Quantitative Introduction to Risk and Uncertainty in Business (3 semester hours)

Course	**OPRE 6301: Section 503** **Thursdays, 7 – 10 pm,** **Classroom SOM 1.107** **OPRE 6301: Section 001** **Tuesdays, 4 – 7 pm,** **Classroom SOM 2.106**
Professor	Dr. Carol A. Flannery B.S. University of Texas at Arlington M.S., Ed.D. Texas A&M at Commerce
Teaching Assistant	Bishoram Guragai (tentatively) Office hours to be announced.
Term	Thursday class: Begins Aug 17 - Final Exam, Nov 30 Tuesday class: Begins Aug 22 – Final Exam, Nov 28
Meetings Other than Classroom	Large Computer Lab Located near Java City on first floor of SOM. (time and days indicated on this syllabus under topics, dates, etc)
Professor's Background	Dr. Flannery joined UT-Dallas in 1995, however this Fall semester begins her 30th year of teaching math and statistics in colleges and universities. In addition to teaching, her expertise includes writing technical math training publications, developing tailor-made, on-site courses for business and industry, and the production and curriculum development of tutorial videos and online courses.

Professor's Contact Information

Office Phone	I am only on campus two days per week (during office hours and class time) so it would be wise to contact me via email only.
Office Location	SOM 2.409 on Tuesday and Thursday afternoons only.
Email Address	flannery@utdallas.edu Email is checked Tuesday and Thursday mornings only. Due to confidentiality, I do not discuss grades or class performance via emails. Emails not originating from a UT-Dallas address may not be answered.
The Art of Email	I have been associated with utilizing email since 1990. It is a fine technology, but one that I have chosen to "limit." Therefore, email is only checked on class days, specifically Tues and Thurs mornings before noon.
Office Hours	Tuesdays: 3 to 3:45 pm and Thursdays: 6 to 6:45 pm

Letters of Recommedation	Requests for letters of recommendation will be considered; and only if requests are made "before" Nov 1. Resumes and other supporting documentation must be included with your request. After your final exam is given, I will not be on campus nor checking email until the beginning of the Spring 2007 semester.

General Course Information

Pre-requisites, Co-requisites, & other restrictions	MATH 5304 Applied Mathematical Analysis for Non-Majors (3 semesterhours) Techniques of mathematical analysis applicable to the social, behavioral and management sciences. Differential and integral calculus of one and many variables. No credit allowed to mathematical sciences majors. Prerequisite: College Algebra (3-1) S Pre-requisite: MATH1314 OPRE 6301 requires students to be proactive in learning Excel throughout the semester. Time in the computer lab for practice has been reserved on certain dates. Please see the course date outline.
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). Prerequisite: MATH 5304 or equivalent. (3-0) S
Learning Outcomes	Apply the basic rules of Probability Theory. Apply the concept of a random variable to solve business problems. Apply the Normal, Poisson, and Binomial probability distributions to solve business problems. Simulate data from the Normal, Poisson, and Binomial Distributions. Identify significant changes in averages and proportions. Determine if two populations have the same mean or the same proportion. Determine if several populations have the same mean (ANOVA).
Required Texts & Materials	**Statistics for Business and Economics, 7th Edition, 2005, by Keller.** The accompanying CD contains problem data and applets. Not having the CD or correct edition of the textbook will definitely limit your success in this course. Please visit the online text companion website; the url is stated within the first few pages of your textbook. Here you can have interactive tutorial help with statistics concepts.

Suggested Texts, Readings, & Materials

Pocket calculator: TI 30XII, TI 30XIIS, or TI36X (your choice). These are statistics friendly calculators to help on your in-class tests. It is the student's responsibility to read the manual and learn the functions on these calculators. Please do not expect me to give you a crash course in how to use this simple calculator. Programmable calculators, cell phones, and/or laptops, **are not permitted** for use with written tests.

Any Excel handbook, however, the textbook does contain instructions on how to utilize Excel on problems. Although this section of OPRE 6301 does not require a laptop in-class, students will be expected to work problems not only manually, but also utilizing Excel. There may be some students who have experience with other statistical software, however, Excel is the software required for use in this course.

Breaks during Class

Breaks will be given during class. Your professor will be on break, too. This is not the time to approach and ask for more explanation of topics, help with practice problems, or other paperwork, etc. It is requested that all be respectful and courteous in the classroom by returning from break at the scheduled time and turning off cell phones. Cell phones are not to be used **within the classroom at any time, this includes break time. Please step out into the hall to use cell phones.**

Assignments & Academic Calendar

Week Number and Dates of Classes	Topics, Assignments, Exam Dates
1—Aug 17-Thursday **Aug 22-Tuesday**	Introduction to Statistics, Graphical Techniques, Numerical Descriptive Techniques, and Data Collection and Sampling --- **Chapters 1, 2, 3, 4, and 5** **Computer Lab first hour of class. Meet in Computer Lab.** **LAB ASSIGNMENT #1 DUE BY END OF THE LAB HOUR.**
2 –Aug 24 –Thursday **Aug 29 - Tues**	**Return to classroom the last two hours of classtime.** **Lecture:** **Chapters 1, 2, 3, 4 , and 5 continued.**
3—Aug 31 – Thurs **Sept 4 –**	Simple Linear Regression – **Chapter 17** **LABOR DAY HOLIDAY**
3—Sept 5 - Tuesday	Simple Linear Regression – **Chapter 17**
4 – Sept 7 – Thurs **Sept 12 - Tues**	Simple and Multiple Linear Regression – **Chapters 17 and 18**
5 – Sept 14 – Thurs **Sept 19 - Tues**	**Computer Lab first hour of class. Meet in Computer Lab.** **LAB ASSIGNMENT #2 DUE BY END OF THE LAB HOUR.** **Return to classroom the last two hours of classtime.** **Lecture:** Probability **– Chapter 6**
6 – Sept 21 – Thurs **Sept 26 – Tues**	Probability – **Chapter 6 continued**
7 – Sept 28 – Thurs **Oct 3 - Tues**	Random Variables and Discrete Probability Distributions – **Chapter 7**
8 – Oct 5 – Thursday **Oct 10 - Tues**	**MIDTERM----TEST #1 WRITTEN – IN CLASS – FIRST TWO HOURS.** **Test will cover Chapters 1, 2, 3, 4, 5, 6, 17, and 18** **Closed Book, closed notes. Pocket calculator permitted.**
9 – Oct 12 –Thurs **Oct 17 - Tues**	Random Variables and Discrete Probability Distributions – **Chapter 7 continued** Continuous Probability Distributions – **Chapter 8** **Computer Lab first hour of class. Meet in Computer Lab.** **LAB ASSIGNMENT #3 DUE BY END OF THE LAB HOUR.**
10 - -Oct 19 – Thurs **Oct 24 - Tues**	**Return to classroom the last two hours of classtime.** **Lecture:** Sampling Distributions **– Chapter 9** Introduction to Estimation **– Chapter 10**
11 – Oct 26 – Thurs **Oct 31 - Tues**	Introduction to Estimation – **Chapter 10 continued** Introduction to Hypothesis Testing – **Chapter 11**
12 - Nov 2 – Thurs **Nov 7 - Tues**	Inference about a Population – **Chapter 12** Inference about Comparing Two Populations – **Chapter 13** **TEST #2 WRITTEN – IN CLASS – FIRST TWO HOURS.** **Test will be cumulative and cover Chapters 1 through 12.**
13 – Nov 9 – Thurs **Nov 14 – Tues**	**Lecture:** Analysis of Variance – **Chapter 15** Chi-Squared Tests – **Chapter 16** **Computer Lab first hour of class. Meet in Computer Lab.** **LAB ASSIGNMENT #4 DUE BY END OF THE LAB HOUR.**
14 - Nov 16 – Thurs **Nov 21 - Tues**	**Return to classroom the last two hours of classtime.** **Lecture:** **Question and Answer Session**

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15 -	**THANKSGIVING HOLIDAYS**
*****Nov 23, 24*****	
16 - Nov 28 (Tues) **Nov 30 (Thur)**	**SOFTWARE EXCEL FINAL EXAMS IN THE COMPUTER LAB (UNLESS OTHERWISE INDICATED)**
SOFTWARE EXCEL FINAL EXAMS IN THE COMPUTER LAB (UNLESS OTHERWISE INDICATED)	**TUESDAY CLASS: NOV 28 - 4 TO 6 PM** **THURSDAY CLASS: NOV 30 – 7 TO 9 PM** **This software test will test your ability to analyze data with Excel utilizing the techniques discussed in Chapters 9 through 16, specifically. However, don't be surprised is you are also asked to do "descriptive statistical summaries" and charts, which were introduced in the beginning of the course.**

Course Policies

Grading (credit) Criteria	**Your earned grade in this course is based upon:** **1 – TEST #1 WRITTEN*==========➔ 20 points** **1 - TEST #2 WRITTEN*==========➔ 20 points** **In- class, multiple-choice with the possibility of Non-multiple-choice questions included.** ***Closed Book, Closed Notes*** **Test #2 Written will be cumulative: it will not only test over the Material covered within class and practice problems, but address Whether the student can analyze data from descriptive Through inferential statistics.** **4 - In Class Lab Assignments---Excel Software==========➔ 20 points** **(5 points each assignment)** **Submit via WEBCT email to Teaching Assistant and Dr. Flannery.** **1 - In Class Excel Software Final Exam ==========➔ 40 points** **Comprehensive. Utilize Excel to analyze data, from Descriptive through Inferential Statistics.**
Grading Scale **Grading Scale (continued)**	**94 – 100 points = A** **87 - 93 points = B** **75 - 86 points = C** **74 and below = F** **There is no grade of D in graduate school.** **Students taking this course as an undergraduate will not receive + or – letter Grades because graduate courses do not carry + or – letter grades.**
Make-up Exams	**There are no makeup written exams.** **There are no makeup software exams.** **There are no makeup lab assignments.**
Taking Tests with other Sections	**Due to fairness, one section may not take a test with another section's scheduled test date. If a student is absent from a lecture, you may be permitted to sit in on another section's lecture only.**
Extra Credit	**No extra credit unless otherwise indicated during the course.**
Late Work	**Late work is not accepted. In extraordinary circumstances, late work may be accepted, but with a point deduction in grade.** **Late LAB ASSIGNMENTS: Automatic 2 point deduction.**

Homework: Practice Problems	**A list of practice problems will be posted on the WEBCT site for your class.** **Problems listed reflect a "minimum" amount of practice.** **It will be updated weekly.** **Homework practice problems are not graded.**
Lecture Notes and Power Point Slides	**I do not post notes or slides on the internet.** **This is not an online, independent-study course. Part of the learning process in a teacher-classroom setting involves taking notes and asking questions.** **This is the approach that will be taken in my classes.**
Questions Regarding Tests	**Inquiries about a test grade should be made to the professor as soon as possible after the return of the test and/or the posting of test grade on WebCT.** **If a student has not made an inquiry about a test grade within two weeks of the posting of the grade (or return of the test), or within one week after the posting of final software exam grades, it will be assumed there are no questions regarding the test grade and therefore all discussion of test grades will be closed.**
Class Attendance	**Attendance is required. It is the student's responsibility to read and understand this syllabus and to obtain class notes, know assignments, test dates, etc from a study buddy in class. Your professor will not reiterate a three-hour missed class over the phone and/or via email, or in the office.**
Posting of Grades on WEBCT	**This is done as a convenience for my students. Sometimes, however, the grades may not be posted. If a grade posted on WEBCT is incorrect, it will be corrected before final grades are submitted.**
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). 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.
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 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 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. ***Please submit any forms to the professor as soon as possible at the beginning of the semester.***
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 http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.

These descriptions and timelines are subject to change at the discretion of the Professor.

PLEASE NOTE: DUE TO THE OVERHAUL OF WEBCT, SOME LINKS ON YOUR CLASS SITE MAY NOT BE UPLOADED UNTIL THE SECOND CLASS MEETING.