EDP 380C 8-Data Analysis Using SAS
Fall 2016 TTH 2:00 - 3:30 SZB 435

Instructor
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Office Hours
Wednesdays 2:30pm – 4:00pm
& by appointment
Office: SZB 538H

Teaching Assistant

Office Hours

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. (2012). *The little SAS book: A primer (5th Ed.)*. Cary, NC: SAS Institute, Inc.
- Class notes available on our Canvas website in the *Files* section. Class notes will be posted prior to the day on which the notes are discussed in class and may be retrieved on Canvas: http://canvas.utexas.edu/

Course Overview

The prerequisite for the course is Statistical Analysis for Experimental Data 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 arrays, loops, macros and subroutines, and working with character data and dates.

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. Students interested in purchasing a version of this program for their personal use can purchase a one-year license through TXShop for $85:
https://utdirect.utexas.edu/txshop/list.WBX?component=0&application_name=CCSOFTDS

Another option to consider is the Stat Apps Server offered by the Department of Statistics and Data Sciences 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:
https://stat.utexas.edu/consulting/stat-apps-server?mobile=false_desktop.

Recently, SAS University Edition is FREE, but it must be run using a virtual application. Go to the following website to download the virtualization software and SAS software:
http://www.sas.com/en_us/software/university-edition/download-software.html.

You may also access SPSS using the College's virtual desktop system. See the following for instructions: https://wikis.utexas.edu/display/coeito/About+CoE+Desktop

Course Assessment

1. *Homework:* There will be 9 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 Canvas 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 Canvas website (under the *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.

Academic Integrity

Following the University's honor code, students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work. All student work must be completed with the utmost honesty, which includes acknowledging the contributions of other sources to your scholastic efforts; avoiding plagiarism; and completing assignments and exams independently unless expressly authorized otherwise.

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

Religious Holidays
A student who misses an examination, work assignment, or other project due to the observance of a religious holy day will be given an opportunity to complete the work missed within a reasonable time after the absence, provided that he or she has properly notified the instructor. It is the policy of the University of Texas at Austin that the student must notify the instructor at least fourteen days prior to the date he or she will be absent to observe a religious holiday. For religious holidays that fall with the first two weeks of the semester, the notice should be given on the first day of the semester. The student will not be penalized for these excused absences, but the instructor may appropriately respond if the student fails to complete satisfactorily the missed assignment or examination within a reasonable time after the excused absence.

Campus Carry
Please see the campus carry website for more information.

Helpful Websites
SAS Tutorials
http://statistics.utexas.edu/images/SSC/Site/documents/SAS_GettingStarted_Tutorial.pdf
http://statistics.utexas.edu/images/SSC/Site/documents/SAS_InferentialStatistics_Tutorial.pdf

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 2016 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
	8/25	Course Introduction			
1	8/30; 9/1	Introduction to SAS ; A simple SAS program; The DATA step; data files; reading data; comments; labels; titles	Ch. 1, 2, 3	Ch. 1 Ch. 2 (pp. 32 -59) Ch. 3 (pp. 96-98)	
2	9/6; 9/8	Procedures; calculations; numeric functions	Ch. 11	Ch. 3 (pp. 74-81)	**HW 1**
3	9/13; 9/15	Continue PROCs; by and class statements; import and export options	Ch. 5, 6	Ch. 4 (pp. 100-123) Ch. 2 (pp. 60-63) Ch. 10	**HW 2**
4	9/20; 9/22	Conditional statements; descriptive stats, analysis options in PROCs; permanent data sets	Ch. 4, 7	Ch. 3 (pp. 82-87) Ch. 2 (pp. 64-72)	**HW 3**
5	9/27; 9/29	Continue PROCs and permanent data sets; working with multiple temporary datasets	Ch. 17	Ch. 9	**HW 4**
6	10/4; 10/6	Permanent formats; arrays and loops; ODS	Ch. 8, 13, 18, 19	Ch. 3 (pp. 94-95) Ch. 4 (pp. 124-148) Ch. 5	**HW 5**
7	10/11; 10/13	Debugging errors; cleaning data **Project 1 handed out**		Ch. 10	**HW 6**
8	10/18; 10/20	Rearranging data; working with character data and dates	Ch. 9, 12	Ch. 3 (pp. 88-93)	**Project 1**
9	10/25; 10/27	Multiple data sets; merging data sets; duplicate data	Ch. 10	Ch. 6	
10	11/1; 11/3	Retain statement; data sets created from PROCs; rearranging data	Ch. 16, 23, 24	Ch. 3 (pp. 92-93)	**HW 7**
11	11/8; 11/10	Debugging errors; simple simulation examples		Ch. 11	**HW 8**
12	11/15; 11/17	Macros and subroutines	Ch. 25	Ch. 7	**HW 9**
13	11/22	More macros; rearranging longitudinal data			
14	11/29; 12/1	Graphs in SAS **Project 2 handed out**	Ch. 20	Ch. 8	**Due 12/8**