

## **OPRE 3360.009 – Managerial Methods in Decision Making Under Uncertainty**

Fall 2019, Thursday: 4pm-6:45pm, JSOM 1.217

**Instructor:** Can Kucukgul  
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**Office Hours:** Wednesday 4:00pm-6:00pm  
Friday 4:00pm-6:00pm

**Prerequisites:** MATH 1325, MATH 2413, MATH 2417

### **Course Description**

This course introduces the concept of probability and statistics for managerial decision making. Concepts will be developed in lecture and exercises using software packages and topics including: summarizing and presenting data, probability theory, sampling, estimation, confidence intervals, hypothesis testing, regression, and ANOVA.

### **Learning Objective**

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 analytic tools.

**Textbook, Readings & Materials:** Reading materials and lecture notes will be posted on eLearning.

If students would like to read a textbook, the following is recommended:

- Modern Business Statistics with Microsoft® Excel® (6th Edition) Authors: Anderson, Sweeney, Williams.

The lecture notes, and other materials posted on eLearning should be sufficient for the students to learn the material. The optional textbook is not required.

### **Grading Policy**

Class Attendance	10%
Homework	20%
Midterm Exam	30%
Final Exam	40%

## Class Participation

You are expected to attend every class and to actively participate in the discussion and activities.

## Homework

Six assignments (best five will be considered - 4 points each) will be posted on e-learning under "Course Content". Assignment submissions are to be made by the students **at the beginning of class on the day it is due. NO LATE HOMEWORK WILL BE ACCEPTED.** On homework problems requiring calculations, show how you arrived at the calculation. You may discuss homework problems with others, but you must write it up by yourself with full understanding of what you write. Identical assignments will be in violation of university regulations and will receive no credit.

## Exams

There will be two exams, that are open book and open notes. Calculators may be used (not cellphones). Exams are **NOT CUMULATIVE. NO MAKE-UP EXAMS** will be scheduled.

## Guidelines for Letter Grades

I will assign two grades:

First one will be based on the following scale.

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	F
Cutoff Percentage	97	93	90	87	83	80	77	73	70	65	60	<60

The second grade will be based on a curve (a statistical method).

Your final letter grade will be the higher of the two grades.

## E-Learning

Your course e-Learning site will be used in several important ways throughout the semester. First, E-learning email is the appropriate avenue for sending email to your professor. Second, all grades will be posted as soon as grading has been completed. Third, a copy of the course syllabus will always be available, and you will be notified of any changes made during the semester. Fourth, several discussion boards are available for your use.

## Laptops & Cell phones

You may bring your laptop computers to class; however, you will not be permitted to have them open during the lectures, unless permitted by the instructor. You may not use your cell phones or other electronic devices in class.

## Special Assistance

For help with test anxiety or time management, the following resources are available: your academic advisor, the Learning Resource Center (MC2.402), the Counseling Center (SU1.608), the New Student Programs Office (SU1.610), your instructor.

## Expectation

University guidelines recommend that you study 2-3 hours per week for every credit hour in which you are enrolled. That is, University expectations suggest you spend 6-9 hours outside of class every week on OPRE 3310 homework and studying.

## Assignments & Academic Calendar

Date	Chapter	Topic	Homework
22-Aug	Ch. 1	Introduction to Data	
29-Aug	Ch. 2,3	Summarizing Data	
5-Sep	Ch. 2,3,4	Summarizing Data Probability	
12-Sep	Ch. 4	Probability	HW 1 Assigned
19- Sep	Ch. 5,6	Distributions of Random Variables	HW 1 Due, HW 2 Assigned
26- Sep	Ch. 5,6	Distributions of Random Variables	HW 2 Due, HW 3 Assigned
3-Oct		<b>Midterm Exam Review</b>	HW 3 Due
10- Oct		<b>Midterm Exam (in class)</b>	
17- Oct	Ch. 7	Sampling & Sampling Distributions	
24- Oct	Ch. 8	Interval Estimation	
31- Oct	Ch. 9	Hypothesis Tests	HW 4 Assigned
7-Nov	Ch. 14	Intro to Linear Regression	HW 4 Due, HW 5 Assigned
14-Nov	Ch. 15	Multiple Regression	HW 5 Due, HW 6 Assigned
21-Nov		<b>Final Exam Review</b>	HW 6 Due
28-Nov		<i>Fall Break, No Class</i>	
5-Dec		<b>Final Exam (in class)</b>	

*The descriptions and timelines are subject to change at the discretion of the Instructor.*

## **Student Conduct & Discipline**

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, A to Z Guide, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3, and in Title V, Rules on Student Services and Activities of the university's Handbook of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

### **Academic Integrity:**

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work.

Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

### **Email Use:**

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of

all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

### **Withdrawal from Class:**

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

### **Incomplete Grade Policy:**

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

### **Student Grievance Procedures:**

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's Handbook of Operating Procedures.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

**Disability Services:**

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:  
The University of Texas at Dallas, SU 22  
PO Box 830688  
Richardson, Texas 75083-0688  
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

**Religious Holy Days:**

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.