OPRE 3333: Quantitative Business Analysis
University of Texas at Dallas

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 3333
Course Title:	Quantitative Business Analysis
Term:	Fall 2020
Lecture Time:	Section 001: Monday/Wednesday, 1:00pm - 2:15pm
	Section 003: Monday/Wednesday, 4:00pm - 5:15pm
Instructor:	Negin Enayaty Ahangar, Ph.D.
Online office Hours:	Tuesday/Thursday, 2:30pm - 4:30pm in Microsoft Teams
Email:	negin@utdallas.edu
Teaching Assistant:	Mohammad Amin Farzaneh
Online office Hours:	Monday/Friday, 10:00am - 12:00pm in Microsoft Teams
Email:	MohammadAmin.Farzaneh@UTDallas.edu

Course Modality and Expectations:

Instructional Mode: Remote/Virtual Learning

Course Platform:

UTD eLearning will be used to post the materials for this course. Lecture files, data files, homework assignments, review questions, and exams will be available on this webpage.

Microsoft Teams will be used to conduct and record the virtual class. A link to the virtual class will be posted on eLearning.

Microsoft Stream will be used to post the asynchronous lectures.

Expectations: Students are expected to

- take an active role in their learning
- attend and participate in class (if synchronous option is chosen)
- adhere to the course timeline (if asynchronous option is chosen)
- ask questions and utilize the office hours

Asynchronous Learning Guidelines: Students who plan to participate via asynchronous access do not need to notify the instructor.

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

Learning Outcomes:
Students are required to take the initiative to learn, understand and apply quantitative business analytic 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 (8^{th} edition) - Larson (Cengage Course Key: utdallas 3273 5760)
2. Business Analytics (3^{rd} edition) - Camm/Fry/Anderson/Sweeney/Williams (Cengage Course Key: MTPP-CDCN-TLB6)

You may purchase the textbooks from UTD bookstore, Cengage publisher or other retailers.

Software:
This course uses Microsoft Excel 2007 or higher (no trial or student version). You can download and install the newest Excel for free as a UTD student using the link `https://www.utdallas.edu/oit/o365/`.

Grading Criteria:
Grades are assigned based upon the following scale and weighting.

Homework	20%	97-100	A^+	87-89	B^+	77-79	C^+	67-69	D^+
Exam 1	30%	93-96	A	83-86	B	73-76	C	63-66	D
Exam 2	20%	90-92	A^-	80-82	B^-	70-72	C^-	60-62	D^-
Exam 3	30%								

Course Policy:

1. **General:**
   - It is your responsibility to read the syllabus and check the eLearning for announcements/changes daily.
   - You must pay close attention to all the due dates from the first day of class and schedule your personal activities around those dates.
   - 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.
   - For any grade posted on elearning, you have one week, after it is posted, to email the instructor a regrading request.
2. **Exams:**
   - Exams will be taken online via eLearning. Instructions will be sent to you via eLearning announcement prior to the exams.
   - Exams will NOT be available to students after submission. 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.
   - There will be NO make-up for any missed exam except for medical emergencies in which a written statement is required for justifying the situation along with the physician's address and phone number.

3. **Homework:**
   - The homework will be assessed through eLearning.
   - The lowest homework grade will be dropped.
   - There will be NO make-up for any missed homework.
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 who is found responsible for committing an act of academic dishonesty will receive a grade of F or 0 (zero) on that quiz, exam, assignment, project or course.
   - 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 Office of Student AccessAbility 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 Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct. The instructor may record meetings of this course. Any recordings will be available to all students registered for this class as they are intended to supplement the classroom experience. Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility 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 Office of Student AccessAbility accommodation. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law. Failure to comply with these University requirements is a violation of the Student Code of Conduct.
8. **Class Materials:** Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility 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.

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.

The following is a tentative schedule, which will be followed as closely as possible. However, should any changes become necessary, it will be announced via eLearning. It is your responsibility to keep track of announcements regarding changes to this schedule.

Course Calendar

Week	Date	Topic	Book	Homework
1	Monday, August 17	System of Linear Equations	Chapter 1 - Larson	
1	Wednesday, August 19	System of Linear Equations	Chapter 1 - Larson	
2	Monday, August 24	System of Linear Equations	Chapter 1 - Larson	Homework 1 (chapter 1)
2	Wednesday, August 26	Matrices	Chapter 2 - Larson	(Due date: August 31)
3	Monday, August 31	Matrices	Chapter 2 - Larson	
3	Wednesday, September 2	Matrices	Chapter 2 - Larson	Homework 2 (chapter 2)
4	Monday, September 7	**Labor Day**		(Due date: September 9)
4	Wednesday, September 9	Determinants	Chapter 3 - Larson	
5	Monday, September 14	Determinants	Chapter 3 - Larson	
5	Wednesday, September 16	Determinants	Chapter 3 - Larson	Homework 3 (chapter 3)
6	Monday, September 21	Introduction to Business Analytics	Chapter 1 - Camm	(Due date: September 23)
6	Wednesday, September 23	Data Visualization	Chapter 3 - Camm	
7	Monday, September 28	Data Visualization	Chapter 3 - Camm	
7	Wednesday, September 30	**Exam 1**	**Chapter 1, 2, 3 (Larson)**	
8	Monday, October 5	Data Visualization	Chapter 3 - Camm	
8	Wednesday, October 7	Time Series Analysis and Forecasting	Chapter 8 - Camm	
9	Monday, October 12	Time Series Analysis and Forecasting	Chapter 8 - Camm	
9	Wednesday, October 14	Time Series Analysis and Forecasting	Chapter 8 - Camm	Homework 4 (chapters 1, 3, 8)
10	Monday, October 19	Linear Optimization Models	Chapter 11 - Camm	(Due date: October 21)
10	Wednesday, October 21	Linear Optimization Models	Chapter 11 - Camm	
11	Monday, October 26	**Exam 2**	**Chapter 1, 3, 8 (Camm)**	
11	Wednesday, October 28	Linear Optimization Models	Chapter 11 - Camm	
12	Monday, November 2	Linear Optimization Models	Chapter 11 - Camm	Homework 5 (chapter 11)
12	Wednesday, November 4	Integer Linear Optimization	Chapter 12 - Camm	(Due date: November 9)
13	Monday, November 9	Integer Linear Optimization	Chapter 12 - Camm	
13	Wednesday, November 11	Integer Linear Optimization	Chapter 12 - Camm	
14	Monday, November 16	Nonlinear Optimization Models	Chapter 13 - Camm	Homework 6 (chapters 12, 13)
14	Wednesday, November 18	Nonlinear Optimization Models	Chapter 13 - Camm	(Due date: November 23)
15	Monday, November 23	Nonlinear Optimization Models	Chapter 13 - Camm	
15	Wednesday, November 25	**Exam 3**	**Chapters 11, 12, 13 (Camm)**	