

Course OPRE 3333**Quantitative Business Analysis****Professor Dr. David Parks****Term Fall 2017****Meetings** Tuesday and Thursday 100-215PM; JSOM 1.107**PROFESSOR'S CONTACT INFORMATION**

- Phone 972-883-5114
- Office location JSOM 3.617
- Email address dparks@utdallas.edu
- Office hours Tuesday and Thursday 230-400PM, Other hours by appointment.

Other information

E-mail is recommended for ALL communications during the semester. eLearning will be used throughout the semester

GENERAL COURSE INFORMATION**Pre-requisites, Corequisites, & other restrictions**

OPRE 3333 and MATH 2333 cannot both be used to fulfill degree requirements. Prerequisite: MATH 1325 Applied Calculus I or MATH 2413 Differential Calculus or MATH 2417 Calculus I). The topics discussed in this course are inherently mathematical. Students are encouraged to explore supplementary resources early on the semester as needed.

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 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 understand and interpret analytic models and use them in decision making
- Be able to utilize basic business analytics tools in Excel

Required Texts & Materials

- i. Elementary Linear Algebra (8th edition) –Larson
- ii. Essentials of Business Analytics (2nd edition) Camm/Fry/Anderson/Sweeney/Williams
Online Book Bundle (both books included) - ISBN 9781337816595 This book is a customized bundle so you can buy through the UTD Bookstore or on-line.
- iii. Additional material such as handouts and slides will be posted distributed in class and as needed, posted in eLearning.

CENGAGE LINK FOR LARSON

<https://studentdashboard.cengagebrain.com/#/course-confirmation/MTPN1TTPFW9J/initial-course-confirmation>

CENGAGE LINK FOR CAMM/FRY/ANDERSON/SWEENEY/WILLIAMS

<https://studentdashboard.cengagebrain.com/#/course-confirmation/MTPPFTMPMCXB/initial-course-confirmation>

TENTATIVE CALENDAR & ASSIGNMENTS

WEEK OF	TOPICS
August 21	Introduction and Systems of Linear Equations
August 28	Systems of Linear Equations
September 4	Matrices
September 11	Matrices/Determinants
September 18	Determinants
September 25	Review/Exam 1
October 2	Business Analytics/Forecasting
October 9	Forecasting/Linear Optimization
October 16	Linear Optimization
October 23	Linear Optimization/Non-Linear Optimization
October 30	Review/Exam 2
November 6	Non-Linear Optimization
November 13	Non-Linear Optimization/Simulation
November 20	Simulation/Decision Analysis
November 27	Decision Analysis
December 4	Decision Analysis/Review
December 11	Exam 3

COURSE GRADING POLICIES

Grading Criteria

3 exams: 25% each (75% total)

Homework Assignments 25%. Assignments available through Cengage.

Grade Assignments

97-100 points = A+;

93-96.9 points = A;

90-92.9 points = A-;

87-89.9 points = B+;

83-86.9 points = B;

80-82.9 points = B-;

77-79.9 points = C+;

73-76.9 points = C;

70-72.9 points = C-

67-69.9 points = D+;

63-66.9 points = D;

60-62.9 points = D- (Passing grades)

Below 60 = F

Any changes to this schedule will be announced in class or through eLearning and it is the student's responsibility to keep track of them.

Homework assignments will be posted in advance of their due date. **LATE HOMEWORK SUBMISSIONS WILL NOT BE ACCEPTED.** No make-up assignments will be given.

Class Attendance EXPECTED. Looking at previous experiences with this and other classes, tardiness and absence are the main contributing factors to poor and failing grades.

Classroom Citizenship

- i. Class begins on time. Please maintain class decorum and be respectful towards fellow students in the class. If you have a doubt or misunderstanding regarding course work feel free to discuss it with me.
- ii. Using your phone during class is not permitted and it is rude. Keep it on silent at all time and away from your desk. No texting. Offenders will be asked to turn off their phones. If this is a recurring problem, students will be asked to give their phones to the instructor

which will be returned at the end of the class session. No pictures or video during class time, it distracts me and it is a violation of privacy.

- iii. Use of your computer is allowed if it is not interrupting the class or distracting other students in the classroom. If such situation occurs, the first time you will be asked to turn off your computer. Recurrent offenders will be asked to leave the classroom. Given that this is a numeric class, the material discussed will need for you to take notes in a conventional way most of the time. Therefore, I encourage you to use your computer wisely. In my experience, abusing the use of computers during class time results in unsatisfactory final grades.
- iv. Use of tablets is allowed if used to read the textbook, or the class notes.
- v. These rules will be enforced.

Special Assistance For help you succeed in the class, the following resources are available: Your instructor, the teaching assistant assigned to this class, JSOM Statistics and Math Lab (JSOM 2.414), the Student Success Center (MC1.302), the Student Counseling Center (SSB 4.600) and the New Student Programs Office (SSB 3.600) among other resources. Expectation University guidelines recommend that you study 2-3 hours per week for every credit hour in which you are enrolled. That is, University expectations suggest you spend 6-9 hours outside of class every week on homework and studying for this course.

Student Conduct and Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, A to Z Guide, which is provided to all registered students each academic year. The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3, and in Title V, Rules on Student Services and Activities of the university's Handbook of Operating Procedures. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391). 4 A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited

to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings. Cheating, includes but is not limited to the use or attempted use of unauthorized materials, information, or study aids in any academic exercise; the use of sources beyond those authorized by the instructor in completing any academic exercise or, engaging in any behavior specifically prohibited by the faculty member in the course syllabus or class discussion. Academic exercise includes all forms of work submitted for credit or hours. Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of an individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from student's official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's Handbook of Operating Procedures. In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may

submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grades

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the course work has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of F.

Disability Services

The goal of Student AccessAbility is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Student AccessAbility is located in room SSB 3.200. Office hours are Monday through Thursday, 8 am to 6 pm and Friday, 8 am to 5 pm. The contact information for the Office of Student AccessAbility: The University of Texas at Dallas, SSB 3.200 studentaccess@utdallas.edu (972) 883-2098 (voice or TTY). Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance. It is the student's responsibility to notify his or her professors of the need for such an accommodation. AccessAbility provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated. The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a

period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment. If a student or an instructor disagrees about the nature of the absence [i.e., the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must consider the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee. Off-Campus Instruction and Course Activities Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the Office of the Dean.