EDCI 699 Statistics: Content, Process, Application  
COURSE SYLLABUS: SPRING 2013

Instructor: Dr. Katy Denson, Ph.D.  
Office Hours: Because I won’t have office hours, I will try to get to class about 30 minutes early and plan to stay a little after class if you have questions.  
Email Address: katydenson@centurylink.net  
Home Phone: 903-479-1147

COURSE INFORMATION

Materials – Textbooks:


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 II research tool. The emphasis in this course will be upon understanding statistical concepts and applying and interpreting tests of statistical inference. Content will include but not be limited to: data and data files, data screening, scaling, visual representations of data, descriptive statistics, correlation and simple regression, sampling distributions, and the assumptions associated with and the application of selected inferential statistical procedures (including t-tests, Chi-square, and one-way ANOVA). Computer software (SPSS) will be employed to assist in the analysis of data for this course. Students should have access to a computer, SPSS software, and the Internet. This access is available at the Metroplex Center and on the Commerce campus in certain computer labs.

Student Learning Outcomes:

- How interesting and fun statistics can be
- How and why statistics has developed as a tool of the scientific process
- How data are collected and how observations are quantified during the scientific and research process
- How observations are represented and stored in a data file
- The structure of a data file
- The uses and limitations of statistical software
- The scaling and coding of data
- Frequency distributions; how data can be represented visually, and the strengths and weaknesses of these representations
- Methods of appropriately describing the central tendencies of various distributions
- Variability and how to quantify variability
- The reasoning and assumptions underlying the inferential statistical process
- Probability, as it refers to inferential statistics
- Correlation and simple linear regression
The appropriate application and interpretation of various inferential statistical procedures, including the t-test, the Chi-square test, inferential tests applied to correlation, and basic ANOVA

- How to write a simple description of methodology and results from analyses
- Identifying weaknesses in methodology and results of research proposals

### COURSE REQUIREMENTS

**Grading:** The course grade will be determined by the following combination of criteria:

- **Homework:** Will be assigned each session in class. It may consist of problems from the text or running and interpreting some form of data. Completing or attempting the homework is very important to success in this class because it gives you an opportunity for practice and application. It is expected that mistakes will occur in practice; therefore, incorrect (not incomplete or partially complete) answers on homework problems will not result in a significant penalty. For that reason, do not assume that high homework grades represent readiness for success on exams. Deductions will be made for poorly organized and labeled assignments or incomplete responses. Homework will count 50% of the course grade. The lowest homework grade will be dropped from the calculation of the final grade.

- **Participation:** A discussion will occur each session at the beginning of the class and will cover homework, readings, and previous discussions. You should be prepared to answer questions regarding discussion material that will be posted on eCollege for that week. It will be helpful if you have completed the discussion questions before coming to class. Participation will count 10% of the course grade.

- **Mid-term Exam:** Will be cumulative to that point, open book and notes, and will count for 20% of the course grade.

- **Final Exam:** Will be cumulative, open book and notes, and will count for 20% of the course grade.

### TECHNOLOGY REQUIREMENTS

**Software:** SPSS Statistical software (version 17.0 or higher are recommended). You can purchase and download a copy from [http://www.onthehub.com/spss/](http://www.onthehub.com/spss/). You can also get a copy from [http://studentdiscounts.com](http://studentdiscounts.com) (can be installed on two computers). Be sure that you choose the **Statistics Standard Grad Pack**. You can get a 6 month or 12 month license. The software is also on the computers in the student lab at the Metroplex and various labs on the Commerce campus.

**Datasets:** If you have your own data from a pilot study or work or some other project, you may use that data for your homework assignments. There may be times that your data is unsuitable for the topic. If you do not have your own data or your data is unsuitable, datasets will be provided.

### ACCESS AND NAVIGATION

**Class Notes:** Because this is a web-enhanced course, class notes for each session will be available on eCollege. Feel free to print the notes to bring to class. That way you won't have to write as much. The notes will be in Doc Sharing under the appropriate week. SPSS presentations and datasets for the homework will also be there.
COMMUNICATION AND SUPPORT

Please feel free to contact me any time you have questions. I make a rule for myself, and I would like for you to follow it also, that if I spend an hour on something, and really give it my all, but I still can’t get it, it’s time to ask for help. Don’t be afraid to ask for help! Don’t just sit there getting frustrated!

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures:

Absences: If you are absent, make sure you have a buddy that will share class notes and collect handouts for you. If you can, let me know you are going to be absent. It is possible you could e-mail your homework, depending on the assignment. You will be expected to turn in homework upon your return, and you will be expected to take the quiz for the week you missed.

University Specific Procedures:

Withdrawing from/dropping EDCI 699: 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, or you will receive a failing grade. THE FINAL DAY TO DROP A CLASS IS April 30, AT 5 P.M. Plan to take care of this several days ahead of time, so that you will have the time required to get the forms signed, submitted, etc. However, YOU WILL NOT FEEL THE NEED TO DROP THIS CLASS!!

ADA Statement

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 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu
Student Disability Resources & Services

Student Conduct

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. (See Code of Student Conduct from Student Guide Handbook).
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<td>Introduction to SPSS</td>
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<td>January 24</td>
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