



Course	OPRE 3360.012: Managerial Methods in Decision Making Under Uncertainty
Instructor	Like Bu
Term	Fall 2024
Meetings	JSOM 2.714; Friday 10:00 am. – 12:45 pm.

PROFESSOR'S CONTACT INFORMATION

Office Location	JSOM 2.713
Email Address	Like.Bu@utdallas.edu
Office Hours	JSOM 2.713; Thursday 4:00 pm – 6:00 pm
Other Information	Please include “OPRE 3360.012” in the title of your email to ensure my timely response.

GENERAL COURSE INFORMATION

Pre-Requisites -

Other Restrictions OPRE 3360 and STAT 3360 cannot both be used to fulfill degree requirements.

Course Description Introduces the concepts of probability and statistics to managerial decision making. Topics include - summarizing and presenting data, probability theory, statistical inference: random sampling, confidence intervals, hypothesis testing, linear regression, and ANOVA. Emphasis will be given to modeling and solving business problems in finance, marketing, accounting, and operations management.

Learning Outcomes On successful completion of this course a student will be able to use the tools of probability and statistical modeling to support business decisions. Specifically, she/he can (i) quantify uncertainty found in business situations and form probabilistic knowledge, (ii) estimate the key metrics based on data and test hypotheses about business realities using data, and (iii) build a statistical model of uncertain business realities for insight gathering and prediction.

Required Text & Materials **Anderson, D., Sweeney, D. and Williams, T. “Modern Business Statistics with Microsoft Office Excel,” 7th ed.**

Other Texts, Readings & Materials Other materials and lecture notes will be posted on eLearning. The required textbook, lecture notes, and other materials posted on eLearning should be sufficient for the students to learn the material.

COURSE POLICIES

Grading (credit) Criteria **The total score (100 points) will be made up of four parts.**

- **Individual Assignments (30%).**
- There will be 6 - 7 assignments. I will upload the assignments on E-learning on Fridays, and the due date will be one week after posting each assignment. **You can attempt up to 2 different versions of each question.** You will receive feedback on the assignment after the due date.
- **TEST I (30%).**
- **TEST II (35%).**
- **Assessment Quiz (5%) (in-class quiz).**
- Class attendance is not mandatory but highly encouraged.

Letter Grades Letter grades will be calculated as follows:

A+	A	A-	B+	B	B-	C+	C	C-	D+	D	F
>95	90	87	83	80	77	73	70	67	63	60	<60

Make-Up Exams Make-up exams will **NOT** be offered except in the event of a medical emergency, for which solid proof is required.

Extra Credit Extra credit will **NOT** be offered.

Late Work Late assignments will **NOT** be accepted except in case of medical emergency (proof required).

Technical Requirements In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements on the [Getting Started with eLearning](#) webpage.

Course Access and Navigation This course can be accessed using your UT Dallas NetID account on the [eLearning](#) website.

Please see the course access and navigation section of the [Getting Started with eLearning](#) webpage for more information.

To become familiar with the eLearning tool, please see the [Student eLearning Tutorials](#) webpage.

UT Dallas provides eLearning technical support 24 hours a day, 7 days a week. The [eLearning Support Center](#) includes a toll-free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication	<p>This course utilizes online tools for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please visit the Student eLearning Tutorials webpage for video demonstrations on eLearning tools. Student emails and discussion board messages will be answered within 3 working days under normal circumstances.</p>
Server Unavailability or Other Technical Difficulties	<p>The University is committed to providing a reliable learning management system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will provide appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the online eLearning Help Desk. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.</p>
Class Attendance	<ul style="list-style-type: none"> • You are expected to actively participate in the class. See “Strategies for Success” below on “Participation” for more details. • You are expected to read the textbook chapters and other required materials prior to the corresponding class lecture (required and optional reading materials will be posted on eLearning prior to each class). • You are responsible for all material discussed and all course schedule changes announced during class.
Classroom Citizenship	<ul style="list-style-type: none"> • Classes begin on time. Please maintain classroom decorum and be respectful toward fellow students. If you have a doubt or misunderstanding regarding course work, feel free to discuss it with me.
Accessibility Accommodations	<p>It is the policy and practice of the University of Texas at Dallas to make reasonable accommodation for students with properly documented disabilities. However, written notification from the Office of Student Accessibility (OSA) is required. If you are eligible to receive accommodation and would like to request it for this course, please discuss it with me and allow one-week advance notice. Students who have questions about receiving accommodations, as well as those who have or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact the Office of Student Access Ability for a confidential discussion. OSA is in the Student Services Building, suite 3.200. They can be reached by phone at (972) 883-2098, or by email at studentaccess@utdallas.edu.</p>
Software	<p>We use MS Excel wherever it is required to solve the exercises related to topics mentioned above. The basic familiarity (such as copy and paste, entering formulae) with Microsoft Excel is assumed.</p>
Mac Support	<p>Microsoft Office 2011 for Mac does NOT have the same statistical tools that Office 2013 for Windows has. Office for Mac does not have regression tools (which we will be using in Module III). I recommend that students with Mac install Microsoft Office for Windows. As a UTD student, you are eligible to buy a student version at a deeply discounted price: check with the university technology store.</p>

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 consider 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.

OPRE 3360.005 COURSE OUTLINE & CALENDAR

I will attempt to stick to this schedule as much as possible, although I reserve the right to modify the lecture contents and homework due dates depending on the evolution of the course. Sufficient notice will be given of any changes.

Week	Date	Lecture Topics
1	Aug 23	Course Overview Introduction to Data and Statistics
2	Aug 30	Descriptive Statistics
3	Sep 06	Introduction to Probability
4	Sep 13	Discrete Random Variables: Binomial Distribution
5	Spe 20	Continuous Random Variables and Normal Distribution
6	Sep 27	Continuous Random Variables and Normal Distribution Exam-I Review
7	Sep 30 – Oct 01	Exam I (at Testing Center on Monday/Tuesday)
8	Oct 11	Sampling Distributions and Introduction to Inference
9	Oct 18	Confidence Interval
10	Oct 25	Hypothesis Testing
11	Nov 01	Hypothesis Testing

12	Nov 08	Introduction to Statistical Models: Covariance, Correlation, and Simple Linear Regression
13	Nov 15	Simple Linear Regression: Validating Modeling Assumptions
14	Nov 22	Test-II Review Session Assessment Quiz (In-class Quiz)
15	Apr 29	Fall break
16	Dec 02-03	Exam II (at Testing Center on Monday/Tuesday)

Exam I: The tests will be held at UTD Testing Center at the first floor of the Synergy Park North 2 building --SPN2-- (3020 Waterview Parkway) from Monday, Sep. 30th - Tuesday, Oct. 1st in any 2 hour 30 minutes time period from 8:30 am to 9:00 pm. Note that the exam location is NOT the regular classroom. Registration for seat reservation closes 48 hours prior to exam date.

Exam II: The test will be held at UTD Testing Center at the first floor of the Synergy Park North 2 building --SPN2-- (3020 Waterview Parkway) from Monday, Dec. 2nd - Tuesday, 3rd in any 2-hour 30 minutes time period from 8:30 am to 9:00 pm. Registration for seat reservation closes 48 hours prior to exam date.

Instructions for Exam I & II:

1. The test is an **eLearning-based**, and you are going to take both tests at the UTD Testing center.
2. The Test is **Open Book and Open Notes**. There is no restriction on printed material that you physically use for the test, however, you are not permitted to use any electronic material.
3. Using any **personal electronic devices** (other than the system used to take the test and the calculator) during the test is strictly prohibited and is considered a violation of the academic integrity policy.
5. The total test duration is **2 hours 30 minutes**.

STRATEGIES FOR SUCCESS

1. Class preparation:

In each class you will be expected to do the following:

- a) Prior to each class, complete skimming over lecture notes or slides (prior to class) if you have time.
- b) If required, print a hardcopy of the lecture notes for each class and bring it with you to take additional notes.
- c) Read the appropriate portions of the textbook (before and after class).

I understand that you have limited time. However, I strongly urge you to devote adequate time to the course since this is not material you can cram over a day or two. If you are pressed for time for specific classes, prioritize your class preparation in the order given above.

2. How to get help:

This course is cumulative and moves rapidly. **DO NOT FALL BEHIND!** It is recommended that you see your instructor **immediately in case of any difficulties. Make use of my office hours well!**

3. How to get a good grade:

- a. Be clear about the course material.
- b. Assignments weigh 30%, so, do not miss submitting assignments.
- c. Do not forget to attend exam review sessions.

ACADEMIC INTEGRITY

The faculty and administration of the School of Management expect from our 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. We want to establish a reputation for the honorable behavior of our graduates, which extends throughout their careers. Both your individual reputation and the school's reputation matter to your success.

The Judicial Affairs website lists examples of academic dishonesty. Dishonesty includes, but is not limited to cheating, plagiarism, collusion, facilitating academic dishonesty, fabrication, failure to contribute to a collaborative project and sabotage. Some of the ways students may engage in academic dishonesty are:

- Coughing and/or using visual or auditory signals in a test;
- Concealing notes on hands, caps, shoes, in pockets or the back of beverage bottle labels;
- Writing in blue books prior to an examination;
- Writing information on blackboards, desks, or keeping notes on the floor;
- Obtaining copies of an exam in advance;
- Passing information from an earlier class to a later class;
- Leaving information in the bathroom;
- Exchanging exams so that neighbors have identical test forms;
- Having a substitute take a test and providing falsified identification for the substitute;
- Fabricating data for lab assignments;
- Changing a graded paper and requesting that it be regraded;
- Failing to turn in a test or assignment and later suggesting the faculty member lost the item;
- Stealing another student's graded test and affixing one's own name on it;
- Recording two answers, one on the test form, one on the answer sheet;
- Marking an answer sheet to enable another to see the answer;
- Encircling two adjacent answers and claiming to have had the correct answer;
- Stealing an exam for someone in another section or for placement in a test file;
- Using an electronic device to store test information, or to send or receive answers for a test;
- Destroying or removing library materials to gain an academic advantage;

- Consulting assignment solutions posted on websites of previous course offerings;
- Transferring a computer file from one person's account to another;
- Transmitting posted answers for an exam to a student in a testing area via electronic device;
- Downloading text from the Internet or other sources without proper attribution;
- Citing to false references or findings in research or other academic exercises;
- Unauthorized collaborating with another person in preparing academic exercises.
- Submitting a substantial portion of the same academic work more than once without written authorization from the instructor.

<http://www.utdallas.edu/judicialaffairs/UTDJudicialAffairs-Basicexamples.html>

PLAGIARISM

Plagiarism on written assignments, especially from the web, from portions of papers for other classes, and from any other source is unacceptable. On written assignments, this course will use the resources of turnitin.com, which searches the web for plagiarized content and is over 90% effective.

CONDUCT DURING COURSE EXAMS

During tests and quizzes, students in this section are not allowed to have with them any food and drinks. When possible, students should sit in alternating seats, face forward at all times, and remove any clothing which might conceal eye movements, or reflect images of another's work. Exam proctors will monitor any communication or signaling between students by talking, whispering, or making sounds, or by using your hands, feet, other body movements, the test paper itself, your writing implement.

ACADEMIC DISHONESTY

Students in this course suspected of academic dishonesty are subject to disciplinary proceedings, and if found responsible, the following minimum sanctions will be applied:

- **Homework – Zero for the Assignment**
- **Quizzes – Zero for the Quiz**
- **Presentations – Zero for the Assignment**
- **Group Assignments – Zero for the Assignment for all group members**
- **Exams – Zero for the Exam and a one letter grade reduction of the final course grade**

These sanctions will be administered only after a student has been found officially responsible for academic dishonesty, either through waiving their right for a disciplinary hearing, or being declared responsible after a hearing administered by Judicial Affairs and the Dean of Student's Office.

In the event that the student receives a failing grade for the course for academic dishonesty, the student is not allowed to withdraw as a way of preventing the grade from being entered on their record. Where a student receives an F in a course and chooses to take the course over to improve their grade, the original grade of F remains on their transcript, but does not count towards calculation of their GPA.

The School of Management also reserves the right to review a student's disciplinary record, on file with the Dean of Students, as one of the criteria for determining a student's eligibility for a scholarship.

JUDICIAL AFFAIRS PROCEDURES

Under authority delegated by the Dean of Students, a faculty member who has reason to suspect that a student has engaged in academic dishonesty may conduct a conference with the student in compliance with the following procedures:

1. the student will be informed that he/she is believed to have committed an act or acts of academic dishonesty in violation of university rules;
2. the student will be presented with any information in the knowledge or possession of the instructor which tends to support the allegation(s) of academic dishonesty;
3. the student will be given an opportunity to present information on his/her behalf;
4. after meeting with the student, the faculty member may choose not to refer the allegation if he/she determines that the allegations are not supported by the evidence; or
5. after meeting with the student, the faculty member may refer the allegations to the dean of students along with a referral form and all supporting documentation of the alleged violation. Under separate cover, the faculty member should forward the appropriate grade to be assessed if a student is found to be responsible for academic dishonesty;
6. the faculty member may consult with the dean of students in determining the recommended grade;
7. the faculty member must not impose any independent sanctions upon the student in lieu of a referral to Judicial Affairs;
8. the faculty member may not impose a sanction of suspension or expulsion, but may make this recommendation in the referral documentation

If the faculty member chooses not to meet with the student and instead forwards the appropriate documentation directly to the dean of students, they should attempt to inform the student of the allegation and notify the student that the information has been forwarded to the Office of Dean of Students for investigation.

The student, pending a hearing, remains responsible for all academic exercises and syllabus requirements. The student may remain in class if the student's presence in the class does not interfere with the professor's ability to teach the class or the ability of other class members to learn. (See Section 49.07, page V-49-4 for information regarding the removal of a student from class).

Upon receipt of the referral form, class syllabus, and the supporting material/documentation from the faculty member, the dean shall proceed under the guidelines in the Handbook of Operating Procedures, Chapter 49, Subchapter C. If the respondent disputes the facts upon which the allegations are based, a fair and impartial disciplinary committee comprised of UTD faculty and students, shall hold a hearing and determine the responsibility of the student. If they find the student in violation of the code of conduct, the dean will then affirm the minimum sanction as provided in the syllabus, and share this information with the student. The dean will review the student's prior disciplinary record and assess additional sanctions where appropriate to the circumstances. The dean will inform the student and the faculty member of their decision.

UT DALLAS SYLLABUS POLICIES AND PROCEDURES

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor. Please check the course eLearning website regularly for following the announcements during the semester regarding such possible changes.