STA5066, Data Management and Analysis with SAS
Fall 2019

Instructor: Dr. Justin Shows
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Office Hours: 2:00-3:00 TuWeTh

Course Materials: All course materials are online, see course Canvas page for link.

Certificate in *SAS Programming and Data Analysis:*

This course satisfies one of the four courses required for the SAS Programming and Data certificate jointly sponsored by FSU and the SAS Institute. **Students** interested in the program **must apply to the program before** the end of the semester in which **the second course in the program is taken**. In addition, a portfolio is required to be submitted in the last semester of program and a representative assignment and/or project from this course must be included. For more details see http://stat.fsu.edu/sas-certificate.

Important Dates: The due dates for all homework as well as the dates of the quizzes and midterms will be posted on Canvas under the assignments tab on the course Canvas page.

Textbook: There is no required text. The following books are good resources:

A Handbook of Statistical Analyses using SAS, Third Edition by Geoff Der, and Brian S. Everitt. CRC Press. (If you have some background with programming, this is an excellent book that covers more statistical material than the course, but much less on SAS programming.)

The Little SAS Book, A Primer, Fourth Edition, Lora Delwiche & Susan Slaughter. (If you have no background in programming, this is an extremely good book that walks through the process.)

SAS Certification Prep Guide: Base Programming for SAS 9, Third Edition

Step-by-Step Programming with base SAS software. (google it, **pdf is free**, ebook is <$3.50)

Accessing SAS Software: For this course we will use SAS On Demand for Academics. All programming will be done using a browser-based interface to the SAS cloud (Details will be provided in the first week's module).

Homework: All homework must be uploaded to Canvas. Except for the first assignment, assignments require you to submit **only the programs** that produce the output for the exercises in the assignment. **All homework materials must be assembled into a single file and this single file should be submitted** to the assignment posted on the course Canvas page**. Homework submission will be covered during the first week of classes.**

Collaborative writing or copying of homework programs is not allowed. Homework Assignments may be discussed with other students (including using social media) but each student is required to write and assemble the programs required for the homework assignment on their own.

Questions about homework grades should first be addressed to the instructor.

Homework Grading:

Late homework will be penalized 20% and no credit will be given for homework submitted more than one week after the due date.

Prerequisites: Previous background in statistics at least through linear regression or permission of the instructor.

Course Objectives: Upon completion of this course students will be able to manage data using the SAS system and will have completed the required course for graduate certification in Data Management and Analysis with SAS.

Course Description: This course provides an introduction to methods for managing and analyzing data using SAS. We will cover as many of the following topics as time permits:

1. Preliminaries
2. Introduction to SAS
3. SAS Programs
4. SAS Syntax
5. SAS Datasets
6. Reading SAS Datasets
7. Controlling Input and Output
8. Reading Raw Data
9. Manipulating Data
10. Editing Data
11. Processing Data Iteratively
12. Processing Text
13. Combining Datasets
14. Summary Reports

15. Enhancing Reports
16. Proc SQL
17. Macro Facility

Grading: The final course grade will be based on homework (50%), quizzes (35%), exam (15%). Letter grades are based on the following scale.

A	A-	B+	B	B-	C	D	F
95+	90-<95	85-<90	80-<85	75-<80	70-<75	<70	<60

Quizzes: There will be numerous quizzes. The quizzes will occur as topics are finished and will be announced on Blackboard. **The quizzes are short (5-15 minutes, timed), online, computer generated, and involve multiple choice, multiple answer, single answer, true/false etc. questions. The quizzes Each student must take the test without consulting anyone else.** The quizzes will be made available for at least two days and you make take them twice. **The best attempt is included in the grade book.**

Midterm

There will be one midterm exam during the last week of classes. **The exam is online and consists of multiple choice, multiple answer, true-false, etc. questions. The exam will be timed (75 minutes), made available for three days, and you make take it twice, but only the final attempt is included in the grade book.**

Academic Honor Code: All students are expected to uphold the Academic Honor Code. The Academic Honor System of the Florida State University is based on the premise that each student has the responsibility to:

- Uphold the highest standard of academic integrity in the student's own work.
- Refuse to tolerate violations of academic integrity in the University community.
- Foster a high sense of integrity and social responsibility on the part of the University community.

Students with Disabilities: Students with disabilities needing academic accommodations should do the following during the first week of class:

- Register with and provide documentation to the Student Disability Resource Center.
- Bring a letter to the instructor from SDRC indicating that you need academic accommodations.

For more information about services available to FSU students with disabilities, contact the Assistant Dean of Students: sdrc@admin.fsu.edu, Disabled Student Services, 08 Kellum Hall, Florida State University, Tallahassee, FL 32306-4066, (850)644-9655.

Some Online Resources:
Some online tutorials:
http://support.sas.com/training/tutorial/

A complete listing of online help for SAS 9.4:
http://support.sas.com/documentation/94/

SAS Analytics U. Numerous tutorials may be found on YouTube at:
https://www.youtube.com/playlist?list=PLVBcK_IpFVi9cajJtRel2uBLbtcLz-WIN

Numerous blogs covering different aspects of SAS are available at:
http://blogs.sas.com/content/

A good resource for many SAS topics is the UCLA web site:
http://www.ats.ucla.edu/stat/sas/

Documentation SAS formats and informats:
http://support.sas.com/documentation/cdl/en/leforinforref/64790/HTML/default/viewer.htm#titlepage.htm

Documentation, SAS Procedures:
http://support.sas.com/documentation/cdl/en/allprodsproc/67392/HTML/default/viewer.htm#titlepage.htm

Documentation, SAS Functions and Call Routines:
http://support.sas.com/documentation/cdl/en/lefunctionsref/67398/HTML/default/viewer.htm#titlepage.htm