

Statistics 5740
Introduction to SAS Software
Autumn Semester 2016

Class Meetings: Scotts Lab East (SO), Room 40, Tu Th, 12:40pm – 1:35pm

Instructor: Nicole Kelbick, PhD

Contact: (614)-292-0293, kelbick.1@osu.edu

Office Hours: 435 Cockins Hall (CH), Tu Th 8:30am – 10:30am, 2:00pm-3:00pm

Grader:

Name	Jianhao Zhang
Email	Zhang.4487@osu.edu
Office	TBA
Hours	TBA

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

Enrollment: ADD and SECTION CHANGES will be processed, contingent upon availability, starting at 7am on Monday August, 29th through Tuesday, August 30th. This will be on a first-come first-served basis in 405A Cockins Hall. **The instructor does not sign any Add or Section Change forms.** Check out www.stat.osu.edu/node/1643 for more detailed information regarding Add and Section Changes.

Closed Section Strategy: If the section you wish to take is closed, consider enrolling into another section that is still open. It is much easier to do a section change (and there are no late add fees either) if a space opens up. It is more complicated to do a late enrollment and the chance of succeeding is not great.

Text: The Little SAS Book (5th edition) by Lora D. Delwiche and Susan J. Slaughter is required.

Website: Homework assignments and other relevant material will be posted on <http://www.carmen.osu.edu>. Please check the website regularly.

Software: Download SAS onto your computer via <https://ocio.osu.edu/software>. SAS is installed on the computers in the labs at Thompson Library and Science and Engineering Library. Installing SAS onto Macs requires extra steps. You may need to get technical support to help you.

Course Description: To perform basic statistical procedures 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.

Important Dates:

Date	Reason
September 5	Labor Day (no classes)
September 16	Last day to drop without receiving a "W" on student record.
October 13-14	Autumn break (no classes)
November 11	Veteran's Day (no classes)
November 23, 24, 25	Thanksgiving break (no classes)
December 7	Last day of class; FINAL PROJECT IS DUE

Grading: Your grade will be based on homework assignments and a final project which will be determined according to the following weighting scale:

Homework	70%
Final Project (Due Weds, Dec. 7 th)	30%
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	100%

Homework: There will be at most eight (8) homework assignments throughout the semester that will test your programming ability across a wide variety of topics in the SAS system. Homework problems will be posted on Carmen. No late homework will be accepted.

Final Project: As a "capstone" experience, students will analyze a provided data set using the methods presented in the course as a final project. Additional information regarding this project will be given in class. **It is due Wednesday, December 7, 2016.**

Office Hours: While questions are welcome and expected during class sessions, all students should feel free to visit office hours for individual assistance with the course material. Questions regarding grades or scores will only be answered during office hours. Students unable to attend office hours may easily make an appointment to see the instructor at another time.

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.

Academic Misconduct: Although you are encouraged to work together, you are expected to produce independent work for homework and/or exams. Academic misconduct for any sort will not be tolerated. If students are caught indulging in dishonest activities during the quizzes or the exams, they will be reported immediately, without any exception. Please review OSU's policies at <http://studentaffairs.osu.edu/csc/>.

Special Accommodation: Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Office of Disability Services (ODS) in Room 150 of Pomerene Hall, (614) 292-3307. Please contact the ODS as early in the semester as possible. You can also contact the instructor privately to discuss your specific needs.

Disclaimer: The schedule and procedures contained in this syllabus should be taken as a fairly reliable guide for the course content and policies. They are, however, subject to change at the instructor's discretion. Any changes will be announced in class as well as posted on CARMEN.

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 datasets with PROC TRANSPOSE

- **Getting Data into SAS II (Chapter 2, Sections 2.10 – 2.22)**
 - Complex raw data
 - Temporary and permanent SAS datasets
 - Reading Excel and Access files
 - Exporting data
 - PROC CONTENTS and PROC DATASETS

- **SAS/GRAPH Basics**
 - Bar and Pie charts
 - Scatterplots
 - Working with maps
 - Annotate datasets

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

- **Working with Character Data and Dates**
 - Character Data Principle
 - 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