

OPRE 3333: Quantitative Business Analysis
University of Texas at Dallas

Course Syllabus

Disclaimer:

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the instructor.

Course Information:

Course Number/Section: OPRE 3333.002/003
Course Title: Quantitative Business Analysis
Term: Spring 2024
Lecture Time: Section 002: Monday/Wednesday, 10:00 am – 11:15 am
Section 003: Monday/Wednesday, 11:30 am – 12:45 pm
Lecture Location: Section 002: JSOM 1.110
Section 003: JSOM 2.106
Instructional Mode: Face to Face

Instructor: Negin Enayaty Ahangar, Ph.D.
Office Information: JSOM 14.409
Office Hours: Tuesday/Thursday, 10:00 am – 11:00 am
Email: Negin@UTDallas.edu

Teaching Assistant: TBA
Office Hours: TBA
Email: TBA

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

Credit cannot be received for both courses, OPRE 3333 and MATH 2333.

Prerequisites: MATH 1325 or MATH 2413 or MATH 2417

Course Description:

Provides students with the analytical tools necessary for making better management decisions. Students are introduced to mathematical techniques used to make different types of business decisions.

Student Learning Objectives/Outcomes:

Students are required to take the initiative to learn, understand and apply quantitative business analytics to real-world business data. At the end of this course, you should:

- Be able to apply mathematical techniques of optimization and linear algebra
- Be able to effectively understand and interpret analytic models and use them in the decision-making process
- Be able to utilize basic business analytic tools in Excel

Textbooks:

1. Elementary Linear Algebra - 8th edition
 - Author: Larson
2. Business Analytics - 4th edition
 - Authors: Camm/Cochran/Fry/Ohlmann

Grading Criteria:

Grades are assigned based on the following weighting.

Assignment Average	25%
Highest Exam Grade	30%
Median Exam Grade	25%
Lowest Exam Grade	20%

The letter grades are determined based on the following grading scheme.

Letter Grade:	<i>A</i> ⁺	<i>A</i>	<i>A</i> ⁻	<i>B</i> ⁺	<i>B</i>	<i>B</i> ⁻	<i>C</i> ⁺	<i>C</i>	<i>C</i> ⁻	<i>D</i> ⁺	<i>D</i>	<i>F</i>
Minimum Required Grade :	97	93	90	87	83	80	77	73	70	65	60	0/*

* Students who receive less than 50/100 on all three exams.

Course Calendar:

Week	Date	Topic	Assignment	Due Date
1	Wednesday, January 17	Systems of Linear Equations		
2	Monday, January 22	Systems of Linear Equations		
2	Wednesday, January 24	Systems of Linear Equations	Assignment 1	January 31
3	Monday, January 29	Matrices		
3	Wednesday, January 31	Matrices		
4	Monday, February 5	Matrices	Assignment 2	February 12
4	Wednesday, February 7	Determinants		
5	Monday, February 12	Determinants		
5	Wednesday, February 14	Determinants	Assignment 3	February 21
6	Monday, February 19	Introduction to Business Analytics		
6	Wednesday, February 21	Data Visualization		
7	Monday, February 26	Data Visualization		
7	Wednesday, February 28	Exam 1 (Lectures 1 – 3)		
8	Monday, March 4	Time Series Analysis and Forecasting		
8	Wednesday, March 6	Time Series Analysis and Forecasting		
9	Monday, March 11	Spring Break		
9	Wednesday, March 13	Spring Break		
10	Monday, March 18	Time Series Analysis and Forecasting		
10	Wednesday, March 20	Time Series Analysis and Forecasting	Assignment 4	March 27
11	Monday, March 25	Linear Optimization Models		
11	Wednesday, March 27	Linear Optimization Models		
12	Monday, April 1	Exam 2 (Lectures 4 – 6)		
12	Wednesday, April 3	Linear Optimization Models		
13	Monday, April 8	Linear Optimization Models	Assignment 5	April 15
13	Wednesday, April 10	Integer Linear Optimization		
14	Monday, April 15	Integer Linear Optimization		
14	Wednesday, April 17	Nonlinear Optimization Models		
15	Monday, April 22	Nonlinear Optimization Models		
15	Wednesday, April 24	Decision Analysis	Assignment 6	April 24
16	Monday, April 29	Decision Analysis		
16	Wednesday, May 1	Exam 3 (Lectures 7 – 11)		

Software:

This course uses Microsoft Excel 2007 or higher (no trial or student version). You can download and install Excel for free as a UTD student.

The Statistics and Math lab:

This lab, located in room JSOM 2.414, assists students enrolled in OPRE 3333, OPRE 3340, or OPRE 3360. The schedule is to be announced on eLearning.

Course Policies:**1. General:**

- Students must read the syllabus and check eLearning for daily announcements/emails.
- Students must pay close attention to all the due dates from the first day of class and schedule their personal activities around those dates.
- For any grade posted on eLearning, students have one week after it is posted to request for regrading.

2. Exams:

- Exams will be administered by the UTD Testing Center. Students should see the UTD testing center page to register for a seat and for more information.
- Students should register for a seat no later than one week before the exam date. Failure to do so will result in a 10-point penalty on the exam grade.
- The instructor reserves the right to deduct points from the student's exam grade for not following the exam instructions and announcements.
- Exams will NOT be available to students after submission. However, you have one week after grades are posted on eLearning to review your graded exam during the instructor's office hours and have the instructor's feedback.
- There will be NO make-up for any missed exam except for medical emergencies. A written statement and the physician's address and phone number are required to justify the situation. Students must respond to emails about makeup exam instructions within 24 hours.

3. Assignments:

- The assignments will be assessed through eLearning.
- The lowest assignment grade will be dropped. Therefore, there will be NO make-up for any missed assignment.

4. Extra Credit:

- Extra credit will NOT be offered.

5. Academic Dishonesty/Cheating:

- Students are required to read, understand and abide by the university policy on academic honesty.
- Any student found responsible for committing an act of academic dishonesty will receive a grade of zero on that exam or assignment.
- 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:

- 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.

7. **Class Recordings:** Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the AccessAbility Resource Center has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

8. **Class Materials:** The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved AccessAbility Resource Center accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

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.

Academic Support Resources:

The information contained in the following link lists the University's academic support resources for all students. Please go to Academic Support Resources webpage for these policies.

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 review the catalog sections regarding the credit/no credit or pass/fail grading option and withdrawal from class. Please go to UT Dallas Syllabus Policies webpage for these policies.