

**The University of Texas at Dallas  
Jindal School of Management  
Course Syllabus**

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**Course Information**

Course Prefix, Number, Section      **OPRE 3333**  
Course Title                              ***Quantitative Business Analysis***  
Term    *Fall 2024*  
Days & Times                              M&W 1:00-2:15 pm  
    JSOM 1.217

**Instructor Contact Information**

Instructor                                  *Hien Nguyen*  
Email Address                              *Hien.Nguyen7@utdallas.edu*  
Office Location                              *JSOM 3.617*  
Office Hours                                *Through Teams M-W 11 am – 12 pm or by appointment*  
Contact through                              *MS Teams, Email*

**TA Contact Information**

TA  
Email Address  
Office Hours

TA  
Email Address  
Office Hours

**Class Attendance and Participation**

Regular class participation and attendance are expected. Indeed, students are still strongly encouraged to engage in class lecture and discussion to have better chance studying the materials and have questions answered.

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**Class Materials**

**Textbooks:**

**It is advised that the student purchase cengage unlimited to gain access to both ebooks and homework platforms**

1. Elementary Linear Algebra - 8th edition - Author: Larson  
- Ebook ISBN: 9780357539538
2. Business Analytics – 4th edition - Authors:  
Camm/Cochran/Fry/Ohlmann/Anderson/Sweeney/Williams  
- **Ebook ISBN: 9780357708385**
3. Introduction to Business Analytics – Richardson/Watson  
Ebook ISBN: 9781265454340 – McGrawHill Connect Homework

**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.

**The Statistics and Math lab:**

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

**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

**Tentative Assignments & Academic Calendar (All the dates are the Monday of the week)**

Week 1	Aug 19	Syllabus review
	Aug 21	System of Linear Equations – Chapter 1 (Larson)
Week 2	Aug 26	System of Linear Equations
	Aug 28	Matrices – Chapter 2 (Larson)
Week 3	Sep 2	No class
	Sep 4	Matrices
Week 4	Sep 9	Determinants – Chapter 3 (Larson)
	Sep 11	Linear Algebra Applications
Week 5	Sep 16	Exam 1 review
	Sep 18	Exam 1
Week 6	Sep 23	Obtain the Data: An Introduction to Business Data Sources
	Sep 25	Introduction to Business Analytics
Week 7	Sep 30	Analyze the Data: Exploratory Business Analytics
	Oct 2	Analyze the Data: Confirmatory Business Analytics
Week 8	Oct 7	Data Visualization
	Oct 9	Time Series Analysis and Forecasting
Week 9	Oct 14	Time Series Analysis and Forecasting
	Oct 16	Linear Optimization Models (online)
Week 10	Oct 21	Linear programming using Excel Solver (online)
	Oct 23	Exam 2 review
Week 11	Oct 28	Exam 2
	Oct 30	Integer Linear Optimization
Week 12	Nov 4	Integer Linear Optimization
	Nov 6	Nonlinear Optimization Models
Week 13	Nov 11	Nonlinear Optimization Models
	Nov 13	Advanced Business Analytics
Week 14	Nov 20	Decision Analysis
	Nov 22	Decision Analysis (cont)
Week 15	Nov 27	No class
	Nov 29	No class
Week 16	Dec 2	Exam 3 Review
	Dec 4	Exam 3

**Grading Policy**

Homework: 25%

Quizzes: 15%

Exam 1: 20%

Exam 2: 20%

Exam 3: 20%

Final grades will be assigned as follow:

>93 A

89-93 A-

86-89 B+

83-86 B

79-83 B-

75-79 C+

70-75 C

65-69 D+

60-65 D

0-59 F

### **Course Policies**

#### ***Homework Assignments***

- Homework is given after each topic is finished. You would have at least one week to work on the assignment.
- Students are allowed to work in groups of up to **three** on homework assignments.
- Only one submission per group is required. Solutions must be submitted into eLearning through the Assignment tab.
- Group's member names must be clearly typed on the solution's cover page. Otherwise, the missing name would not receive any credits.
- All **typed** solutions along with the Excel files used for HWs must be submitted via eLearning. Hand-written submissions will not be graded.
- Solutions must be converted to a pdf before submission. Otherwise, points will be deducted.
- For questions answered in Solver, the excel file **Must** be uploaded. Missing excel files result in a loss of 50 points.
- No late submissions will be accepted, no matter what. Don't wait until the last minute!
- You may choose to replace your lowest non-zero assignment with the highest of your assignment grade.

#### ***Quizzes***

- Three quizzes will be given.
- Quizzes will be given online in eLearning.
- Quizzes will cover material from the textbook, instructor's lectures, handouts, and homework.
- If you miss a quiz without a properly documented excuse conforming to university policy, your grade will be zero for the missed exam(s).
- Make-up quizzes are offered only for legitimate and documented reasons, such as documented illness or family emergencies.

### ***Exams***

- Three noncumulative exams will be given.
- Exams will be given online in eLearning.
- Exams will cover material from the textbook, instructor's lectures, handouts, and homework.
- If you miss an exam without a properly documented excuse conforming to university policy, your grade will be zero for the missed exam(s).
- Make-up exams are offered only for legitimate and documented reasons, such as documented illness or family emergencies.

### ***Extra Credit***

There are no extra credits. However, I might consider extra credit opportunity depending on the grade of the class as a whole.

### **University Policies**

For information on a host of UTD course policies, see <http://go.utdallas.edu/syllabus-policies>. Several, but not all, of these policies are addressed in more detail below.

### **Nondiscrimination**

UTD's Nondiscrimination Policy states that, "The University of Texas at Dallas is committed to providing an educational, living and working environment that is welcoming, respectful and inclusive of all members of the university community. An environment that is free of discrimination and harassment allows members of the university community to excel in their academic and professional careers. To that end, to the extent provided by applicable federal and state law, the University prohibits unlawful discrimination against a person because of their race, color, religion, sex (including pregnancy), national origin, age, disability, genetic information, or veteran status. The University's commitment to equal opportunity extends its nondiscrimination protections to include sexual orientation, gender expression and gender identity.

"Retaliation against a person who files a claim of discrimination, participates in a discrimination investigation or proceeding, or otherwise opposes an unlawful employment practice is prohibited.

"A person who believes that he or she has been subjected to discrimination or harassment in violation of this policy and seeks to take action may use either the informal resolution process or the formal complaint process, or both. The informal resolution and formal complaint process described in this policy are not mutually exclusive and neither is required as a pre-condition for choosing the other; however, they cannot both be used at the same time."

For the full policy statement, see <https://policy.utdallas.edu/utdbp3090>.

### **Accessibility Services**

It is the policy and practice of The University of Texas at Dallas to make reasonable disability-related accommodations and/or services for students with documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required (see <http://www.utdallas.edu/studentaccess>). If you are eligible to receive disability-related

accommodations and/or services and to ensure accommodations will be in place when the academic semester begins, students are encouraged to submit documentation four to six weeks in advance. Students who have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact the Office of Student AccessAbility for a confidential discussion.

The Office of Student AccessAbility provides:

- a) Academic accommodations for eligible students with a documented permanent physical, mental or sensory disability
- b) Facilitation of non-academic and environmental accommodations and services
- c) Resources and referral information, and advocacy support as necessary and appropriate.

OSA is located 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](mailto:studentaccess@utdallas.edu). *Course syllabus* Page 7 of 8

## **Academic Integrity**

Students are expected to adhere to UTD's Student Code of Conduct:

Because the value of an academic degree depends on the absolute integrity and character of the student the university expects all students to maintain a high level of responsibility with respect to their behavior. As a member of the university community, it is imperative that a student maintain a high standard of individual responsibility and civility.

The dean may initiate disciplinary proceedings under Subchapter D against a student accused of a violation of the Code of Conduct upon complaint by a faculty member, a student or other source.

Academic dishonesty could result in disciplinary action from the university. Penalties could include receiving a grade of "F" for this course, expulsion or even the revocation of a degree. With respect to academic dishonesty, see Section 49.10 from the Student Code of Conduct (<http://policy.utdallas.edu/utdsp5003>), which includes:

- a) **Plagiarism:** The adoption or reproduction of ideas, words, statements, images or works of another person as one's own without proper acknowledgement.
- b) **Cheating:** Using or attempting to use unauthorized materials, information, or study aids in any academic exercise. Academic exercise includes all forms of work submitted for credit or hours.
- c) **Fabrication:** Falsification or creation of any information, data or citation in an academic exercise.
- d) **Collaboration and/or Collusion:** Seeking or providing aid to another student in completion of any assignment submitted for academic credit without permission from the faculty member.

## **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 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.*