Continuous Probability Distributions	Chapter 6	
Thursday, July 2	Exam 2: Chapters 4, 5, 6		
Tuesday, July 7	Sampling and Sampling Distributions	Chapter 7	
Thursday, July 9	Sampling and Sampling Distributions	Chapter 7	
Tuesday, July 14	Interval Estimation	Chapter 8	
Thursday, July 16	Interval Estimation	Chapter 8	Quiz 4 (Ch 7)
Tuesday, July 21	Hypothesis Tests	Chapter 9	
Thursday, July 23	Hypothesis Tests	Chapter 9	Quiz 5 (Ch 8 & 9)
Tuesday, July 28	Hypothesis Tests	Chapter 9	
Thursday, July 30	Exam 3: Chapters 7, 8, 9		