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

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**Instructor: Marie Loughin (D100)**  
**Instructor: Peter Muirhead (D200)**

**Prerequisite:**

Admission to the major or honours programs in statistics or actuarial science at SFU. Corequisite: STAT 350.

**Calendar Description:**

Guided experience in written and oral communication of statistical ideas and results with both scientific and lay audiences. **Writing.**

**Outline:**

This course exposes students to typical genres of writing in the field of statistics. These include technical reports for both statistical and lay audiences, consulting reports, and critiques (e.g. of the use of statistics in the media). A framework called The Statistical Method (MacKay and Oldford, Statistical Science, 2000) is used as a backbone for structuring reports and for conducting statistical work in general.

Writing requires an in-depth understanding of the subject matter. Therefore, **students are encouraged to take this course in their fourth year.** Completion of STAT 350 is highly recommended.

The course will give students the opportunity to receive feedback on their writing from the instructor, a TA, and their classmates. Each student will complete approximately five reports during the semester. The first draft of each report will be critiqued and returned. Students are expected to respond to the critiques and resubmit a final version. The final report will include an in-class, oral presentation. Report marks will be based both on writing technique and statistical content. In addition, students are expected to complete homework and in-class assignments, and will be marked on their contribution to seminar-type discussions led by the instructor.

It is assumed that you are familiar with the following topics:

- Elementary probability theory, including properties of the normal, Poisson, binomial, etc., distributions
- Confidence intervals, p-values, hypothesis testing
- Linear regression theory
- Other standard data analysis tools (diagnostic plots, t-tests, ANOVA methods, etc.)

The course will involve seminars for three hours per week.

**Grading Scheme:**

Class participation – 10%  
Homework – 15%  
Quiz and Test – 15%  
Projects – 60%

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*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. Please consult the General Guidelines of the calendar for more details.*