

SPRING 2016 - STAT 342 D100

**INTRODUCTION TO STATISTICAL COMPUTING AND EXPLORATORY DATA ANALYSIS - SAS (2)***Class Number: 2963 Delivery Method: In Person***COURSE TIMES + LOCATION:**

Tu, Th 8:30 AM – 10:20 AM

EDB 7618, Burnaby

**INSTRUCTOR:****Carl Schwarz**

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Office: SC-K10559

**PREREQUISITES:**

STAT 285 or STAT 302 or STAT 305.

## Description

**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. Students with credit for STAT 340 may not take STAT 342 for further credit.

**COURSE DETAILS:****Course 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

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Term Test	50%
Final Exam	50%

### NOTES:

***All grading is subject to change.***

## Materials

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### RECOMMENDED READING:

#### Recommended Text:

***SAS and R, Data Management, Statistical Analysis, and Graphics, 2nd ed*, by Ken Kleinman and Nicholas J. Horton,  
**Publisher: CRC Press****

### DEPARTMENT UNDERGRADUATE NOTES:

#### Students with Disabilities:

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

#### Tutor Requests:

Students looking for a Tutor should visit <http://www.stat.sfu.ca/teaching/need-a-tutor-.html>. We accept no responsibility for the consequences of any actions taken related to tutors.

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Each student is responsible for his or her conduct as it affects the University community. Academic dishonesty, in whatever form, is ultimately destructive of the values of the University. Furthermore, it is unfair and discouraging to the majority of students who pursue their studies honestly. Scholarly integrity is required of all members of the University. <http://www.sfu.ca/policies/gazette/student/s10-01.html>

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