Statistics 5740
Introduction to SAS software
Autumn 2013 Syllabus

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Course Description
The basic statistical procedures covered will be illustrated using SAS. The intent of the course is to cover some of the SAS statistical methods that graduate students from outside the Statistics Department require for their own research.

Prerequisites
Stat 5302 (530) or equiv, or permission of instructor.

Textbook
The Little SAS Book 5th edition by Lora D. Delwiche and Susan J. Slaughter

Homework
There will be many homework projects throughout the semester that will test your programming ability across a wide variety of topics in the SAS system.

Grading
The final course grade will be based on:
Homework ................................................. 70%
Final Project (due Monday Dec. 9th) .................... 30%

Academic Misconduct
Please help maintain an academic environment of mutual respect and fair treatment. You are expected to produce original and independent work on the exams. Although students are often encouraged to work together on homework assignments, all students must submit their own work in their own words. It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term academic misconduct includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). Academic misconduct will not be tolerated and will be dealt with procedurally in accordance with university policy, which can be found at http://oaa.osu.edu/coam.html. The Code of Student Conduct is available at http://studentaffairs.osu.edu/csc/.
Communication Devices
Cell phones, PDAs and other communication devices must be either turned off or put on vibrate during class. Please refrain from texting during class as a courtesy to those sitting around you. All electronic devices other than a calculator must be shut off and put away during examinations.

Addressing Issues of Differing Abilities
All students who feel they may need accommodations based on the impact of a disability should contact the instructor privately to discuss their specific needs. Students with documented disabilities must also contact the Office of Disability Services (ODS) in 150 Pomerene Hall (phone: 292-3307) to coordinate reasonable accommodations for the course. ODS forms must be given to the instructor as early in the quarter as possible.

Drop Date
The last day to drop the course without a ‘W’ appearing on your record is Friday, September 13.

Receiving an ‘I’ for the Course
You cannot receive an incomplete for the course unless 65% of the work in the course has been completed. Extenuating circumstances will be handled on a case-by-case basis.

Course Outline
- Getting Started Using SAS (Chapter 1)
  - Terminology and Basic Syntax
  - SAS windowing environment
  - Types of data

- Getting Data into SAS I (Chapter 2, Sections 2.1-2.9)
  - Entering Data Directly
  - Import Wizard for common formats
  - Reading raw data (list and column input)

- Sorting, Printing, and Summarizing Data (Chapter 4)
  - Writing reports with PROC REPORT and PROC PRINT
  - Standard and custom formats for data
  - Tabular reports with PROC TABULATE
  - Summarizing data with PROC MEANS and PROC FREQ

- Working with Data (Chapter 3)
  - Creating and redefining variables
  - SAS functions
  - Conditional Execution
  - Array processing
  - Transposing data sets with PROC TRANSPOSE
• **Getting Data into SAS II (Chapter 2, Sections 2.10-2.22)**
  - Complex Raw Data
  - Temporary and permanent SAS data sets
  - Reading Excel and Access files
  - Exporting data
  - PROC CONTENTS and PROC DATASETS

• **SAS/GRAPH Basics (Additional Reading)**
  - Bar and Pie charts
  - Scatterplots
  - Working with Maps
  - Annotate data sets

• **Modifying and Combining SAS datasets (Chapter 6)**
  - The SET statement
  - Merging datasets
  - Outputting multiple data sets

• **Working with Character Data and Dates**
  - Character Data Principles
  - Character expressions
  - Character handling functions
  - Date Value concepts
  - Formatting dates and functions for date calculations

• **Basic Statistical Procedures (Chapter 8)**
  - Single variable with PROC UNIVARIATE
  - One and two sample problems
  - Categorical data with PROC FREQ

• **Basics of the Macro Facility (Chapter 7)**
  - Macro variables
  - Macro programs
  - Adding parameters to macro programs

• **Output Delivery System (Chapter 5)**
  - Output delivery system concepts
  - HTML, RTF, and printer output
  - Output objects, restricting output, and output datasets