

Psy 612 Introductory Statistics Spring, 2013

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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.

Text: *Discovering Statistics Using SPSS* by Andy Field. Sage Publications (2009).

Software: SPSS Statistical software (version 17.0 or higher are recommended). You can purchase and download a copy from <http://www.onthehub.com/spss/>. You can also get a copy from <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.

Class Notes: Class notes for each session will be available on eCollege. Feel free to print the notes to use as you listen to the lecture. That way you won't have to write as much. The notes will be in Doc Sharing under the appropriate week. Presentations and datasets for the homework will also be there.

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.

Course Objectives: Develop and demonstrate an understanding of:

- 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

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

- Homework: Will be assigned each session in class. It will consist of running and interpreting some form of data analysis. 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 quizzes or exams. Deductions will be made for poorly organized and labeled assignments or incomplete responses. Homework will count 35% of the course grade.
- Quizzes: Will occur each session and will cover homework, readings, and previous discussions. You will most likely be asked to interpret and answer some questions regarding an SPSS printout. If you are interpreting a printout, you can use your books. Quizzes will count 25% of the course grade.
- Mid-term Exam: Will be cumulative to that point and will count for 20% of the course grade.
- Final Exam: Will be cumulative and will count for 20% of the course grade.

Withdrawing from/dropping Psy 612: 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!!

Additional Notes:

1) This syllabus and course description is provided as a general guideline to assist in your planning. Various circumstances may result in changes to the syllabus or course schedule, and such changes are at the instructor's discretion. A reasonable attempt will be made to communicate such changes to students in advance; however, it is the student's responsibility to keep up with such changes. If you miss a class, be sure to check with classmates or the instructor to determine whether any changes were made while you were away.

2) 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

Gege Library 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamuc.edu

Student Disability Resources & Services

3) 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).

4) Please keep track of the grades you receive throughout the semester. Please keep your scores for your records so that you will be able to monitor your progress. You will receive your grades for the assignments at the next class. You will have the opportunity to learn your homework and quiz grades in class, after turning in each.

5) NEVER fax anything to me without first making arrangements to do so with the instructor. NEVER mail (U.S. Mail or overnight/express services) anything to me without first making arrangements to do so. Turning in assignments and projects ON TIME and IN PERSON is the responsibility of the student. If alternative arrangements are made with me, then ALWAYS make a copy of the assignment so that you will have a backup if the assignment is not received.

6) Please limit e-mail to course related correspondence (no chain letters or joke lists, please). If you e-mail me and do not receive an e-mail response within 48 hours, most likely, your e-mail was not received. I will respond to all e-mails within a reasonable period of time. If you e-mail me and don't hear from me, please call me.

Calendar

Session	Topics	Readings	Due Dates
Week 1	Chapter 1 Introduction to SPSS	Field, Chapters 1 and 3	January 20
Week 2	Finish Chapter 1 Chapter 2	Field, Chapters 1 and 2	January 27
Week 3	Chapter 2	Field, Chapters 1, 2 and 3	February 3
Week 4	Chapter 2 Using the Normal Curve	Field, Chapter 2	February 10
Week 5	Chapter 2 Presenting Data	Field, Chapter 2	February 17
Week 6	Correlation	Field, Chapter 6	February 24
Week 7	Mid-term Exam		March 3
Week 8	Spring Break		
Week 9	Regression	Field, Chapter 7	March 17
Week 10	t-test for Independent Means	Field, Chapter 9	March 24
Week 11	t-test for Dependent Means	Field, Chapter 9	March 31
Week 12	ANOVA	Field, Chapter 10	April 7
Week 13	Post Hoc Tests	Field, Chapter 10	April 14
Week 14	Chi-square	Field, Chapter 18	April 21
Week 15	Review for final exam		April 28
Week 16	Final Exam		May 6

General SPSS Instructions

Your SPSS book, *SPSS Survival Manual*, will give you lots of good information about SPSS and how to run each type of analysis that we do. Let me point out a few things that will make your life simpler.

Beginning on page 28 of your SPSS book, there is a section called **Changing the SPSS 'Options'**. Read through the list of changes you can make. If there is anything there you feel you need to change, go ahead. You can always change it back if you don't like it.

Getting Rid of the Syntax

Here is a REALLY IMPORTANT change that is not in your book. Get to the Options screen, and now click on the Viewer tab. On the left hand side, under the list of icons, you will see a checkbox in front of the words: Display commands in the log. **Uncheck this**. This adds countless pages to output, so get rid of it.

Changing the Font

From this screen you can also change your font for your titles and output, etc. It's not necessary, but if there is a certain font you want, go for it.

Adding a Page Break

SPSS will print the output pretty much however it wants to do it. You can add page breaks wherever you need them to make your output look better. Here's how to do it: When you are looking at your output, there are two windows, the navigation window on the left (skinny column) and the output on the right (larger portion). In the navigation window, click (but **don't** double-click) on the place where you want the page break to go. At a title is a good place because SPSS is notorious for putting the title on one page and the table on the next. When you click, that section is now highlighted. Go to Insert at the top of the screen. A menu comes down. Click on **Page Break**. You see that if you don't like where the page break is, you can clear the page break in the same way. Now click on Output at the top of the navigation window. The whole output should now be highlighted. Then go to File, and select Print Preview. This will let you see if your page breaks are in the right place and if you need any others.

Shrinking a Table

As you are looking at your output in Print Preview, you may see that your table is split onto two pages. This is very irritating, but there is a cure! You can shrink a table a long table to fit on one page or you can shrink a wide table to fit on one page. But be careful!! If you have a really long table, SPSS will shrink it for you, but the print will be microscopic and you will not be able to read it. Here's how to do it:

From the Viewer screen, where you are looking at your output, double-click on the table to enter the editing mode. There should now be a little double-hatch line around it. Right click and choose Table Properties. Then select the Printing tab. Check **Rescale Wide Table to Fit Page** or **Rescale Long Table to Fit Page**. Then click on OK. You can go to Print Preview again to check your work.