EDP 371 – Introduction to Statistics

Fall, 2011 - Unique Number: 10360 T & TH: 11 – 12:30 UTC 4.124

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Course Description:

This course is designed to help students learn the introductory descriptive and inferential statistical procedures that are used in behavioral and social science research studies. Students will learn the assumptions underlying, the hypotheses being tested by, and the inferences that can be made with the use of the procedures. These skills will provide the student with a basis to conduct their own such analyses and to evaluate critically others' uses of statistics.

This course carries the Quantitative Reasoning flag. Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.

Pre-requisites

Mathematical skills: While this course is not completely mathematical, it is founded upon the use of mathematical tools. Thus some fundamental mathematical skills are essential for successful mastery of the material. Students are expected to have basic algebra skills including the ability to solve single variable equations. Students should have a basic understanding of exponents and square roots, as well as the order of operations, proportions, fractions, decimals, percentage, and negative numbers. Pages in Appendix A of the textbook contain a review of the basic math skills needed for this course.

Calculator: Students are required to bring to class a scientific calculator that can be used to sum, multiply, take the square root and square of numbers. Calculators are recommended for use with class assignments and tests as well as during class time. During in-class exams, you must use a calculator that does not have the capacity to connect to email (use of cell phones is completely **forbidden** during exams).

Course Materials and Resources

Required: ***Statistics for the Behavioral Sciences, 8th Edition*** **by F. J. Gravetter and L. B. Wallnau**. This textbook is available at the Co-op. Homework problems are taken from this book. It also provides a good resource in that it presents the material in a slightly different way than the instructor presents the material during class time.

Optional: Class notes discussed in class will be available on Blackboard at **http://courses.utexas.edu** under **11F Introduction to Statistics (10360)**. These are available under the *Course Documents* folder on Blackboard.

Reading the notes does not provide the student with the learning experiences/ material equivalent to that obtained by attending class. The notes provide a skeleton of what is being covered each day and will thus be an incomplete version of the material actually covered. They contain spaces for the student to fill in the additional material and practice provided in class.

Assignments - *UNGRADED*

Homework

Reading about statistics does not ensure mastery. As with many other skills, the best way to master statistics is through practice. There will be homework problems associated with each class topic (see List of Topics). Once a topic has been covered in class, the homework should be completed.

The majority of the homework assignments are even-numbered problems from the textbook. Because answers to odd-numbered problems are available at the back of the text, students are also encouraged to try odd-numbered problems on their own. The questions and answers to each even-numbered homework assignment will be made available in the *Assignments* folder on Blackboard. It is the student's responsibility to check their work and ensure their mastery of the relevant material. Please come to visit the TA and the instructor during office hours if you have any questions.

Review Problems Online

This assignment is an ungraded assignment. It is designed to encourage students to keep up with material covered in class while offering them the opportunity to test their mastery of concepts and to try out additional computational exercises. It also exposes students to some of the kinds of questions they should be considering when reviewing material. Multiple-choice problems assessing mastery of recent material will be posted on Blackboard (http://courses.utexas.edu) in the *Assignments* folder under the folder entitled *Review Quizzes*.

Assignments - *GRADED*

Exams

There will be three exams. The exams will focus on the material covered during the most recent class segment. These exams provide students with an incentive to synthesize the material being covered and an opportunity to practice the skills being learned. More detail will be provided about the material assessed by each exam closer in time to the actual exams. It should be noted that most of the statistical skills acquired during this class are constantly building upon earlier learning. This means that even though each exam will focus on the preceding section of the course, students might need to recall skills learned in earlier sections!

Format: Exams will consist of true-false, multiple-choice and short-answer questions including both conceptual and computational problems. Students will be given one class period to complete the exam.

Materials: Students will be given a formula sheet and necessary tables for each exam. Students should bring a calculator.

Proportion of final grade: Exams are weighted equally and worth a total of ***100%***.

Makeups

Only in exceptional circumstances (which does ***NOT*** include family vacations/ weddings, routine doctor's appointments, job interviews, etc.) and only with **prior** permission from the instructor, or with a verifiable medical excuse, will students be able to take a makeup exam. The student must provide medical proof of illness. The student is responsible for notifying the TA and the instructor by the day of the exam that they cannot attend the exam.

Grading system

Grades are assigned based on the percentage of accumulated points:

Overall Course Percent	*Grade*
93% - 100%	A
90% - 92%	A-
86% - 89%	B+
83% - 85%	B
80% - 82%	B-
76% - 79%	C+
73% - 75%	C
70% - 72%	C-
66% - 69%	D+
63% - 65%	D
60% - 62%	D-
Below 60%	F

Attendance policy

Students are responsible for all material presented in lectures. It is expected that students will attend lectures although attendance will not be taken. The class is designed this way because it is felt that the practice obtained during class time provides one of the best opportunities for learning.

Exams are held during class time and can only be re-scheduled for individual students under exceptional circumstances (see Makeups for details).

Students are expected to arrive ***on time*** for the beginning of class. Students anticipating late arrival should notify the instructor before class. A pattern of tardiness can ***negatively affect*** your grade.

Students are expected to remain in the classroom for the duration of the lecture. Students needing to leave prior to the end of the scheduled meeting time should inform the professor before the lecture begins.

Cell phones and pagers ***must*** have the sound turned off when in the classroom and are not allowed to be visible during exams.

Religious holy days sometimes conflict with class and examination schedules. It is the policy of The University of Texas at Austin that you must notify each of your instructors prior to the classes scheduled on dates you will be absent to observe a religious holy day. If you have to miss an exam due to a religious holy day, it is your responsibility to re-schedule with the professor another time to take the exam.

Subject Pool requirement

To receive credit for this class, students are required by my Department to participate in the Educational Psychology subject pool. An alternative assignment will be offered by those in charge of the subject pool for students not willing to participate. Please reference the handouts for further details.

Scholastic dishonesty policy

The University defines academic dishonesty as cheating, plagiarism, unauthorized collaboration, falsifying academic records, and any act designed to avoid participating honestly in the learning process. Scholastic dishonesty also includes, but is not limited to, providing false or misleading information to receive a postponement or an extension on a test or other class assignment, and submission of essentially the same written assignment for two courses without the prior permission of faculty members.

By accepting this syllabus and participating in this course, you have agreed to these guidelines and *must* adhere to them. This means (specifically for this class) that any work that you hand in for a grade ***MUST*** be your own work. This also means that you may ***NOT*** use or review the exams of students of this class from previous semesters.

Violation of this agreement and of any of the University rules on scholastic dishonesty will result in the student being awarded an ***F for the final course grade***, being referred to the appropriate university officials, and may result in suspension or expulsion from the University. For more information on scholastic dishonesty, students may review the Student Judicial Services web-site: http://www.utexas.edu/depts/dos/sjs/.

Disability Accommodation

Students with disabilities who require special accommodations need to get a letter that documents the disability from the Division of Diversity and Community Engagement, Services for Students with Disabilities (471-6259 voice or video phone: 1-866-329-3986). This letter should be presented to the instructor at the beginning of the semester and accommodations needed should be discussed at that time. Five business days before an exam, the student should remind the instructor of any testing accommodations that will be needed. See the following website for more information: http://www.utexas.edu/diversity/ddce/ssd/index.php

Communication

In this course, ***e-mail*** will be used as a means of communication with students. You will be responsible for checking your e-mail regularly for class work, deadlines, changes and announcements.

Do NOT leave me a phone message in my office because I do NOT check my voicemail regularly. I do, however, check email several times each weekday (on weekdays between 9am and 5pm).

You will also be responsible for checking the Blackboard course site regularly for class work, announcements, and copies of the lecture notes. As with all computer systems, there are occasional scheduled downtimes as well as unanticipated disruptions. Notification of these disruptions will be posted on the Blackboard login page. Blackboard is available at http://courses.utexas.edu. Support is provided by the ITS Help Desk at 475-9400 Monday through Friday 8 am to 6 pm, so plan accordingly.

Hints for success

Practice: Practice will facilitate successful mastery of the skills to be learned from this class. During class periods, guided practice will be offered in the form of sample problems. The homework and review question assignments will also provide opportunities for practice. It is hoped that studying for and completion of exams will provide additional such opportunities.

Practice II: Watching the instructor work through examples might (hopefully) make it appear simple. However, I will not be at your side when you are working problems out in the real world (or, say) on exams. I strongly recommend that you practice what you see me doing.

Practice III: You know the topic you are covering when doing a homework assignment or listening to my working through an example in class. In the real world (or, in, say, an exam), you will not have these contextual clues (such as chapter headings!). Make sure you understand when to use the statistics we cover, not just how to do so.

Homework I: The homework problems provide you with mostly computational practice. However, I expect you to grasp more than just the steps required to solve problems. I would recommend that you also focus on mastering the concepts covered during class time. You can assess your mastery of some of the concepts by working through the online review questions.

Homework II: By the same token, while some of the homework problems appear to entail purely computational practice, some of them are trying to demonstrate statistical concepts (such as comparing factors that might impact statistical conclusions) using numbers. Instead of whipping through the computations, do try to take some time to think through why the questions might ask you to compare outcomes. What factor is being manipulated and what is the impact of the manipulation?

Textbook: You are responsible for whatever topics are covered in class. We do not necessarily cover all the material in the textbook. The terminology in the textbook sometimes differs from what we use in class. Use the terminology I use in class.

Study groups: It is highly recommended that you form study groups to master the material in this class. If you understand a concept, teaching it to your fellow students will help you solidify that learning. If you do not understand a concept, it might help to have it presented to you by someone who has more recently mastered it than the TA or instructor. It can help to have a concept presented by several people in different ways.

Office hours: Use them – our job is to help you learn! If you cannot make our office hours, ask us after class or via email to schedule another time to meet with me or the TA.

Email I: Check your email messages from me and the TA.

Email II: Use email to schedule appointments ***NOT*** to ask conceptual or computational questions. We will not answer those questions online because hand-feeding you the answer(s) does not help your learning as much as our prompting **you** (face-to-face) to come up with the answer.

Email III: (and most important) If you email one of us (professor or TA), please copy ***both*** of us on the email. That ensures a speedier response.

Class notes: If a student misses class, it is his/her responsibility to obtain any missed information from a classmate – ***not*** from the instructor, ***nor*** from the TA.

Keep up: The skills to be mastered for statistical analyses keep building upon themselves. If you fall behind, it will not only affect the topic in which you are behind but will affect your learning of a later topic.