

STAT 541/J541 SYLLABUS  
Advanced SAS Programming  
Spring 2020

John M. Grego  
MW 11:15-12:30 Wardlaw 116  
Office Hrs: TTh 11-12:30

209D Leconte  
777-5070  
grego@stat.sc.edu

**Text** SAS<sup>®</sup> *Certification Prep Guide: Advanced Programming for SAS<sup>®</sup> 9, Fourth Edition*, by SAS Institute Inc.

**Disabilities** If you qualify for accommodations because of a disability, please submit a letter to me from the Student Disability Resource Center in a timely manner so that your needs can be addressed. The Student Disability Resource Center determines accommodations based on documented disabilities. Contact: 777-6142, LeConte 112A; sadrc@mailbox.sc.edu; ([sc.edu/about/offices\\_and\\_divisions/student\\_disability\\_resource\\_center/](http://sc.edu/about/offices_and_divisions/student_disability_resource_center/))

**Learning Outcomes** Students should be able to

- Perform SQL queries and data management using PROC SQL
- Interpret and write complex SAS macro programs
- Manage, combine, modify, and format data sets in SAS
- Write SAS code that runs efficiently
- Sort and query SAS data sets efficiently

**Grading** Grades will be weighted in the following way:

Exam 1 (in-class)	100 points
Exam 2 (in-class)	100 points
Homework/Classwork	100 points
Project	100 points
Final Exam (take-home)	100 points
Total	500 points

The project will be a coding, data management or macro-writing project that can be undertaken with a partner (or partners) and will consist of a project proposal (25%), computer work (25%), and written draft (50%). The project will enhance (or reinforce) several skills students will need in their future (or current) career: written communication, practical problem-solving and collaboration.

The grading scale will be:

90 to 100	A
85 to 89.9	B+
80 to 84.9	B
75 to 79.9	C+
70 to 74.9	C
65 to 69.9	D+
60 to 64.9	D
0 to 59.9	F

In accordance with standards outlined in the *Academic Bulletin*, graduate students will be assigned additional work. The class exercises and each of the three exams will have supplemental problems at the graduate level that graduate students must complete. This work will count toward graduate students' overall score for a given assignment.

**Blackboard and Course Webpage** All classwork should be uploaded by the student via Blackboard (the website includes instructions for properly uploading documents). I will generally use Blackboard to manage assignments, though almost all course material will be posted on the course website. The URL for the class web page is [people.stat.sc.edu/grego/courses/stat541](http://people.stat.sc.edu/grego/courses/stat541); the website is also available through Blackboard under Course Documents.

**Classwork and Homework** Students will complete exercises that emphasize active participation for each of the chapters of the text. The material will generally include demonstrations of code, as well as more typical homework problems.

In a typical class, I will review any class exercises, then lecture on new material while building in time for you to run the same code that I run in class. Given the need to accommodate "hands-on" time for much of the material in this course, many lectures will be shorter than the allotted 75-minute time period.

You are encouraged to discuss assigned exercises with your classmates and the instructor, but all such assignments must be written independently. Do not copy any part of another student's work or computer code. You are not allowed to discuss the take-home final exam with your classmates; you should consult me if you have any questions. Incidences of cheating and academic dishonesty will be punished to the full extent allowed under university regulations.

**Tests** When possible, students may take the two in-class tests in the classroom during the regularly-scheduled class time. Otherwise, students may work with the Distributed Learning Testing Coordinator (Shannon Carson; [scarson@mailbox.sc.edu](mailto:scarson@mailbox.sc.edu)) to arrange a time to take the test. Distance students should identify a proctor who will communicate with the Distributed Learning Testing Coordinator to arrange test administration.

**Course Interaction** The professor will be available in person in their office, by phone, and by e-mail. Students may also communicate with one another in person in the studio, by e-mail, or other social media. A weekly Discussion Board will be available in Blackboard to encourage student-student and student-instructor interaction.

**Course Delivery Technology** Course viewing information is available on Blackboard. The course can be watched live via Breeze/Adobe Connect (enter as a guest), or streamed or downloaded within 24 hours. Instructions for login will be posted as an Announcement

in Blackboard. Links to the lecture will automatically be posted to Blackboard—look for Course Lectures Playlist in the upper left hand frame of the home page for the course.

I will use the computer extensively in class for demonstrations and introduction of computer software; all computing done by me in class will also be posted on the webpage. Most students will use SAS Studio, an online version of SAS that is available for free through SAS OnDemand; the course enrollment link is included in Blackboard under Course Documents. The link to another free version of SAS Software, SAS University Edition, is available in Blackboard under Course Documents as well. SAS is available on the PCs in Gambrell's basement (use your Blackboard login userid and password), as well as 5 computers (Computers 1-3) in the Cooper Technology Lounge on Level 5 of Thomas Cooper Library. But students may consider copies for laptop use, since limited access to labs can affect course success. SAS licenses are available for student use for \$100 from USC (accessed via the Purchase Computer Software tab in Self Service Carolina); the licenses are in effect from 7/1/2019 to 6/30/2020.

## Course Schedule

Date	Assignment/Topic	Graded Work
1/13	Chapter 1	
1/15	Chapter 2	
1/20	No class (MLK service day)	
1/22	Chapter 3	CE 1
1/27	Chapter 4	CE 2
1/29		CE 3
2/3	Chapters 5-6	
2/5		CE 4
2/10	Ch 7; Ch 3 supplement	CE 5
2/12		
2/17		Exam 1
2/19	Ch 8; Ch 2 supplement; SAS Resources	CE 6
2/24	Chapter 9	CE 7
2/26	Chapter 10	
3/2	Chapter 11	CE 8
3/4		
3/9	Spring Break	
3/11	Spring Break	
3/16	Chapters 12-13	
3/18		CE 9
3/23	Chapters 14-15	
3/25		CE 10
3/30	Chapter 16	CE 11, Proposal Due
4/1		
4/6	Chapters 17-18	Exam 2
4/8		
4/13	Chapters 19-20	CE 12
4/15		
4/20	Chapters 21-24	CE 13, Project Draft Due
4/22		
4/27		

The final exam will be due Monday, May 4 at 5 PM