



COURSE OUTLINE

Introduction to Quantitative Methods in Geography

Office Hours: Monday 11:00 – Noon, 1:30 – 2:30 PM
Thursday 11:00 – Noon, 1:30 – 2:30 PM

Office Location: Turpin B352

Contact: (250) 721-7337 flaherty@mail.geog.uvic.ca

COURSE DESCRIPTION

This course will introduce you to some of the most widely used methods for summarizing and analyzing different types of data. Topics include descriptive statistics, probability distributions, hypothesis testing, confidence intervals, difference of means tests, analysis of variance (ANOVA), correlation, and simple linear regression. Lab exercises will involve applying these techniques to real world problems.

COURSE GOAL

The main objectives of this course are to provide you with the skills for:

- Organizing and describing data in an informative way;
 - Drawing inferences and constructing convincing arguments based on data analysis;
 - Evaluating arguments based on data analysis that appear in the geographic literature as well as the media.
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LEARNING OUTCOMES

- An ability to choose and apply appropriate statistical tests based on their underlying assumptions and limitations.
 - An ability to interpret, summarize and report the results from different statistical analyses.
 - Greater appreciation of statistics as tool for scientific research.
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EVALUATION - NOTE: FORMULA SHEETS WILL NOT BE PROVIDED

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|-------------------|---------------------------------|---------------|------------|
| Mid-term Test 1 | 14% Thursday, February 8 | Lab Exercises | 32% |
| Mid-term Test 2 | 14% Monday, March 22 | | |
| Final Examination | 40% | | |

LECTURE SCHEDULE

| Date | Monday | Thursday) | LAB |
|----------|-----------------------|------------------------|-------------------------------|
| JAN 1/4 | XXXXX | Course Introduction | |
| 8/11 | Measurement | Descriptive Statistics | 0 – Intro to Labs (no credit) |
| 15/18 | Probability | Probability and Odds | 1 – Descriptive Stats |
| 22/26 | Sampling | Normal Curve | 2 - Probability |
| 29/Feb1 | Large Sample CI | Small Sample CI | 3 – Sampling/Z scores |
| 5/8 | Hypotheses | TEST 1 | 4 – Confidence Intervals |
| 12/15 | READING BREAK | READING BREAK | NO LAB |
| 19/22 | Goodness of Fit Tests | Multi-sample tests | 5– Chi-square |
| 26/MAR 1 | t –tests | Paired t / ANOVA | 6 – t-tests |
| 5/8 | ANOVA | Correlation | 7 – ANOVA |
| 12/15 | Correlation | Regression | 8 - Correlation |
| 19/22 | TEST 2 | Regression | NO LAB |
| 26/30 | Research Design | REVIEW | 9 - Regression |
| Apr 2/6 | EASTER | REVIEW | |

GRADING SYSTEM

As per the Academic Calendar:

| Grade | Grade point value | Grade scale | Description |
|-------|-------------------|-------------|--|
| A+ | 9 | 90-100% | Exceptional, outstanding and excellent performance. Normally achieved by a minority of students. These grades indicate a student who is self-initiating, exceeds expectation and has an insightful grasp of the subject matter. |
| A | 8 | 85-89% | |
| A- | 7 | 80-84% | |
| B+ | 6 | 77-79% | Very good, good and solid performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one area balanced with satisfactory grasp in the other area. |
| B | 5 | 73-76% | |
| B- | 4 | 70-72% | |
| C+ | 3 | 65-69% | Satisfactory, or minimally satisfactory. These grades indicate a satisfactory performance and knowledge of the subject matter. |
| C | 2 | 60-64% | |
| D | 1 | 50-59% | Marginal Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter. |
| F | 0 | 0-49% | Unsatisfactory performance. Wrote final examination and completed course requirements; no supplemental. |
| N | 0 | 0-49% | Did not write examination or complete course requirements by the end of term or session; no supplemental. |

GEOGRAPHY DEPARTMENT INFO

- Geography Department website: <http://geog.uvic.ca>
- Undergraduate Advisor: Dr. Phil Wakefield – geogadvisor@uvic.ca

COURSESPACES AND LABS

You **MUST** be registered in a Lab Section! Lab questions/problems should be addressed to your TA. For scheduling issues contact the Senior Lab Instructor (Phil Wakefield).

Lecture notes containing most, but not all, of the PPT slides presented in the lectures, lab assignments, data sets and other course materials can be downloaded. NOTE: These materials are intended as supplements to the lectures. They are not intended to replace the lectures.

Username: your UVic Netlink-ID

Password: your UVic Netlink-ID password

Laboratory operating hours can be found at <http://www.sfg.uvic.ca/hours.php>

POLICY ON LATE ASSIGNMENTS

Lab assignments are due at the beginning of the following lab. Penalty for assignments handed in more than 24 hours late is **10%** of the value of the assignment. Assignments that are one week late will not be graded. Only the course instructor can grant exceptions.

ACADEMIC INTEGRITY

It is every student's responsibility to be aware of the university's policies on academic integrity, including policies on **cheating, plagiarism, unauthorized use of an editor, multiple submission, and aiding others to cheat.**

Policy on Academic Integrity: <http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html>

If you have any questions or doubts, talk to me, your course instructor. For more information, see <http://www.uvic.ca/learningandteaching/students/resources/expectations/>.

ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a documented disability or health consideration that may require accommodations, please feel free to approach me and/or the Resource Centre for Students with a Disability (RCSD <http://rcsd.uvic.ca/>) as soon as possible. The RCSD staff is available by appointment to assess specific needs, provide referrals, and arrange appropriate accommodations. The sooner you let us know your needs, the quicker we can assist you in achieving your learning goals in this course.

POSITIVITY AND SAFETY

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members.

COURSE EXPERIENCE SURVEY (CES)

AT the end of term you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device.