STA 3024, SAS for Data and Statistical Analyses
Spring 2016 Course Syllabus

Instructor: Dr. Steven Ramsier
Office: 106A OSB
Office hours: 10:00 to 11:00 AM Wednesday and 12:00 Noon to 1:00 PM Thursdays
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Grader: Mark Orndorff
Grader E-mail: morndorff@stat.fsu.edu

Class Meeting Times: 2:00 – 3:15 PM TuTh in 215 HCB

Exam Dates: Feb. 4 (Thursday)**, Mar. 1** (Tuesday)**, and Apr. 12** (Tuesday)**.**
No Final Exam

Optional Text: Elliott, R.J. (2010), *Learning SAS in the Computer Lab*, Third Edition, Brooks/Cole.
   (ISBN 0-495-55968-7).
   Other references will be provided during the course of the semester.
Internet: Blackboard access.
Prerequisite: Introductory statistics course at or above the 2000 level or consent of the instructor.
Software: Access to *SAS University Edition* (Recommended), *SAS Studio* (Online, OnDemand version), or
SAS 9.3 (Windows version available on campus computer labs but differs slightly from the other two versions
which will be used in class).
Strongly Recommended: A laptop computer with internet access to bring to class (tablets work with limits).

Course Description: This course will introduce the student to the SAS programming language in a lab-based
format. The objective is for the student to develop programming and statistical computing skills to address
data management and analysis issues using SAS. The course will also provide a survey of some of the most
common data analysis tools in use today and provide decision-making strategies in selecting the appropriate
methods for extracting information from data.

**Course Objectives:** Students who complete this course will be able to:
* Manipulate data sets including as inputting raw data from external files.
* Create data subsets.
* Implement if…then…else structures, and loops.
* Write SAS numeric, character, and probability functions.
* Produce descriptive statistics with graphics.
* Conduct basic statistical estimation and testing using SAS.
* Employ statistical modeling on both qualitative and quantitative data in the SAS environment.

Grade Composition (1000 Points Total):

Starter Assignment	20
6 Take-Home Assignments (80 pts. each)	480
3 In-Class Exams (100 pts. each)	300
Project	200
Total	1000

Grade Assignments for Course Points Earned (_No Rounding_):

A	930-1000	B-	800-829	D+	670-699
A-	900- 929	C+	770-799	D	630-669
B+	870-899	C	730-769	D-	600-629
B	830-869	C-	700-729	F	0-599
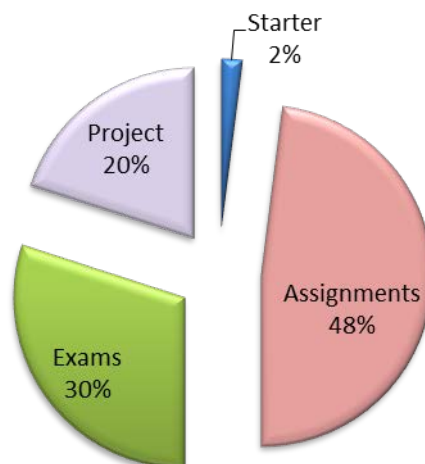
Assignments and Responsibilities

Take-Home Assignments
The assignments will consist of problems that will be solved using SAS. There will be six (6) assignments given and all assignments are to be turned in on the Thursday that they are **due no later than 11:59 PM.** Assignment documents are uploaded via Blackboard and **no emailed assignments** will be **accepted**.

Late, unexcused assignments will be penalized as follows: turned in by 11:59 PM the following Friday – 90% of grade, turned in by 11:59 PM the Saturday after it was due – 75% of grade, thereafter – no credit. Assignments are graded on several components: Correct functions and/or procedures, correct data format, properly executable, correct results, interpretations, and adequate commenting.

You are free to discuss the assignment with any of your classmates; however, your programming, interpretation, and write-up must be done independently. That is, all code, output, and explanations must be generated by you. Your interpretations must be in your own words. A note on "working together:" As mentioned above, discussing problems and potential solutions among your classmates; however, **documents** produced including SAS code, SAS output, interpretations, written answers **may not be shared among classmates**. Providing a classmate assignment documents or accepting such documents from a classmate is considered a violation of the academic honor code and will be dealt with accordingly.

Assignments will be submitted electronically through Blackboard.

> **Warning about Using SAS Studio Online:** Access to SAS Studio is done through a web browser and is mostly reliable. However, the program is run on SAS's servers and SAS allocates the resources in order for the program to run smoothly. In the past students have experienced outages and, although these are generally temporary, these can cause students to take longer to complete tasks than would normally be anticipated. Around assignment due dates and times can be especially problematic as several people are attempting to get on the server at once and therefore experience more outages. Understanding this, **a temporary server outage is not a valid excuse to turning in an assignment late**. Good advice is to allow yourself plenty of time to complete your assignments. Please start assignments early to avoid the frustration that a server outage can cause. Trying to complete an assignment at the last minute is a formula for creating extreme stress and potentially adversely affecting your grade.

Exams
Three 75-minute exams will be given during the course of the semester. The format uses multiple choice questions. The exams will not require a computer and will ask questions on SAS coding, programming concepts, and interpretation of output. The exams are closed book; however, one 8.5 x 11 in. sheet of notes, front and back (must be self-produced), is permitted on each exam.

No final will be given and exams will only directly cover material presented following the previous exam. **There are generally no make-up exams for unexcused absences.** If you miss an exam, the absence must be excused. Excused absences are granted for emergencies such as a death in the family or treatment of an injury or illness at a medical facility. **Documentation is required.** It is up to the discretion of the instructor as to how to handle excused absences from exams. For exam conflicts resulting from university organizational events, weddings, work related trips, etc. that are known in advance, the instructor will handle them on an individual basis (usually provisions for taking the exam early).

Project
Students will work in groups of three or four on a project. For program evaluation purposes, we ask that Statistics majors form their own groups wherever possible. Groups will account for each student's contribution and will be evaluated individually. The project consists of finding a data set of interest, determining and implementing appropriate graphical methods for presenting the data, using appropriate statistical tools to analyze the data, generating appropriate SAS code, and interpreting the results. The data

set, to the best of your knowledge, should not have been previously analyzed in the way you plan to use it for your project. There will be short written reports required and a brief verbal presentation to the class.

Tentative Course Outline:

Week of	Topics	Exams	Assignments/Project
Jan. 7	Introduction		
Jan. 12 & 14	Reading Data, Program Management		Starter Assignment due 1/14
Jan. 19 & 21	More Reading Data		Assignment #1 due 1/21
Jan. 26 & 28	Data Management, Dates, and Functions		Assignment #2 due 1/28
Feb. 2 & 4	Functions, Descriptive Stats, **Exam 1**	**Feb. 4**	
Feb. 9 & 11	Charting Categorical Data		**Project A due 2/11**
Feb. 16 & 18	Basic Stats, Iterative Methods		Assignment #3 due 2/18
Feb. 23 & 25	Simulations, Statistic al Graphics		Assignment #4 due 2/25
Mar. 1 & 3	**Exam 2**, Project B Set-up	**Mar. 1**	
Mar. 8 & 10	*Spring Break*		
Mar. 15 & 17	More Graphics, Project B Pres.		**Project B due 3/17,**
Mar. 22 & 24	Project B Presentations		**3/22, or 3/24**
Mar. 29 & 31	Hypothesis Testing, ANOVA, Correlation		Assignment #5 due 3/31
Apr. 5 & 7	Regression, Chi-Square		Assignment #6 due 4/7
Apr. 12 & 14	**Exam 3**, Project C Set-up	**Apr. 12**	
Apr. 19 & 21	Project Time, Project Materials Uploaded		**Project C Due 4/21**

Computer Competency for Statistics Majors: In order to fulfill FSU's Computer Competency Requirement, the student must earn a "C-" or better in the course, and in order to receive a "C-" or better in the course, the student must earn at least a "C-" on the computer competency component of the course. If the student does not earn a "C-" or better on the computer competency component of the course, the student will not earn an overall grade of "C-" or better in the course, no matter how well the student performs in the remaining portion of the course.

University Attendance Policy: Excused absences include documented illness, deaths in the family and other documented crises, call to active military duty or jury duty, religious holy days, and official University activities. These absences will be accommodated in a way that does not arbitrarily penalize students who have a valid excuse. Consideration will also be given to students whose dependent children experience serious illness.

Academic Honor System: The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the Academic Honor Policy and for living up to their pledge to ". . . be honest and truthful and . . . [to] strive for personal and institutional integrity at Florida State University." (Florida State University Academic Honor Policy, found at http://dof.fsu.edu/honorpolicy.htm.)

Students with Disabilities: ADA Policy: Students with disabilities needing academic accommodation should; (1) register with and provide documentation to the Student Disability Resource Center; (2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center, Dean of Students Department
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice), (850) 644-8504 (TDD)
SDRC@admin.fsu.edu

Syllabus Change Policy: This syllabus is a guide for the course and is subject to change with advance notice.