



STAT 342-1

Introduction to Statistical Computing and Exploratory Data Analysis-SAS

Spring 2014

Day Course

(Jan 6-Feb 21)

Students requiring accommodations as a result of disability must contact the Centre for Students with Disabilities 778-782-3112 or csdo@sfu.ca

Instructor: [Dr. Carl Schwarz](#)

Prerequisite:

STAT 285 or STAT 302 or STAT 305 or equivalent. Students with credit for STAT 340-3 may not take STAT 342-1 for further credit.

Textbook:

SAS and R, Data Management, Statistical Analysis, and Graphics, by Ken Kleinman and Nicholas J. Horton, Publisher: CRC Press

Calendar Description:

Introduces the SAS statistical package. Data management; reading, editing and storing statistical data; data exploration and representation; summarizing data with tables, graphs and other statistical tools; and data simulation. **Quantitative**

Outline:

SAS component

1. What is SAS?
 - Downloading and installing
 - Overview of the system
2. Data management in SAS
 - a. Data input and structures
 - DATA step
 - Reading specially formatted files
 - Date/time/character formats and manipulations
 - Derived variables
 - Exporting
 - b. Data access: from database systems using query languages
 - c. Merging and reshaping data
 - sorting/subsetting (set/if/where statements)/ merging/transposing
 - processing using DO LOOPS and SAS arrays
 - modify variable attributes
3. Data exploration and representation in SAS
 - basic procs (print, plot, tabulate, means, univariate, freq)
 - by statement and uses in analysis and simulation
 - output delivery system to extract information from analyses
4. Data simulation in SAS

Grading Scheme:

Assignments – 20%

Term Test – 40%

Final Exam– 40%

Grading is subject to change.

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Students are encouraged to review policies pertaining to academic integrity available on Student Services webpage at

<http://students.sfu.ca/academicintegrity.html>

Students looking for a Tutor should send an email to stat@sfu.ca with “Tutor Request” in the subject line.

Please only include information that you would like forwarded to our tutors mailing list.

Last updated December 11, 2013