STA5066, Data Management and Analysis with SAS

Instructor: Dr. Dan McGee (dmcgee@fsu.edu)
Grader: TBA (See Blackboard Page)
All contact Info on Blackboard (**Instructor Info tab**).

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

Important Dates: The due dates for all homework as well as the dates of the midterm exams will be posted on Blackboard under the assignments content area on the course Blackboard 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 lecture).
NOTE: Cloud maintenance is usually done on weekends so the cloud will sometimes be unavailable for part of the time on those weekends. So **do not wait until the last day** to do homework assignments. "The cloud was unavailable," is not an acceptable reason for late submission.

Homework: All homework must be uploaded to Blackboard. Unless otherwise noted, assignments require that you submit only the programs that produce the output included 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 Blackboard page.
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 be addressed to the course TA.

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. Reading Raw Data
8. Manipulating Data
9. The Data Step Additional Topics
10. Editing Data
11. Combining Datasets
12. Summary Reports
13. Enhancing Reports
14. Processing Data Iteratively
15. Converting And Creating Data With Functions
16. Introduction to the SAS Macro Facility
17. Introduction to Proc SQL
18. Statistical Graphics
19. Basic Statistics Using SAS

Grading: The final course grade will be based on homework (60%), and two midterm exams (20% each).

Tests: There will be two midterm exams. The first midterm will be scheduled after approximately half the semester is completed. The second midterm will be the last

week of classes and may cover any material presented in the class, reading, or homework. **The tests are computer generated, online, and involve multiple choice, single answer, etc.**

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:
A complete listing of online help for SAS 9.4 (Probably more than you want):
http://support.sas.com/documentation/94/

A new addition to SAS is SAS Analytics U. Numerous tutorials may be found on YouTube at:
https://www.youtube.com/playlist?list=PLVBcK_IpFVi9cajJtReI2uBLbtcLz-WIN

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

A good resource for many SAS topics is often 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