STA 3024 SAS for Data and Statistical Analyses
Fall 2020 Course Syllabus

Instructor: Dr. Steven Ramsier
Office: 102B OSB *(Not anticipated to be in the office frequently this semester.)*
Virtual Office Hours (via Zoom): 12:00 Noon to 1:00 PM on Tuesdays
11:30 AM to 12:30 PM 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

TAs/Graders: Noel Crawford **E-mail:** pnc10@my.fsu.edu
Weekly Virtual Help Hour: Thursdays 3-4 pm
Grading: Assignments 1, 3, 5, Team Agreement, Project B

Michael Zamani **E-mail:** mkz16@my.fsu.edu
Weekly Virtual Help Hour: Wednesdays 2-3 pm
Grading: Starter, Assignments 2, 4, 6, Project A

Class Meeting Times: The class involves asynchronous delivery. You may work on a schedule of your choosing that permits you to meet weekly due dates/times and allows you to work with two or three other students during some weeks in order to complete a project.

Final Period: ***No Final Exam***

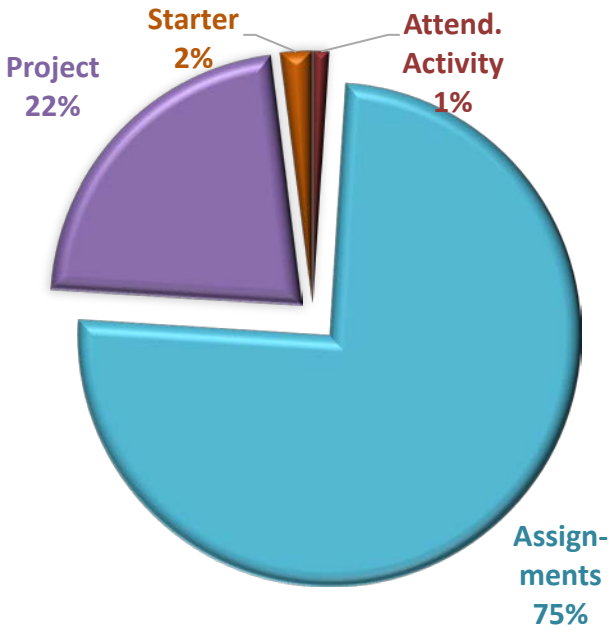
Optional Text: Elliott, R.J. (2010), *Learning SAS in the Computer Lab*, Third Edition, Brooks/Cole. (ISBN 0-495-55968-7).
Other references will be provided during the course of the semester.
Internet: Online access required for SAS programs and learning management system
Prerequisite: Introductory statistics course at or above the 2000 level or consent of the instructor.
Software: Access to *SAS Studio* (online, on-demand version), *SAS University Edition* (local computer version), or *SAS 9.4* (Windows version available on campus computer labs but differs slightly from the other two versions which will be used in class).
Strongly Recommended: A computer with a large enough screen to have both Canvas and SAS Studio windows opened at the same time.

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.

Grades



Grade Composition (1000 Points Total):

First Day Attendance Activity	10
Starter Assignment	20
6 Assignments (125 pts. each)	750
Project	220
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

First Day Attendance Activity
You will receive a small number of points for successfully recording your attendance during the first week of class. The activity will involve postings to a discussion board among a group of your classmates. The postings will be due by the Wednesday of the first week of classes. Any student on the class roster not posting by the due date and time will be dropped from the class. Students adding the course after the Wednesday deadline may still complete the activity by that Friday of the first week and still receive the points.

Assignments
The assignments will consist of problems that will be solved using SAS. There will be one smaller (starter) assignment and six (6) more extensive assignments given. All assignments are to be turned in on the Friday that they are **due no later than 5:00 PM.** Assignment documents are uploaded via Canvas and **no emailed assignments** will be **accepted**.

Late, unexcused assignments will be penalized as follows: turned in by 5:00 PM the following Saturday (or 24 hours past time due) – 90% of grade, turned in by 5:00 PM the following Sunday (or 48 hours past time 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. Assignments will be submitted electronically through Canvas.

You are free to discuss the assignment with any of your classmates; however, the activity of students "working together" is not permitted. 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. Sharing documents and using any portion of another student's (past or present) work, representing it as your own, will result in a score of zero on the assignment.

> **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.

Project
Students will work in groups of three or four on a project. For program evaluation purposes, we will try to place statistics majors in groups with other statistics majors wherever possible. Groups will account for each student's contribution and students not giving a fair share of effort can be penalized 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 video presentation recorded. Late projects will have the same penalty imposed as with assignments. If some emergency prevents you from turning project materials in on time, written documentation must be submitted to the instructor for consideration.

Grade Complaints:
Address your work in question first to the TA responsible for grading it (may be a different person for assignments and projects). Provide **a clear, brief, written explanation** of why you think you deserve additional credit. The written statement must be provided **within one week** after the work is graded and available to the class in general. All grade disputes must be resolved by the last day of normal classes (before finals week).

Tentative Course Outline:

Week of	**Topics**	**Assignments/Project**
Aug. 24	Introduction, Reading Data	First Day Attend. due 8/26
Aug. 31	Modified Read, Calculations, Ext. Data	Starter Assignment due 9/4
Sep. 7	Conditional Proc., Special Data Types	Assignment #1 due 9/11
Sep. 14	Combining Data, SQL for Data Mgt.	Assignment #2 due 9/18
Sep. 21	Dates, Functions, Project A Setup	Team Agreement due 9/25
Sep. 28	Norm. Dist., Basic Stats	**Project A due 10/2**
Oct. 5	Charting, Iterative Methods	
Oct. 12	Simulations, Arrays, X vs. Y Plots	Assignment #3 due 10/16
Oct. 19	Series Plots, Scatterplot Enhancements	Assignment #4 due 10/23
Oct. 26	Stat. Graphics, Macros, Project B Setup	
Nov. 2	Hypothesis Testing, T-Tests	**Project B due 11/6**
Nov. 9	ANOVA, Correlation, Regression	Assignment #5 due 11/13
Nov. 16	More Regression, Project C Setup	Assignment #6 due 11/20
Nov. 23	Multiple Regression, Thanksgiving	
Nov. 30	Project C Prep and Presentations	**Project C Video due 12/4**
Dec. 4	Project Materials Uploaded	**Project C Upload due 12/4**

Certificate in *SAS Programming and Data Analysis:*
This is the core course that is required (plus three elective courses) 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.

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.

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://fda.fsu.edu/Academics/Academic-Honor-Policy.)

Americans with Disabilities Act:
Students with disabilities needing academic accommodation should:
(1) register with and provide documentation to the Student Disability Resource Center; and
(2) bring a letter to the instructor indicating the need for accommodation and what type.

Please note that instructors are not allowed to provide classroom accommodation to a student until appropriate verification from the Student Disability Resource Center has been provided.

This syllabus and other class materials are available in alternative format upon request.

For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
874 Traditions Way
108 Student Services Building
Florida State University
Tallahassee, FL 32306-4167
(850) 644-9566 (voice)
(850) 644-8504 (TDD)
sdrc@admin.fsu.edu
http://www.disabilitycenter.fsu.edu/

Syllabus Change Policy:
Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.