

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 2025
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 – 12:00 pm
Email:	negin@utdallas.edu
Teaching Assistant:	Amit Kumar Pandey
Office Hours:	Monday/Wednesday, 3:00 pm – 5:00 pm (online via MS Teams)
Email:	AmitKumar.Pandey@UTDallas.edu
Teaching Assistant:	Bhushan Bendigeri
Office Hours:	Tuesday/Thursday, 2:00 pm – 3:00 pm (online via MS Teams)
Email:	Bhushan.Bendigeri@UTDallas.edu

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 - 5th 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 22	Systems of Linear Equations		
2	Monday, January 27	Systems of Linear Equations		
2	Wednesday, January 29	Systems of Linear Equations	Assignment 1	February 5
3	Monday, February 3	Matrices		
3	Wednesday, February 5	Matrices		
4	Monday, February 10	Matrices	Assignment 2	February 17
4	Wednesday, February 12	Determinants		
5	Monday, February 17	Determinants		
5	Wednesday, February 19	Determinants	Assignment 3	February 26
6	Monday, February 24	Introduction to Business Analytics		
6	Wednesday, February 26	Data Visualization		
7	Monday, March 3	Exam 1 (Lectures 1 – 3)		
7	Wednesday, March 5	Data Visualization		
8	Monday, March 10	Time Series Analysis and Forecasting		
8	Wednesday, March 12	Time Series Analysis and Forecasting		
9	Monday, March 17	Spring Break		
9	Wednesday, March 19	Spring Break		
10	Monday, March 24	Time Series Analysis and Forecasting		
10	Wednesday, March 26	Time Series Analysis and Forecasting	Assignment 4	April 2
11	Monday, March 31	Linear Optimization Models		
11	Wednesday, April 2	Linear Optimization Models		
12	Monday, April 7	Exam 2 (Lectures 4 – 6)		
12	Wednesday, April 9	Linear Optimization Models		
13	Monday, April 14	Linear Optimization Models	Assignment 5	April 21
13	Wednesday, April 16	Integer Linear Optimization		
14	Monday, April 21	Integer Linear Optimization		
14	Wednesday, April 23	Nonlinear Optimization Models		
15	Monday, April 28	Nonlinear Optimization Models		
15	Wednesday, April 30	Decision Analysis	Assignment 6	May 2
16	Monday, May 5	Decision Analysis		
16	Wednesday, May 7	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 for daily announcements/emails.
- Students must carefully observe all due dates from the first day of class and plan their personal activities accordingly.
- Students have one week from the date a grade is posted on eLearning to address any grading concerns with the instructor.

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 must register for exams at the UTD Testing Center 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 in person during the instructor's office hours and receive feedback from the instructor.
- 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 make-up exam instructions within 24 hours and register for the exact date and time provided by the instructor. Failure to do so will result in missing the make-up exam.
- Exam grades cannot be curved since their weights vary for different students.
- Students are not allowed to have cheat sheets for exams, but they may be provided with a formula sheet.

3. Assignments:

- The assignments will be assessed through eLearning.
- The lowest assignment grade will be dropped.
- The solution to an assignment will be posted after the due date. Therefore, there will be no make-up opportunities for any missed assignments.

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.