CED 611 01W CRW

Introduction to Graduate Statistics

COURSE SYLLABUS: SUMMER I 2016

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COURSE INFORMATION

Required Materials

Required Materials

The following textbook and software are required:

1. **Textbook**: *Discovering Statistics Using IBM SPSS Statistics* by Andy Field. Sage Publications (2013). Fourth Edition. ISBN-10: **1446249182** | ISBN-13: **978-1446249185**
2. **Software**: SPSS Statistical software (version 17.0 or higher are recommended). You may choose one of the recommended sources below.
   - You may purchase SPSS for download from http://www.onthehub.com/spss/
   - You may also get a copy from http://studentdiscounts.com that can be installed on two computers; you may want to share the cost with a fellow student.

     ATTENTION: Be sure to select the **Statistics Standard Grad Pack.** You can get a 6- or 12-month license.

SPSS on Campus

The SPSS statistical software is installed on computers in the student lab at the Mesquite Metroplex Center and in various labs on the Commerce campus. Make sure labs are available at convenient times so you are able to complete assignments on time.

OTHER MATERIALS AND RESOURCES

The textbook's student resources and accompanying web site are not required, yet you may want to explore them in case they suit your needs and learning style. (*Please see "*Technology Requirements*" for other requirements.*)

COURSE DESCRIPTION

This course is intended to provide graduate students with an introduction to statistics and is approved by the Graduate School as a Level III research tool. The emphasis in this course will be on understanding statistical concepts and applying and interpreting tests of statistical inference. Content will include but not be limited to: the application of selected inferential statistical procedures, including advanced correlational methods, multiple regression, ANOVA, two-way factorial ANOVA, and other advanced procedures. Computer software (SPSS) will be employed to assist in data analysis. Students should have access to a computer, SPSS software, and the Internet. This access is available at the Mesquite Metroplex Center and on the Commerce campus in certain computer labs.

STUDENT LEARNING OUTCOMES

This course is designed so students develop and demonstrate an understanding of

- Using statistics as a tool of the scientific process; how data are collected and quantified.
- The uses and limitations of statistical software.
- Data scaling, coding, manipulation, and analysis; Frequency distributions; Representing data visually; Methods of describing the central tendencies; Understanding and quantifying variability.
- Inferential statistics: the Central Limit Theorem and hypothesis testing; the reasoning and assumptions underlying inferential statistics; probability in inferential statistics.
- The appropriate application and interpretation of inferential statistical procedures, including simple and multiple linear regression, factorial ANOVA (including *post hoc* and multiple comparisons).
- Basic reporting of the methodology and results for statistical tests.
- Choosing the appropriate statistical procedure to analyze data.

COURSE REQUIREMENTS

Activities and Due Dates

The semester is divided into "Weeks," each of which, except exams, typically opens at 12:00 a.m. on a Monday and closes at 11:59 p.m. on the following Sunday, when all work is typically due. The university works on Central Time (UTC -6:00); if outside of the Central Time zone, please adjust accordingly.

The open and close schedule for a week in which a course exam is administered differs from the usual pattern; please consult the calendar carefully so you can plan your semester. Course exam weeks do not necessarily coincide with the institution's "exam weeks."

Weekly tasks include a combination of learning content in the textbook and other materials, watching instructional videos, completing exercises and assessments, and submitting written work. Failure to complete work by the due date will result in a score of zero. Barring reasonable extenuating circumstances, no late work will be accepted, nor will assessments be reopened.

Contact the instructor about individual needs or special requests as soon as concerns or extenuating circumstances come up. Special requests will be resolved case-by-case.

GRADING

The following of criteria (and weights) determine the final course grade:

Assignments (25%): Assignments provide practice and application and, typically, consist of creating a product based on a data analysis. Mistakes typically do not result in a substantial penalty if there is evidence of a well thought-out attempt (unlike poorly organized, mislabeled, careless, or incomplete work).Thus, do not equate high scores with high course performance.

Self-Grading Assignments (SGA) (25%): SGAs are completed online and graded automatically. You are allowed multiple attempts, so the activity provides both practice and self-assessment. A low score indicates you should review related materials before attempting the SGA again for a better score.

Quizzes (20%): Most weeks, a timed quiz tests all materials covered that week. Quizzes are not cumulative, but knowledge of statistics is, so quizzes may require you to draw on previously learned materials. For some quizzes, you must run a data analysis in SPSS and answer questions based on the results, so verify at the beginning of the week if access to SPSS is needed when you take the quiz later in the week.

Comprehensive Final Examination (30%): The final examination is timed, cumulative, and includes theoretical and practical components. The exam may not coincide with the institution's "exam week." The exam opens and closes as scheduled in the course (see *Tentative Course Calendar* at the end of this document); please plan ahead.

Final Course Grade

Based on the weighted average of your course work, the final course grade is converted using the following grading scale: A = 90-100; B = 80-89; C = 70-79; F = 0-69.

TECHNOLOGY REQUIREMENTS

Browser Check

It is strongly recommended that you perform a "Browser Test" prior to the start of your course. To launch a browser test, login in to eCollege, click on the "myCourses" tab, and select the "Browser Test" link under Support Services"

Other

This is a "**printer-heavy**," **online** course. You must have access to the **Internet** and a **printer**.

To be able to view Adobe presentations, you must have the latest version of **Adobe Reader** installed on your computer. (Log in to the course for more information.) In rare instances, you may be unable to view the presentations unless other supporting software (e.g., Java and Adobe Reader) are installed and updated properly.

All written assignments must be formatted in APA style and submitted as Microsoft Word (preferred) or Rich Text Format (.rtf) documents. If you use a word processor other than MS Word, use the program's "Save As" feature to save the document as a Word document.

ACCESS AND NAVIGATION

eCollege Technical Concerns

- **Chat Support:** Click "Live Support" on the tool bar within your course to chat with an eCollege Representative.
- **Phone:** For the HelpDesk, call (toll-free) 1-866-656-5511 to speak with an eCollege Representative.
- **Email:** To initiate an eCollege support request, the Help Desk is available 24/7 at helpdesk@online.tamuc.org
- **Help:** Click the "Help" button on the toolbar for information about working with eCollege (e.g., how to submit to Dropbox, how to post to discussions, etc.).

Other Questions or Concerns

Contact the appropriate TAMU-C department for questions or concerns. If you are unable to reach the appropriate department with questions about course enrollment, billing, advising, or financial aid, call 903-886-5511 Monday-Friday between 8:00 a.m. and 5:00 p.m.

Dropping/Withdrawing from the Course

Students are responsible for following University procedures to drop a class. If you stop attending the class for any reason, you must initiate the process of dropping; otherwise you will receive a grade, including zeros for work you did not complete. In the Summer I 2016 semester, the last day to drop a class is June 25, 2015, at 5 p.m. (Please double-check dates with the Office of the Registrar. **Plan to initiate the withdrawal process several days in advance to allow time for all the required procedures**.

School Days and Holidays

I will be available on school days (i.e., regularly scheduled working days in the institution's calendar). The course calendar takes holidays into account; however, if a short holiday falls during a scheduled week, you must still complete the work for that week as scheduled.

Engagement in the Course

Online courses offer flexibility to work when convenient; however, this is not a self-paced course. You must keep up with weekly tasks to meet deadlines. Plan to dedicate to the course a

minimum of 6-8 hours a week consistently. After 2-3 weeks, you will be able to gauge your individual needs and adjust your study time accordingly. It works best to spread your study time throughout the week rather a single, long study session. Consistent work will give you time to absorb and practice the content. In addition, if you have a question, you need enough time to receive a reply and proceed with your work before it is due.

ADDITIONAL NOTES

- Circumstances may require changes to the syllabus or scheduled activities at the instructor's discretion. Changes will be communicated by email or course announcements. Maintain a working email address on eCollege; check for course messages and announcements daily.
- It is the student's responsibility to stay abreast of course-related information, changes, and grades. In a classroom-based course, if you miss a class, check with a fellow student about what you missed during your absence.
- Back up all your work and graded assignments during the semester in case you are asked to resubmit or redo an assignment. Keep track of your grades and save all records. If there are any discrepancies, you may be asked to provide copies of your work.
- Never fax or mail anything to me without first making arrangements; keep a copy of the assignment in case it is not received.
- University closings are generally irrelevant in online courses. For classroom-based courses, check the university's web site for closings or cancellations due to weather. Also, check KETR radio on 88.9 FM and television channels 4, 5, and 8 (channel 7 for Tyler and Longview Area).

COMMUNICATION AND SUPPORT

Interaction with the Instructor

- It is best to communicate with me by email. You can also call and leave a message, or we can schedule a phone call. When leaving a voice message, include your full name, course and section, and a call-back number.
- When sending an email, **start the subject line with the course (CED 611)**; otherwise, your message may be overlooked or accidentally deleted.
- If you receive no reply within *two school days*, re-send the message.
- Limit all email communication to course-related topics (e.g., no chain letters, jokes, etc.).
- For individual questions or concerns, your messages are always confidential. From time to time, the answer to a general, course-related question may benefit all students, so I may send a blanket response to the whole class.

COURSE AND UNIVERSITY PROCEDURES/POLICIES

ADA Statement–Students with Disabilities

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library- Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148

ADA Office URL: http://www.tamuc.edu/CampusLife/CampusServices/studentDisabilityResourcesAndServices/default.aspx

ADA Office Email: StudentDisabilityServices@tamuc.edu

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (*Refer to the institution's* "Code of Student Conduct" *from* "Student Guide Handbook.") Follow all guidelines of academic honesty. If you plagiarize, cheat or collude, you will receive a failing course grade and be subjected to further disciplinary action at the discretion of the institution.

If in doubt whether any action violates guidelines for student conduct, consult the instructor. Materials on plagiarism are available at plagiarism.org and other sources on the Internet.

Non-Discrimination Statement

Texas A&M-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

COURSE OUTLINE / CALENDAR

The calendar on the next page is tentative. Changes may occur under certain conditions and depending on the progress the class and will be communicated by email or course announcements on eCollege. Unless otherwise noted, due dates are at 11:59 p.m. Central Standard Time (GMT -6:00). If you live or travel outside this time zone, adjust accordingly.

The final exam opens on a ***Sunday*** and closes on the **Wednesday** immediately thereafter**.** Plan **two 2-hour windows** to take Part 1 (theory) and Part 2 (practice) for the exam.

Tentative Course Calendar

			Content	
Week	Opens on	All work is due at 11:59 p.m.	Textbook chapter	SPSS component
1	6/6/2016	6/12/2016	• Ch 1 – review basic concepts • Overview of Chapter 3	• Data entry • Frequencies and Descriptives procedures
2	6/13/2016	6/19/2016	• Ch 1 – continued; *z*-Scores	• Select Cases procedure
3	6/20/2016	6/26/2016	• Ch 2 – population, samples; hypothesis testing	• Split File procedure • Graphing results in Microsoft Word
4	6/27/2016	7/3/2016	• Ch 2 – continued; using statistical models	• Setting up the SPSS database, using Select Cases and Split File procedures (review)
5	7/4/2016	7/10/2016	• Ch 8 – simple and multiple regression	• Running simple regressions • Running multiple regressions
6	7/11/2016	7/17/2016	• Ch 11 – one-way ANOVA	• Running one-way ANOVAs • Computing new variables SPSS
7	7/18/2016	7/24/2016	• Ch 13 – factorial ANOVA	• Running two-way ANOVAs with *post hoc* tests
8	7/25/2016	7/31/2016	• Ch 13 – *post hoc* tests and planned comparisons	• *Post hoc* tests and planned comparisons in SPSS
9[1]	8/1/2016	8/7/2016	• Ch 14 – Repeated measures	• Running repeated measures ANOVAs
10 Exam	8/7/2016	8/10/2016	Part 1 (theory) and Part 2 (application) of the comprehensive final examination. (More information will be provided under Week 10 on eCollege.	

ATTENTION: *Note that the dates for the comprehensive final examination differ from the open-close pattern during the semester. Students must plan accordingly. The last day of the semester follows immediately after the exam, so these dates are non-negotiable.*

Any substantial changes to the syllabus or course calendar will be communicated to the class through course announcements or by email.

Start- and end-of-semester dates are nonnegotiable; please plan your personal and student calendar accordingly. The instructor will be available during official school days.

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[1] All work, including assignments whose due dates were extended **with prior instructor's approval**, must be submitted by the close of Week 9, after which date uncompleted assignments will receive a score of zero.

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