Course Syllabus

OPRE 6301/SYSM 6303 (cross-listed courses).0W1 – Summer 2016 – Instructor: Sonia Leach
Naveen Jindal School of Management (JSOM)
The University of Texas at Dallas

Course Information

Course	OPRE 6301/SYSM 6303 (cross-listed courses) – Section: 0W1
Course Title	Quantitative Introduction to Risk and Uncertainty in Business
Professor	Sonia E. Leach, Ph.D., Clinical Associate Professor
Term	Summer 2016
Dates	May 23 – August 8, 2016 (Last exam is August 7, 2016)

Professor Contact Information

Office Phone	972-883-5845
Office Location	JSOM 3.229
Email Address	sonia.leach@utdallas.edu
Office Hours	All contact concerning your class must be via eLearning class website. Email sent via eLearning is checked daily Monday through Friday. Voicemail on office phone is not checked daily
Office Hours	By appointment.

About the Instructor

Dr. Leach began her association with UT Dallas in 2012 upon retirement from her 20-year active-duty career in the United States Air Force. She has over 15 years of studying and performing statistical analysis, three of which were in direct support of U.S. Congressional budget decisions. Her teaching expertise include probability and statistics, operations management, global supply chain management, spreadsheet modeling and analytics, and project management. Dr. Leach has earned a BS in Mathematics from The Pennsylvania State University, a MS in Operations Research from the Air Force Institute of Technology and a Ph.D. in Industrial Engineering from Arizona State University.

Course Description

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.) (3-0) S

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 and 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;
7) Identify significant changes in averages and proportions
8) Determine if two populations have the same mean or the same proportion; and
9) Determine if several populations have the same mean.

Required Textbooks and Materials

Required Texts

Statistics for Management and Economics, 10th Edition, by G. Keller, 2015. ISBN 10-digit: 1-285-42545-6. ISBN 13-digit: 978-1-285-42545-0.

This is the required edition of the text. Any other editions, including the International and Abbreviated editions, will not have the same problems and/or chapter topics. Since your exam problems may contain textbook problems, you are risking a low exam grade by not having the correct edition. The required 10th edition will permit you to download the necessary Excel data files, and Data Analysis Plus macros from the Publisher's website: cengagebrain.com.

Required Software

This course uses a Windows-based computer, eLearning, Internet access, Microsoft Excel 2007, 2010 or 2013 (no trial versions), Data Analysis Add-Ins activated (this comes with Excel); Data Analysis Plus, ANES and GSS data files (all available for download from the textbook Publisher's website). ANES and GSS files are discussed on page 7 in your textbook.

If you choose not to install Data Analysis Plus, it will be the student's sole responsibility to utilize and learn other available existing Excel statistics tools/packs to work problems throughout the semester. Lectures and the Textbook utilize Data Analysis and Data Analysis Plus. Instruction on other tools and/or stat packs will not be provided. Data Analysis Plus is student-friendly and saves time in working problems. Existing Excel statistics tools cannot do all of the problem work as done by Data Analysis Plus.

Macs do not have the scripting ability necessary to run Data Analysis Plus. If you are using a Mac, it is necessary to install a Windows Virtual machine, such as Parallel Desktop, or VMWare Fusion 4 which will then allow the use of Windows within the Mac Operating System. You must have the Windows version of Excel or the Parallel Desktop or VMWare Fusion is of no use. At this time, Data Analysis Plus for Office 2011 Mac OS is available from the publisher's website. Always check your textbook publisher's website for any updates regarding Data Analysis Plus for Macs.

Textbooks and some other bookstore materials can be ordered online through Off-Campus Books http://www.offcampusbooks.com or the UT Dallas Bookstore http://www.bkstr.com/texasatdallasstore/home. They are also available in stock at both bookstores.

Course Policies

Exams

All examinations are online and must be taken during the scheduled Exam Windows, as makeup examinations will not be offered for this course. It is the student's responsibility to have a reliable computer with all of the required software and data files. You can access the exam only once during the exam time window. Once you access your exam, you will have two hours to complete it. The exam must be completed by the end of the exam time window.

Refer to the Course Academic Calendar in this syllabus for the dates and times of the course exams. There is no perfect time during the week in which to administer a course exam. The day/time chosen for each exam is based on when most students will not have other pre-scheduled commitments (such as work and/or religious services). Please note that all times are based on the U.S. Central Daylight Savings Time Zone – be sure to adjust your timing if you reside in or will visiting another time zone on the day of an exam.

No Make Up Exams

Makeup examinations will not be offered for this course. Students who miss an exam will receive a score of zero. Please be certain that you can take all course exams during the monitored exam windows on the designated dates which are listed on the Course Academic Calendar in this syllabus. Any exceptions to the schedule must be approved by the instructor on a case-by-case basis **at least one week prior** to the scheduled exam time.

No Extra Credit

There will be no extra credit opportunities for this course.

Late Work

None accepted.

Virtual Classroom Citizenship

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

Policy on Server Unavailability or Other Technical Difficulties

It is the student's responsibility to have a reliable internet connection. Students should immediately report any problems with eLearning to the instructor during a monitored exam time window. The instructor will respond in a timely manner in order to ensure exam completion during the allotted time. The student must be available to receive the instructor's direction and complete the exam. Requests for assistance by a student beginning the exam more than after 15 minutes into the exam window are not acceptable. Students may also contact the UTD eLearning Help Desk (to assist with issues during an exam, as well as to address issues not occurring during an exam period): http://www.utdallas.edu/elearninghelp, phone: 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. 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.

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 http://www.utdallas.edu/elearning/students/getting-started.html#techreqs on the Getting Started with eLearning webpage http://www.utdallas.edu/elearning/students/getting-started.html.

Course Access and Navigation
The course can be accessed using the UT Dallas NetID account at: https://elearning.utdallas.edu. Please see the course access and navigation http://www.utdallas.edu/elearning/students/getting-started.html#courseaccessandnav section of the site for more information.

To become familiar with the eLearning tool, please see the Student eLearning Tutorials http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html.
UT Dallas provides eLearning technical support 24 hours a day/7 days a week. The eLearning Support Center http://www.utdallas.edu/elearninghelp services include a toll free telephone number for immediate assistance (1-866-588-3192), email request service, and an online chat service.

Communication
This course utilizes online tools 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 visit the eLearning Tutorials webpage http://www.utdallas.edu/elearning/students/eLearningTutorialsStudents.html for video demonstrations on eLearning tools.

Student emails and discussion board messages will be answered within 3 working days under normal circumstances.

Distance Learning Student Resources
Online students have access to resources including the McDermott Library, Academic Advising, The Office of Student AccessAbility, and many others. Please see the eLearning Current Students page http://www.utdallas.edu/elearning/students/cstudents.htm for details.

Server Unavailability or Other Technical Difficulties
The University is committed to providing a reliable learning management 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 provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and also contact the online eLearning Help Desk http://www.utdallas.edu/elearninghelp. The instructor and the eLearning Help Desk will work with the student to resolve any issues at the earliest possible time.

Student Assessments

Grading Criteria

Assessment Activity	Points
Module 1 Exam	100
Module 2 Exam	100
Module 3 Exam	100
TOTAL	**300**

Letter Grades

Total Points	Letter Grade
270-300	A
260-269	A-
250-259	B+
240-249	B
230-239	B-
220-229	C+
210-219	C
209 and below	F

A C grade is the lowest passing grade in graduate-level courses. Undergraduates taking this graduate course will be subject to the same grading policy as graduate students.

Emails to the professor, after each exam and/or after the semester is completed, requesting extra credit work and/or a grade higher than actually earned, will not be answered. There is no extra credit. The semester grade received is the grade earned.

Accessing Grades

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

Online Exams

You may access exams by clicking the Assessments/Exams link on the designated page. Please read the on-screen instructions carefully before you click Begin. After each exam is graded and scores are released, you may go to My Grades page and click the score link of the exam to view your graded submission. There will be three online exams in this course, one for each module. Each exam is two hours. Refer to the Course Academic Calendar in this syllabus for dates of exams. **The exam window will be on a Sunday, beginning at 1:00pm, with all exams completed by 4:00pm that same day.** You will be able to access your exam during that window only. Please make plans to begin your exam by 2:00 pm at the latest. Otherwise, students beginning their exam after 2:00 pm will have less than 2 hours in which to complete it.

Your Last Exam is Sunday – August 7, 2016.

Please be certain that you can take all course exams during the monitored exam window on the designated dates which are listed on the Academic Calendar. Any exceptions to the schedule must be approved by the instructor on a case-by-case basis at least one week prior to the scheduled exam time.

The first Exam (Module 1) will be a combination of multiple-choice, true-false and/or problem solving.

The second Exam (Module 2) will be a combination of multiple-choice, true-false and/or problem solving. It will be assumed that the student has cumulative knowledge from Module 1 material.

The third Exam (Module 3) will be a combination of multiple-choice, true-false and problem solving. It will be assumed that the student has cumulative knowledge from Module 1 and Module 2 material.

The exams may require you to utilize MS Excel (versions 2007, 2010 or 2013). Although lessons include problems that are solved manually, Excel is the required format for answering exam questions and homework. For many inferential problems, it is not possible to work the problems manually. On problems of statistical inference, a data file may or may not be included within the question. You may be asked to refer to a data file. These are usually the data files that you installed from your textbook publisher's website: cengagebrain.com. You may also be given data in an exam question to be typed into your Excel worksheet before you can proceed to work the problem. Please see the Assessments/Exams link on the course menu or see the icon on the designated page. You can click each exam name link when it appears and follow the on-screen instructions. Please refer to the Help menu for more information on using this tool.

Each exam link will be deactivated after the due date/time. After your exam is graded and grades are released, you may click each exam's Graded tab to check the results and feedback. Students will submit the completed exams using the exam dropbox tool. Questions regarding a graded exam must be submitted via the Email utility on your class eLearning website. You must be logged in to send or receive these messages. A response to your inquiry will be typed within the Feedback section of your exam.

The exams are open book and notes.

Students are expected and required to do their own work on each exam.

Additional information about exams may be announced later on the discussion board.

Each exam is timed and can be accessed only one time within the scheduled exam time window. Please read the on-screen instructions carefully before you click Begin Assessment. Upon completion, you must SAVE and then SUBMIT your exam.

Course Academic Calendar

2016 Week of	TOPIC/LECTURE/READINGS	READING
May 23	Module 1 – Statistics and Graphical Descriptive Techniques	Chapters 1, 2, 3
May 30	Module 1 – Numerical Descriptive Techniques, Data Collection and Sampling	Chapter 4 (Section 1-4, 7,8) Chapter 5
June 6	Module 1 - Probability	Chapter 6 (Section 1-3, 5)
June 13	**MODULE 1 EXAM – 1 hour, 45 minutes SUNDAY, June 19 Exam Window: 2-4PM CDT**	
June 20	Module 2 – Random Variables and Discrete Probability Distributions, Continuous Probability Distributions	Chapter 7 (Sections 1, 4, 5) Chapter 8 (Sections 1, 2, 4)
June 27	Module 2 – Sampling Distributions, Introduction to Estimation	Chapter 9 (Sections 1, 2, 4) Chapter 10
July 4	Module 2 – Introduction to Hypothesis Testing, Inference About a Population	Chapter 11 Chapter 12 (Sections 1, 2) Chapter 8 (Sections 1, 2, 4)
July 11	**MODULE 2 EXAM – 1 hour, 45 minutes SUNDAY, July 17 Exam Window: 2-4PM CDT**	
July 18	Module 3 – Inference about Comparing Two Populations, Analysis of Variance	Chapter 13 (Sections 1, 3, 5) Chapter 14 (Sections 1, 2) Chapter 8 (Sections 1, 2, 4)
July 25	Module 3 – Simple Linear Regression and Correlation, Multiple Regression	Chapter 16 Chapter 17 (Sections 1, 3)
Aug 1	**MODULE 3 EXAM – 1 hour, 45 minutes SUNDAY, August 7 Exam Window: 2-4PM CDT**	

Suggested Textbook Problems

Chapter 1:	1.2 – 1.8 (even numbered problems)
Chapter 2:	2.14 – 2.34 (even numbered problems)
	2.40 – 2.50 (even numbered problems)
Chapter 3:	3.6 – 3.20 (even numbered problems)
	3.32, 3.34, 3.48 – 3.58 (even numbered problems)
Chapter 4:	4.2 – 4.16 (even numbered problems)
	4.32 – 4.36 (even numbered problems)
	4.42 – 4.54 (even numbered problems)
Chapter 5:	5.2, 5.3, 5.7, 5.12, 5.17 – 5.19
Chapter 6:	6.1 – 6.3, 6.5, 6.6, 6.8, 6.12, 6.16, 6.20
	6.28 – 6.40 (even numbered problems)
	6.48, 6.56, 6.62 – 6.68 (even numbered problems)
Chapter 7:	7.2, 7.8 – 7.20 (even numbered problems)
	7.32, 7.84, 7.92 – 7.100 (even numbered problems)
	7.110 – 7.118 (even numbered problems)
Chapter 8:	8.16 – 8.56 (even numbered problems)
	8.84 – 8.88(even numbered problems)
	8.96 – 8.100 (even numbered problems)
Chapter 9:	9.2 – 9.24 (even numbered problems)
	9.30 – 9.42 (even numbered problems)
	9.52, 9.54
Chapter 10:	10.2, 10.12, 10.22 – 10.32 (even numbered problems)
	10.52, 10.54
Chapter 11:	11.8 – 11.46 (even numbered problems)
Chapter 12:	12.1, 12.3, 12.4, 12.8, 12.24 – 12.34 (even numbered problems)
	12.70, 12.74, 12.94, 12.96
Chapter 13:	13.1, 13.4, 13.5, 13.12 – 13.20 (even numbered problems)
	13.32 – 13.36 (even numbered problems)
	13.78, 13.80, 13.90, 13.92
Chapter 14:	14.4 – 14.14 (even numbered problems)
	14.38, 14.42
Chapter 16:	16.2, 16.6. 16.8, 16.10, 16.32, 16.34b-c,
	16.38, 16.40, 16.56, 16.62, 16.90, 16.100, 16.102
Chapter 17:	17.8, 17.10, 17.18, 17.24, 17.28

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.