

EDP 371 - Introductory Statistics**Spring 2012****Instructor: Dr. Dawn Zimmaro****Unique Number: 10270****Course Syllabus****Course Description**

This course is designed to help you learn the introductory descriptive and inferential statistical procedures that are used in behavioral and social science research studies. When you finish this course I want you to have *statistical literacy* – to be able to critically evaluate statistical material and to appreciate the relevance of statistically-based approaches in all aspects of life. This means you should be able to identify solutions to problems that involve data. Second, you should be able to critically evaluate research involving data. Finally, I hope that your experience with team-based learning will enable you to work more effectively with others. Throughout the semester I will ask for your feedback to see if we are continuing to move toward achieving these goals.

Course Objectives

At the end of this course you should be able to:

1. Calculate descriptive statistics and solve problems using z-scores
2. Solve problems using the one-sample t-test
3. Solve problems using the independent and dependent-samples t-tests
4. Solve problems using the one-way analysis of variance and a post hoc follow up test
5. Solve problems using correlation, regression, and chi-square
6. Identify and select the appropriate statistics to use

Meeting Time and Location

Day: Tuesday and Thursday
Time: 3:30 – 5:00 pm
Place: UTC 4.110

Instructor

Name: Dr. Dawn Zimmaro
Office: MAI 2207
Office Hours: Wednesday, 8:30 - 9:30 AM, and by appointment.
Email: dawn.zimmaro@austin.utexas.edu

Teaching Assistant

Name: Dave Gillian
Office: SZB 506N (tentative)
Office Hrs: Monday, 11:00 AM – 12:15PM, Tuesday, 2:00 - 3:15 PM, and by appointment.
Email: EDP371@gmail.com

Be sure to contact both the TA and me by email if you cannot meet with us during scheduled office hours and would like to schedule another appointment.

Course Materials and Resources

Required: *Statistics for the Behavioral Sciences, 9th Edition* by F. J. Gravetter and L. B. Wallnau. This textbook is available at the Co-Op. You will have required weekly reading assignments so it is important that you have a copy (print or electronic). 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.

The textbook publisher, CengageBrain.com, offers you the option to purchase print textbooks, rent textbooks, eBooks, or individual eChapters, all for substantial savings over average retail prices. CengageBrain.com also includes Cengage Learning's broad range of digital solutions, study tools, and a selection of free content.

Below is the link for this course. **This link will direct you to the purchase page for the course textbook.**

Gravetter/Wallnau

Statistics for the Behavioral Sciences

<http://www.cengagebrain.com/shop/isbn/1111830991?cid=D2S>

As an added bonus, the publisher is offering an exclusive promotion for you: \$20 off any purchase of \$100 or more with coupon code **SPRING2012***.

*Coupon code expires 3/1/2012 and excludes Rental, Aplia and Microsite purchases.

Optional: Class handouts will be available on Blackboard at <http://courses.utexas.edu> under **12SP Introduction to Statistics (10270)**.

Readiness Assurance Quizzes (RAQs)

Every Tuesday you will take individual and team quizzes covering material presented in the assigned readings. There will be eleven 10-point multiple-choice quizzes over the course of the semester. Quizzes will first be taken individually (without the help of others) and then again in teams. You will take the individual quizzes during the first 20 minutes of class. At the end of the 20 minutes, students will assemble in their teams and take the same quiz again using scratch-off forms. The team quiz will last for 30 minutes. Students may receive bonus points if their team scores higher than other teams. For example, if a team scores higher on a quiz than all other teams, each individual from that team will receive two (2) points added to their individual score. Second place teams will receive one (1) bonus point. So, if a student scores 8 points and the team scores higher than all other teams, then that student receives 10 points for the overall score. If teams tie, they get equal points. The total number of possible points for each quiz is 12 points (10 individual + 2 bonus). In this way your team score can only help your individual quiz grade and will never negatively affect your course grade. The lowest individual score across the 11 RAQs will be dropped so only 10 individual scores will count toward your final grade. Thus, a student may receive up to 20 extra credit points on quizzes.

RAQ Appeals

If your team feels strongly about the correctness of an item that they missed, the team may submit a written appeal to the instructor. This appeal process must occur immediately following a readiness quiz. Only teams, not individuals, may write appeals. Only teams that write successful appeals get points for that appeal, even if another team missed the same question(s). Appeals are not simply an opportunity to dig for more points. Rather, they are an opportunity for teams to make scholarly arguments for their collective positions. All arguments must be supported by evidence from the text or lecture notes. If the appeal is based on an ambiguously phrased question, the team must suggest wording that is less ambiguous. The decision to grant or refuse an appeal will be made by the instructor after class via e-mail. The following is an example of a successful appeal:

Argument: "We feel that A, rather than B, should be the correct answer to question 15."

Evidence: "According to Table B.6, the critical r for 10 degrees of freedom, two-tailed test, and an alpha of .05 is .576, which is larger than the calculated r of .570. This would lead us to conclude that there is no relationship between shoe size and intelligence."

Team Application Activities

Every Thursday, after a mini-lecture, you will participate in team application activities. These activities will focus on applying what you learned to real-life problems. At the end of the activity each individual will be responsible for writing an interpretation of what was learned in the application activity. The team activity will count for 5 points and the individual activity will count for 5 points, for a total of 10 points. There will be eleven team activities throughout the course. Your lowest team application activity score will be dropped so only 10 team activities scores will count toward your final grade.

Professionalism Feedback

In this class, professionalism is very important. In the professional world, your life is influenced by three things: your own effort, the effort of the people you depend upon, and the way you work together, which is why I have chosen the Team-Based Learning system which values all three of those things.

Two times during the course you will provide professionalism feedback to each member of your team. The feedback should reflect your judgment of such things as:

Preparation – were they prepared when they came to class?

Contribution – did they contribute productively to the team discussion and work?

Respect for others' ideas – did they encourage others to contribute their ideas?

Flexibility – were they flexible when disagreements occurred?

It is important to provide positive feedback to people who truly worked hard for the good of the team and to also make suggestions to those you perceived not to be working as effectively on team tasks. I will refer to the feedback a student has received from team members in those situations where the student is a few points short of a letter grade. Improvement as a team member and/or sustained good work may convince me to show mercy to students who barely miss the cutoffs. By the way, you will also evaluate me as the instructor several times during the semester.

Problem Solving Tests

There will be three comprehensive problem-solving tests worth 100 points each. Each test will involve applying the knowledge acquired in the assigned readings to real-world problems. 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 to the time of 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.

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.

Makeup assignments

Only in exceptional circumstances (which do **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.

Disability Accommodation

Students with disabilities who require special accommodations need to get a letter that documents the disability from the Services for Students with Disabilities. Any student with a documented disability who requires academic accommodations should SSD at 471-6259 (voice) or 1-866-329-3986 (Video Phone) as soon as possible to request an official letter outlining authorized accommodations. This letter should be presented to the instructor in each course 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>

Attendance policy

Since every class includes an individual and team quiz or activity class attendance is critical for success in this course. Students are expected to arrive on time for the beginning of class.

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

Subject Pool requirement

To receive credit for this class, students are required by the Educational Psychology 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.

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

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 presentation materials. 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.

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

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.

Quantitative Reasoning Flag

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.

Grading

Individual RAQs	100 points
Team Activities	100 points
Exam 1	100 points
Exam 2	100 points
Exam 3	100 points
TOTAL:	500 points

Your overall course grade will be determined by the number of points you obtain:

A:	465 – 500 points (93 – 100%)
A-:	450 – 464 points (90 – 92.9%)
B+:	435 – 449 points (87 – 89.9%)
B:	415 – 434 points (83 – 86.9%)
B-:	400 – 414 points (80 – 82.9%)
C+:	385 – 399 points (77 – 79.9%)
C:	365 – 384 points (73 – 76.9%)
C-:	350 – 364 points (70 – 72.9%)
D+:	335 – 349 points (67 – 69.9%)
D:	315 – 334 points (63 – 66.9%)
D-:	300 – 314 points (60 – 62.9%)
F:	0 – 299 points (0 – 59.9%)

How to Succeed in EDP 371

Instructors who use team-based learning have observed the behaviors of high- and low-performing teams. These observations have led us to these recommendations when you work in teams.

- 1) Sit close together in a circle - this enables easy communication and eye contact, which is very important to team performance.
- 2) In team activities, be prepared to share three things with your teammates: (a) what answer you chose as an individual, (b) why you chose that answer, and (c) how confident you are about it.
- 3) Come prepared - not only having read what was assigned, but also by bringing your book and calculator to every class.
- 4) Deliberate as long as time permits - unless a team is full of all-stars, we have found that teams who deliberate longer (especially at the beginning of the term) do better in team activities.

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 assignments or 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/>.

Class Schedule

DATE	TOPIC	ASSIGNMENT FOR NEXT CLASS	DUE DATE
Tuesday, January 17	Class overview and syllabus review	Read chapter 1	1/19
Thursday, January 19	Introduction to Statistics	Read chapters 2 and 3	1/24
Tuesday, January 24	Frequency Distributions Central Tendency RAQ 1		
Thursday, January 26	Frequency Distributions Central Tendency	Read chapters 4 and 5	1/31
Tuesday, January 31	Variability z-Scores RAQ 2		
Thursday, February 2	Variability z-Scores	Read chapters 6 and 7	2/7
Tuesday, February 7	Probability Probability and Samples RAQ 3		
Thursday, February 9	Probability Probability and Samples		
Tuesday, February 14	Exam 1		
Thursday, February 16	Peer Assessment 1 Exam 1 Review	Read chapters 8 and 9	2/21
Tuesday, February 21	Intro to Hypothesis Testing Intro to the t Statistic RAQ 4		
Thursday, February 23	Intro to Hypothesis Testing Intro to the t Statistic	Read chapters 10 and 11	2/28
Tuesday, February 28	t Test for Two Independent Samples t test for Two Related Samples RAQ 5		
Thursday, March 1	t Test for Two Independent Samples t test for Two Related Samples	Read chapters 12 and 13	3/6
Tuesday, March 6	Intro to ANOVA Repeated Measures ANOVA RAQ 6		
Thursday, March 8	Intro to ANOVA Repeated Measures ANOVA	Read chapter 14	3/20
Tuesday, March 13	SPRING BREAK		
Thursday, March 15	SPRING BREAK		

DATE	TOPIC	ASSIGNMENT FOR NEXT CLASS	DUE DATE
Tuesday, March 20	Two-factor ANOVA RAQ 7		
Thursday, March 22	Two-factor ANOVA		
Tuesday, March 27	Exam 2		
Thursday, March 29	Peer Assessment 2 Exam 2 Review	Read chapter 15	4/3
Tuesday, April 3	Correlation RAQ 8		
Thursday, April 5	Correlation	Read chapter 16	4/10
Tuesday, April 10	Regression RAQ 9		
Thursday, April 12	Regression	Read chapter 17	4/17
Tuesday, April 17	Chi-Square Statistic RAQ 10		
Thursday, April 19	Chi-Square Statistic	Read chapter 19	4/24
Tuesday, April 24	Choosing the Right Statistic RAQ 11		
Thursday, April 26	Choosing the Right Statistic		
Tuesday, May 1	Exam 3 preparation; CIS		
Thursday, May 3	Exam 3		