STA 3024, SAS for Data and Statistical Analyses
Spring 2015 Course Syllabus

Instructor: Dr. Steven Ramsier
Office: 106A OSB
Office hours: 12:30 to 1:30 PM on Wednesdays and 11:00 AM to 12:00 Noon on Thursdays.
E-mail: ramsier@stat.fsu.edu
Phone: 644-3218 (Main Statistics office phone – currently no direct line to the instructor)
Fax: 644-5271
Class URL: http://campus.fsu.edu

Grader: Serin Zhang
Grader E-mail: srzhang@stat.fsu.edu

Class Meeting Times: 11:00 AM - 12:15 PM MW in 216 HCB
Help Sessions (Optional): 2:00 PM - 3:15 PM in 219 HCB (TA: Mike Ahn)

No Final Exam

(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 Studio SAS or University Edition; SAS 9.4 (Windows Version) may also be used and is 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):
Week 2 Starter Assignment 20
6 Take-Home Assignments (80 pts. each) 480
5 In-Class Quizzes (60 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 and commenting must be done independently. That is, all code, output, and interpretations must be generated by you. Your interpretations must be in your own words. 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.

Quizzes
Five 20-minute quizzes are given during the course of the semester. Your lowest score will be replaced by the median of the other four quiz scores. The quizzes will not require a computer and will present questions on SAS coding, programming concepts, and interpretation of output. The quizzes are open book and notes; however, all communication devices must be deactivated during the quiz. Anyone communicating with any other person by any means will be considered in violation of the academic honor system.

Graded quizzes are not handed back to students. Quizzes are kept on file in the instructor’s office. A student is welcomed to review their graded quiz during office hours.

There are generally no make-up quizzes. If you miss a quiz, that will be considered your lowest score and one out of the six scores that will be dropped. In the event that two or more quizzes are missed, an excused absence (e.g., a death in the family, treatment of an injury, or illness at a medical facility) must be granted by the instructor. Documentation is required. It is up to the discretion of the instructor as to how to handle multiple excused absences from quizzes. For quiz conflicts resulting from university organizational events, weddings, work related trips, etc., known in advance; the instructor will handle them on an individual basis.

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:

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<tr>
<th>Week of</th>
<th>Topics</th>
<th>Quizzes</th>
<th>Assignments/Project</th>
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<tr>
<td>Jan 7</td>
<td>Introduction</td>
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<td>Starter Assignment due 1/15</td>
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<tr>
<td>Jan 12 &amp; 14</td>
<td>Reading Data, Program Management*</td>
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<td>Assignment #1 due 1/29</td>
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<td>Jan 19 &amp; 21</td>
<td>MLK Day, More Reading Data</td>
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<td>Assignment #2 due 2/5</td>
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<tr>
<td>Jan 26 &amp; 28</td>
<td>Data Management, Dates, and Functions</td>
<td>Q1: 1/26</td>
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<tr>
<td>Feb 2 &amp; 4</td>
<td>More on Functions, Descriptive Stats</td>
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<tr>
<td>Feb 9 &amp; 11</td>
<td>Charting Categorical Data, Project Setup</td>
<td>Q2: 2/11</td>
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<tr>
<td>Feb 16 &amp; 18</td>
<td>Basic Stats, Iterative Methods</td>
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<td>Project A due 2/19</td>
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<td>Feb 23 &amp; 25</td>
<td>Simulations, Arrays, Graphics</td>
<td>Q3: 2/23</td>
<td>Assignment #3 due 2/26</td>
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<tr>
<td>Mar 2 &amp; 4</td>
<td>Statistical Graphics</td>
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<td>Assignment #4 due 3/5</td>
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<td>Mar 9 &amp; 11</td>
<td>Spring Break</td>
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<td>Mar 23 &amp; 25</td>
<td>Hypothesis Testing, ANOVA</td>
<td>Q4: 3/23</td>
<td>Assignment #5 due 4/2</td>
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<td>Mar 30 &amp; Apr 1</td>
<td>Correlation, Regression</td>
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<td>Assignment #6 due 4/9</td>
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<td>Apr 6 &amp; 8</td>
<td>More Regression, Project C Setup</td>
<td>Q5: 4/8</td>
<td>Project C Presentations on 4/15</td>
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<td>Apr 13 &amp; 15</td>
<td>Project Time, Project C Presentations</td>
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<td>Project C Pres. on 4/20 &amp; 4/22</td>
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<td>Apr 20 &amp; 22</td>
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<td>Apr 20 &amp; 22</td>
<td>Project Materials Uploaded</td>
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<td>Project Materials due 4/22</td>
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*Video lectures with TA assistance in class

### 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](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.