Course Syllabus--C OPRE 6301.0G1

School of Management The University of Texas at Dallas

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Course Information

Course

Course Number/Section OPRE 6301, Sec. 0G1 Course Title: Quantitative Introduction to Risk and Uncertainty in Business Term and Dates: Summer 2011 (May 23 – August 10) *****Actually, August 4, 5, 6 is your Final Exam window for this online class**** See your academic calendar included within this syllabus

Professor Contact Information

Professor	Carol A. Flannery, Ed.D.
Office Phone	972-883-4833 however it is only answered during on-campus
	office hours
Email Address	use eLearning email
Office Location	SM 2.409
Online Office Hours	By Appointment

About the Instructor

Dr. Flannery began her association with UT-Dallas in 1995. She has 35 years experience in colleges and universities teaching all levels of mathematics and statistics. Her expertise includes curriculum design, developing short term on-site courses for area business and industry, production of instructional video, and the development of additional online courses, such as the Math Refresher online course for MBA students at UT-Dallas. Dr. Flannery earned M.S. and Ed.D. degrees from Texas A & M at Commerce.

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

Prerequisite: MATH 5304 or equivalent. (3-0) S

Course Description

OPRE 6301 Quantitative Introduction to Risk and Uncertainty in Business (3 semester hours) Introduction to statistical and probabilistic methods and theory applicable to situations faced by managers. Topics include: data presentation and summarization, regression analysis, fundamental probability theory and random variables, introductory decision analysis, estimation, confidence intervals, hypothesis testing, and One Way ANOVA (Some sections of this class may require a laptop computer). Dr. Flannery's section of OPRE 6301 does require a laptop!

Students must be responsible for the operation of their laptops. This course teaches statistics and the use of Excel in analyzing data. It is not a course to instruct in the basic uses of a laptop. Therefore, it should be understood that all who enroll in this course assume the responsibility of their laptops and consult "help" functions when necessary.

Student Learning Objectives/Outcomes

Students are expected to develop skills on problem formulation, identification of appropriate statistical techniques, computer implementations in Excel and/or manual calculations and written explanations, and interpretation of empirical results of the following --

BE ABLE TO:

- 1) organize and summarize raw data
- 2) build and evaluate a regression model from raw data
- 3) apply the basic rules of Probability Theory
- 4) apply the concept of a random variable to solve business problems
- 5) apply the Normal, Poisson, and Binomial Distributions to solve business problems
- 6) simulate data from the Normal, Poisson, and Binomial Distributions
- 7) identify significant changes in averages and proportions
- 8) determine if two populations have the same mean or the same proportion
- 9) determine if several populations have the same mean

Required Textbooks and Materials

(1) Text: STATISTICS FOR MANAGEMENT AND ECONOMICS, 8th EDITION,

by G. KELLER, South-Western, 2008.

(ISBN 10 digit 0-324-56949-1; ISBN 13 digit 978-0-324-56949-0)

Please have this required edition of the text. Other editions have different topics in some chapters. The international editions have been known to have different problems than the non-international edition.

(2) Laptop with Excel 2007 (because the textbook utilizes this version).

If you have Excel 2010, you can still utilize the CD. However, it needs to installed by first placing the CD in your drive, and then typing the following in your Internet Explorer window:

D:\manual_installation

Please note that if your CD drive is NOT the letter D, use the letter of your drive. When the window opens showing all programs available on the CD, click on version 7.0. You will see a yellow question mark icon and another icon that has a green color. Click on the green icon that appears. Repeat this process to install your Excel Data files, and Excel Workbooks. It will be the student's responsibility to follow along with the discussion, noticing any differences are similarities between Excel 2007 and 2010. This also applies to any other versions of Excel.

(3) Your laptop must have the Textbook CD-Rom installed by the first class day; Excel data sets, Excel Workbooks, Excel Workbooks, etc. Install everything, except the other software formats of data files such as minitab, etc. We will be utilizing only Excel in statistical problem-solving as well as written calculations in some chapters. Although "Data Analysis" tools are available as an "add in" with your Excel software (you usually must add it in manually), "Data Analysis Plus" is installed from the textbook CD.

Newer MACS do not have the scripting ability necessary to run Data Analysis Plus; if you are using a MAC, it is suggested to install a Windows Virtual machine, such as "parallel desktop", which will then allow the use of ordinary Office within the Mac OS. Students with MACS in past semesters have done this with no problems.

Suggested Course Materials

See Required Textbook and Materials listed above.

Textbooks and some other bookstore materials can be ordered online through <u>Off-Campus</u> <u>Books</u> or the <u>UTD Bookstore</u>. They are also available in stock at both bookstores.

Course Policies

All examinations are online and must be taken during the scheduled "Exam Windows", as there will be **NO** makeup examinations offered for this course. You can access the test only once during the exam window of time.

Make Up Exams: There are no Make-up exams offered for this course.

Extra Credit: Please note that there will be **NO** extra credit opportunities for this course

Late Work None

Suggested Problems

Suggested exercises and/or problems are available for each module/unit. Most of these problems are "even numbered" which means the answer is in the back of your textbook.

No points are given for completing homework. However, keeping up with homework problems in a timely manner will help you toward completing a successful examination of the material. If you need assistance with the course or the materials, it is your responsibility to ask for help from the instructor or your classmates via the discussion board.

There should always be a thorough effort to working the problem prior to asking for help. If your instructor is asked for help, there will be questions asked of the student to see if initial steps to working a problem has been achieved.

Examinations:

There will be four tests in this course, one for each module. Each test is 2 hours.

The first test (Module 1) will be all multiple-choice and cumulative.

The second test (Module 2) will be a combination **and/or** all multiple-choice, all true-false, **or all** problem solving. This test will be on all concepts and problems discussed in the probability lessons and in Chapter 6 on Probability.

The third test (Module 3) and fourth test (Module 4), which is the Final Exam, will be a combination **and/or** all multiple-choice, all true-false, or **all** problem solving. Both of these tests will be cumulative.

The course utilizes Excel 2007. Although lessons include how some problems can be solved manually, Excel is the required format for answering test questions and homework. For many inferential problems, it is simply not possible to work the problems manually. On problems of statistical inference, a data file may or may not be included within the question. These are usually the data files that you installed from your textbook cd. You may also be given data in a test question to be typed into your Excel worksheet before you can proceed to work the problem. Not using Excel whenever possible will result in points deducted from your test.

Special Assignments

Discussion board topics (worth 15% of your course average). Each student is required to contribute in a worthwhile fashion to each discussion topic posted. This includes the stated "Discussion Board" topics and any new topics the professor may assign at a later date.

Worthwhile contributions do not include "yes", "no", "I agree with this response" type of answers. In keeping with a graduate-level class, responses to the discussion board will be held to a high standard. Students who do not demonstrate that they are responding to a graduate level discussion will be marked down in scoring.

Students will be graded on their contributions by the rubric specified in the "Participations/Discussion" section of this syllabus.

Class Participation

Students are required to login regularly to the online class site. The instructor will use the tracking feature in eLearning to monitor student activity. Students are also required to participate in all class activities such as discussion board, chat or conference sessions and any group projects assigned.

Virtual Classroom Citizenship

The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper netiquette when interacting with class members and the professor.

Policy on Server Unavailability or Other Technical Difficulties

The university is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the UTD eLearning Help Desk: <u>http://www.utdallas.edu/elearninghelp</u>, 1-866-588-3192. The instructor and the UTD eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

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Technical Requirements

In addition to a confident level of computer and Internet literacy, certain minimum technical requirements must be met to enable a successful learning experience. Please review the important technical requirements and the web browser configuration information.

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Course Access and Navigation

This course was developed using a web course tool called eLearning. It is to be delivered entirely online. Students will use their UTD NetID account to login to the course through UTD Galaxy: <u>http://galaxy.utdallas.edu</u> or directly at <u>http://elearning.utdallas.edu</u>. Please see more details on <u>course access and navigation information</u>.

To get started with an eLearning course, please see the <u>Getting Started: Student eLearning</u> <u>Orientation</u>.

UTD provides eLearning technical support 24 hours a day/7 days a week. The services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service. The UTD user community can also access the support resources such as self-help resources and a Knowledge Base. Please use this link to access the UTD eLearning Support Center: <u>http://www.utdallas.edu/elearninghelp</u>.

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Communications

This eLearning course has built-in communication tools which will be used for interaction and communication. Some external communication tools such as regular email and a web conferencing tool may also be used during the semester. For more details, please see <u>communication tool information</u>.

Another communication tool available to students is live voice chat in the 3D virtual world of Second Life. Instructions for accessing the UTD SOM Island in Second Life can be found at http://som.utdallas.edu/somResources/eLearning/faculty/secondLife.php.

Interaction with Instructor: The instructor will communicate with students mainly using the **Announcements and Discussions tools**. Students may send personal concerns or questions to the instructor using the course email tool via eLearning. The instructor will reply to student emails or Discussion board messages within 3 working days under normal circumstances.

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Student Resources

The following university resources are available to students:

UTD Distance Learning: http://www.utdallas.edu/oee/distance/students/cstudents.htm

McDermott Library: Distance Learners (UTD students who live outside the boundaries of Collin, Dallas, Denton, Rockwall, or Tarrant counties) will need a UTD-ID number to access all of the library's electronic resources (reserves, journal articles, ebooks, interlibrary loan) from off campus. For UTD students living within those counties who are taking online courses, a Comet Card is required to check out materials at the McDermott Library. For more information on library resources go to http://www.utdallas.edu/library/distlearn/disted.htm.

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Student Assessments

Grading Information

Weights

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Test 1 (Module 1)	20%
Test 2 (Module 2)	20%
Test 3 (Module 3)	20%
Test 4 (Module 4)	25%
Discussion Board Participation (Rubric graded)	15%

Determining Letter Grades

Grade Range Letter Grade 90-100 A 80-89 B 70-79 C

70-79 C < 69.5 F

Letter grades will not contain + or -. There are no "D" grades in graduate school. Undergraduates taking this course will be held to the same standards as graduate students, meaning, there will be no "D" grades for any student.

Grades are not curved. Cut-offs for letter grades will be strictly adhered to. For example, if your course average is 89.3, this translates to B.

Grading Policy

Each test will be graded on a percentage correct out of 100 total points. Your rubric score will be converted to a percentage, i.e., a score of 13/15 = 87.

Accessing Grades

Students can check their grades by clicking "My Grades" under Course Tools after the grade for each assessment task is released.

Assignments

Suggested homework problems and reading are listed on eLearning. Discussion board is required on listed topics.

Group Projects

Discussing homework problems, case studies and any other special topics and/or problems on the Discussion Board.

Assignment submission instructions (If there are Assignments to be Submitted)

You will submit your assignments (in the required file format with a simple file name and a file extension) by using the Assignments tool on the course site. Please see the Assignments link on the course menu or see the icon on the designated page. You can click each assignment name link and follow the on-screen instructions to upload and submit your file(s). Please refer to the Help menu for more information on using this tool. **Please note**: each assignment link will be deactivated after the assignment due time. After your submission is graded, you may click each assignment's "Graded" tab to check the results and feedback.

Participation/Discussions

Each student is required to contribute worthwhile statements about problem solving under each discussion topic. Topics may be added to and/or changed at any time. Your grade on the Discussion Board topics will be based upon points from the following rubric listed on the next page.

Discussion Board participation will be graded utilizing the following rubric:

	Excellent = 3 points	Good = 2 points	Poor = 0 or 1 pts.
Quality of Responses to Discussion Topics: Answers of "yes", "no", "I agree", and similar responses will not count as worthwhile contributions to the discussion topics			
Time Frame of Response: Are your responses timely to the discussion topic at hand? Or did you wait till everyone else moved on to another discussion topic?			
Peer Tutoring: Responses clarifying to other students who are having trouble understanding how the procedures used in analyzing problem at hand.			
Responses discussing alternate statistical processes (legitimate), if any, that could be used in approaching and analyzing data. And include why these different approaches could be utilized.			
Quantity: Did you participate in each discussion topic in a worthwhile manner, befitting of a university graduate student?			

Online Tests/Quizzes

You can access quizzes/exams by clicking the Assessments link on the course menu or see the quiz/exam icon on the designated page.

All exams will be released on the course Exams page. Students will submit the completed exams using the assignment dropbox tool.

See Assignments link on the course menu. The exams are open book and notes. Additional information about tests may be announced later on the discussion board.

Each test is timed and can be accessed "<u>only one time</u>" within the scheduled exam time window. Please read the on-screen instructions carefully before you click "Begin Assessment". After each quiz is graded and released, you may go back to the Assessments page and click "View All Submissions" to review your exam results.

SEE ACADEMIC CALENDAR ON NEXT PAGE.

WEEK OF	MODULE/ UNIT	СН	TOPIC	SUGGESTED PROBLEMS and READING ARE POSTED ON ELEARNING
May 23	Module 1 – Unit 1, 2, 3, and Introduction to the Course and eLearning	1, 2,	Statistical Terms and Types of Data	In addition to working suggested problems, Obtain Textbook; Install Excel Data Files, Data Analysis Plus and Data Analysis Add-In Familiarize yourself with the Data Files associated with problems and also Excel Workbooks
May 31 (May 30 is holiday)	Module 1 – Unit 4, 5, 6	2, 4, 5	Numerical Descriptive Techniques; Graphical and Tabular Techniques; Data Collection And Sampling Techniques	
June 6	Module 2 – Unit 1, 2	6	Probability	
June 9, 10, 11 (Thurs, Fri, Sat)			Test 1 – Module 1 Online (Time: 2 hours)	Exam Window: June 9, 10, 11 (till midnight June 11, USA central daylight time)
June 13	Module 3 – Units 1, 2	7 8	Discrete & Continuous Probability Distributions	
June 23, 24, 25 (Thursday, Friday, Saturday)			Test 2 – Module 2 Online (Time: 2 hours)	Exam Window: June 23, 24, 25(till midnight June 25, USA central daylight time)

WEEK OF	MODULE/ UNIT	СН	TOPIC	SUGGESTED PROBLEMS and READING ARE POSTED ON ELEARNING
July 5	Module 3 – Unit 3	9	Sampling Distributions	
July 11	Module 4 – Unit 1,2	10 11 12	Estimation & HypothesisTesting	
July 14,15,16 Thursday, Friday, Saturday			Test 3 – Module 3 Online (Time: 2 hours)	Exam Window: July 14,15,16 (till midnight July 16, USA central daylight time)
July 18	Module 4: Unit 3, 4	8, 13, 14	Comparing Two Populations; Analysis of Variance and Tukey's Omega	
July 25	Module 4 – Unit 5	16, 17	Simple and Multiple Linear Regression	
Aug 4, 5, 6 (Thursday, Friday, Saturday)			Test 4 – Module 4 Online (Time: 2 hours)	Exam Window: Aug 4, 5, 6 (till midnight Aug 6, USA central daylight time)

Scholastic Honesty

The University has policies and discipline procedures regarding scholastic dishonesty. Detailed information is available on the <u>UTD Judicial Affairs</u> web page. All students are expected to maintain a high level of responsibility with respect to academic honesty. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since such dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced.

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Course Evaluation

As required by UTD academic regulations, every student must complete an evaluation for each enrolled course at the end of the semester. An online instructional assessment form will be made available for your confidential use. Please look for the course evaluation link on the course Home Page towards the end of the course.

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University Policies

Student Conduct & 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).

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.

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 Use

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 each 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 students 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.

Students must use the eLearning email tool when sending email to their professor.

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 deal 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 Grade Policy

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 \underline{F} .

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is: The University of Texas at Dallas, SU 22 PO Box 830688 Richardson, Texas 75083-0688 (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. Disability Services 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., for 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 take into account 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 the website address given below. Additional information is available from the office of the school dean. (<u>http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm</u>)

These descriptions and timelines are subject to change at the discretion of the Professor. Any errors and/or omissions will be corrected with notice to the class via an announcement on eLearning. It is the student's responsibility to read and understand this syllabus.

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