EDP 384: Data Analysis Using SAS

Fall 2013 – Unique #: 10620 TTH 2:00 - 3:30 SZB 268

Instructor
Dr. Tiffany Whittaker
Mail: SZB 504
Phone: (512) 471-2749
Email: t.whittaker@austin.utexas.edu

Office Hours
Thursdays 9:30am – 11:00am
& by appointment
Office: SZB 538H

Required Course Material

- Cody, R. (2007). *Learning SAS by example: A programmer's guide*. Cary, NC: SAS Institute, Inc.
- Delwiche, L. D., & Slaughter, S. J. (2008). *The little SAS book: A primer (4th Ed.)*. Cary, NC: SAS Institute, Inc.
- Class notes, available on our Blackboard website in the *Course Documents* section. Class notes will be posted prior to the day on which the notes are discussed in class and may be retrieved on Blackboard: http://courses.utexas.edu.

Course Overview

The prerequisite for the course is Experimental Design and Statistical Inference or the equivalent. The course will provide an introduction to programming using SAS in the context of social and behavioral sciences. Students will learn how to use SAS to read, manipulate, and analyze data. We will cover more advanced topics with SAS, including macros, handling missing data, an introduction to simulating data, and an introduction to matrix language.

This course assumes no prior experience with SAS. Because the homework assignments and projects require the use of SAS, you will need to have access to this software package. The SAS package is available (though limited to 6 users at one time) on the PCs in the SZB 439 open area. Students interested in purchasing a version of this program for their personal use can purchase a one-year license through TXShop for $75: http://www.utexas.edu/its/products/sas/purchase.php. Another option to consider is the Stats Apps Server offered by the Division of Statistics and Scientific Computation which allows students and faculty access to a number of statistical and mathematical applications, including SAS, through a terminal server. It costs a minimum of $5 per year for storage if you have a Windows Services Account with the Austin Disk Services Option. Additional storage requires an additional fee. To set this up, go to: http://ssc.utexas.edu/software/stat-apps-server.

Course Assessment

1. *Homework:* There will be 10 homework assignments, each designed to give students a chance to apply and practice the concepts learned in class.
2. *Projects:* There will be 2 projects assigned to better integrate the concepts discussed in class.

These will be handed out and posted on our Blackboard website under the *Assignments* section. You should always keep a photocopy or electronic copy of your work for your own protection. You will have at least 1 week to complete each homework assignment and project. Students are on their honor to do the assignments completely independently; students found doing otherwise will be subject to the maximum university penalties.

Assignments are due as specified in class, and should be submitted on time for full earned credit. Late work will be accepted for full earned credit IF AND ONLY IF arrangements are made with me PRIOR TO DUE DATE. Otherwise, 5% of the points possible will be deducted for each weekday the assignment is late.

Please do not use email to ask about programming questions or errors. Instead, please email to schedule an appointment or come by during office hours with questions.

Course Grades

Your homework assignments and projects will be averaged according to the percentages (weights) shown below. Grades will be posted to our Blackboard website (under the *My Grades* section) – please periodically check for any keypunch errors. Final grades will then be assigned based on the scale below:

Assessment	*Weight*
Total homework points converted to a percentage	50%
Total project points converted to a percentage	50%

Overall Course Percent	*Grade*
93% - 100%	A
90% - 92%	A-
87% - 89%	B+
83% - 86%	B
80% - 82%	B-
77% - 79%	C+
73% - 76%	C
70% - 72%	C-
below 70%	F

Unless a computational error has been made, grades will not be changed after the end of the semester.

No Extra Credit: Your course grades are based only on the above information. There will be no extra-credit opportunities.

Grades of "Incomplete:" Unless the student can demonstrate that near catastrophic events have led to a case of extreme hardship, grades of "Incomplete" will not be given.

Attendance: Attendance will not be part of your grade. Students who attend class, of course, tend to be better prepared for assignments.

Accommodations For Persons With Disabilities

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. See the following website for more information:
http://www.utexas.edu/diversity/ddce/ssd/index.php

Helpful Websites

SAS Tutorial
http://ssc.utexas.edu/software/software-tutorials#SAS

UCLA Academic Technology Services-Resources to help you learn and use SAS
http://www.ats.ucla.edu/stat/sas/

SAS Support
http://support.sas.com/techsup/

SAS Listserv
http://listserv.uga.edu/archives/sas-l.html

Global Online SAS Community for SAS Users
http://www.sascommunity.org/wiki/Main_Page

SAS Consultant Special Interest Group Website
http://www.sconsig.com

Fall 2013 Tentative Schedule

Following are the topics to be covered and the readings that students are expected to be doing, whether or not the material is explicitly addressed in class. Also, the due dates of homework assignments/projects are listed. You will have 1 week to complete each assignment/project. Topics are subject to change, if we do not move as quickly as anticipated.

Lecture	Dates	Topic	Cody	Delwiche & Slaughter	HW/ Project Due
	8/29	Course Introduction			
1	9/3; 9/5	Introduction to SAS; A simple SAS program	Ch. 1	Ch. 1	
2	9/10; 9/12	The DATA step; data files; reading data; comments; labels; titles	Ch. 2, 3	Ch. 2 (pp. 32 -61) Ch. 3 (pp. 100-101)	HW 1
3	9/17; 9/19	Procedures; calculations; numeric functions	Ch. 11	Ch. 3 (pp. 78-85)	HW 2
4	9/24; 9/26	Continue PROCs; by and class statements; import and export options	Ch. 5, 6	Ch. 4 (pp. 104-125) Ch. 2 (pp. 62-67) Ch. 9 (pp. 262-275)	HW 3
5	10/1; 10/3	Conditional statements; descriptive stats, analysis options in PROCs; permanent data sets	Ch. 4, 7	Ch. 3 (pp. 86-91) Ch. 2 (pp. 68-75)	HW 4
6	10/8; 10/10	Continue PROCs and permanent data sets; working with multiple temporary datasets	Ch. 17		HW 5
7	10/15; 10/17	Permanent formats; arrays and loops; ODS **Project 1 handed out**	Ch. 8, 13, 18, 19	Ch. 3 (pp. 98-99) Ch. 4 (pp. 126-149) Ch. 5	HW 6
8	10/22; 10/24	Rearranging data; working with character data and dates	Ch. 9, 12	Ch. 3 (pp. 92-97)	Project 1
9	10/29; 10/31	Multiple data sets; merging data sets; duplicate data	Ch. 10	Ch. 6	
10	11/5; 11/7	Retain statement; data sets created from PROCs; rearranging data	Ch. 16, 23, 24	Ch. 3 (pp. 96-97)	HW 7
11	11/12; 11/14	Simple simulation examples; missing data			HW 8
12	11/19; 11/21	Macros and subroutines **Project 2 handed out**	Ch. 25	Ch. 7	HW 9
13	11/26	More macros; rearranging longitudinal data			HW 10
14	12/3; 12/5	SQL; SAS/IML **Project 2 Due**	Ch. 26	Appendix D (pp. 326-330)	Project 2