OPRE3333.004– SPRING 2018

Course   **:** OPRE3333.004
Title   **:** Quantitative Business Analysis
Term   **:** SPRING 2018

Professor: Levent Kaan, Ph.D.   -   Levent.Kaan@utdallas.edu

Office	: JSOM 3.428	**Class Meetings**	: MON & WED
Office Hrs	: Advanced Scheduling	**Class Hrs**	: 4:00 PM- 5:15 PM
Call or Text	: 214-755-1439	**Location**	: UTD Dallas Main Campus- JSOM 2.106
Teaching Assistant	: Parvathy Thankamony (pxt162730@utdallas.edu)		

Required Textbooks:

OPRE:3333: Quantitative Business Analysis , Subtitle: Levent Kaan, Custom LLF ISBN = 9781337922203

Recommended Readings:
- Elementary Linear Algebra (Classic Version) (2nd Edition) (Pearson Modern Classics for Advanced Mathematics Series) by Lawrence E Spence and Arnold J Insel
- Elementary Linear AlgebraNov 4, 2013 by Howard Anton
- Introduction to Time Series Analysis and Forecasting (Wiley Series in Probability and Statistics)Apr 27, 2015 by Douglas C. Montgomery and Cheryl L. Jennings
- Introduction to Operations Research with Access Card for Premium ContentJan 27, 2014 by Frederick S. Hillier
- Operations Research: Applications and Algorithms (with CD-ROM and InfoTrac)Jul 25, 2003 by Wayne L. Winston
- Operations Research: An Introduction (10th Edition)Jun 5, 2016 by Hamdy A. Taha

Prerequisites
One of the following should be completed: MATH 1325 Applied Calculus I / MATH 2413 Differential Calculus / MATH 2417 Calculus I

Course Description
This course introduces the concept of business processes problem solving utilizing quantitative techniques including matrices, data analysis, and time series. Linear, nonlinear, and integer type problems will be evaluated. As a result of this course students are expected to solve various business type problems utilizing quantitative techniques and make decisions based on the validated results.

Student Learning Objectives / Outcomes
A student successfully completing this course is expected to know how to utilize quantitative methods to approach a problem, solve, and validate to make sound business decisions. Student is expected to learn and use Microsoft EXCEL with add-ins like solver, data analysis toolpak, and similar software (lindo, lingo, ampl etc.) as needed. Bringing a Microsoft based laptop will help learning process for student. Mac based computers office toolpaks are not 100% compatible with the Excel toolpak that this course will utilize.

Days	Topics
8-Jan	Course Introduction & Syllabus Review
10-Jan	Elementary Linear Algebra - Chapter 1: System of Linear Equations
15-Jan	MLK Day
17-Jan	Elementary Linear Algebra - Chapter 1: System of Linear Equations
22-Jan	Problem Solving Session
24-Jan	Elementary Linear Algebra - Chapter 2: Matrices
29-Jan	Elementary Linear Algebra - Chapter 2: Matrices

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31-Jan	Elementary Linear Algebra - Chapter 2&3: Matrices/Determinants
5-Feb	Elementary Linear Algebra - Chapter 3: Determinants
7-Feb	Problem Solving Session
12-Feb	Test 1 - Preview 2 of 2
14-Feb	**TEST 1**
19-Feb	Essentials of Business Analytics - Chapter 5: Time Series Analysis and Forecasting 1 of 3
21-Feb	Essentials of Business Analytics - Chapter 5: Time Series Analysis and Forecasting 2 of 3
26-Feb	Essentials of Business Analytics - Chapter 5: Time Series Analysis and Forecasting 3 of 3
28-Feb	Essentials of Business Analytics - Chapter 8: Linear Optimization Models - 1 of 3
5-Mar	Essentials of Business Analytics - Chapter 8: Linear Optimization Models - 2 of 3
7-Mar	Essentials of Business Analytics - Chapter 8: Linear Optimization Models - 3 of 3
12-Mar	Spring Break
14-Mar	Spring Break
19-Mar	Test 2 - Preview 1 of 2
21-Mar	Test 2 - Preview 2 of 2
26-Mar	**TEST 2**
28-Mar	No class - Instructor Business Trip
2-Apr	Essentials of Business Analytics - Chapter 9: Integer Linear Optimization - 1 of 2
4-Apr	Essentials of Business Analytics - Chapter 9: Integer Linear Optimization - 2 of 2
9-Apr	Essentials of Business Analytics - Chapter 10: Nonlinear Optimization
11-Apr	Essentials of Business Analytics - Chapter 10: Nonlinear Optimization
16-Apr	Essentials of Business Analytics - Chapter 12: Decision Analysis 1 of 2
18-Apr	Essentials of Business Analytics - Chapter 12: Decision Analysis 2 of 2
23-Apr	Test 3 Preview
25-Apr	**TEST 3**

Grading Policy

Homework 5: 25% (Total of 250 points)
Tests (3): 75% (250 points each-750 total)
No Bonus Assignments

97-100 = A+; 93-96 = A; 90-92 = A-
87-89 = B+; 83-86 = B; 80-82 = B-
77-79 = C+; 73-76 = C; 70-72 = C-
67-69 = D+; 63-66 = D; 60-62 = D-; less than 60 = F

Course Policies

Make Up Test:	No make-up tests
Late Work:	25% deduction on late work (accepted until solutions posted online or in class)
Class Attendance:	Being on time & 100 % class attendance required for full understanding of this course. UT Dallas requires professors to provide attendance information to registrar.
Course Submissions:	All course related submissions are expected to be done using e-learning system. Use UT Dallas assigned email for your official communication with the professor. E-learning is the form of course teaching and homework submissions.

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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 content in this syllabus is subject to change at the discretion of the Professor. It is student's responsibility that they have the latest and greatest revised copy in their possession for all updates and revisions.
Latest copy always resides in UTD eLearning class site.

Revised on Friday, January 05, 2018