



COURSE OUTLINE

Introduction to Quantitative Methods in Geography

- Contact:** ianoc@uvic.ca (emails will be responded to only from 9.00am until 1.00pm Monday to Friday – if you have not heard back in 24 hours please email again)
- Office Hours:** Please see Brightspace for current office hours or email to arrange an appointment.
- Class Meetings:** Tuesdays and Wednesdays 11:30 am to 12:20 pm
Location: DTB A102
- Labs:** You must be registered in a Lab Section that you attend.

We acknowledge and respect the ləkʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

COURSE OBJECTIVES

By the end of this course, students will be introduced to:

1. Methods for analyzing quantitative data.
2. Descriptive statistical techniques.
3. Probability and probability distributions.
4. Sampling methods and sampling distributions.
5. Inferential statistical techniques.
6. Non-parametric statistical methods.
7. Correlation and simple linear regression.
8. Common statistical graphs and data visualizations.
9. Statistical analysis using R.

LEARNING OUTCOMES

1. Select appropriate statistical methods for geographic questions.

2. Conduct and interpret hypothesis tests.
3. Use R to perform basic statistical analyses.
4. Communicate and present statistical results effectively.

COURSE FORMAT

Please read the following carefully and keep in mind for the course:

Brightspace is the primary course hub where you will access course materials (e.g., the course outline, readings, learning resources, assessments, and grades). Brightspace will also serve as the primary avenue of communication for this course. Please check the site regularly for course announcements and updates.

This course will be delivered in person on Tuesdays and Wednesdays from 11:30 a.m. to 12:20 p.m.

Classes and laboratory periods will be in-person on campus. Exams will be in-person as well.

Attending the lectures at the designated times is expected. Real-time interaction with the instructor and student colleagues as well as the structure provided by having set times greatly enhances the learning experience. Lectures and Labs are NOT recorded.

I welcome you to contact me or visit (during office hours) to discuss your ideas and questions anytime during this course.

TECHNOLOGY REQUIREMENTS

Laboratory activities in this course use the open-source statistical software R and the RStudio Desktop development environment.

Both R and RStudio are available at no cost and may be installed on personal computers. Instructions for downloading, installing, and using the software will be provided through the course Orientation Module on Brightspace.

REQUIRED TEXT

There is no required textbook for this course; however, weekly readings and online learning resources will be provided on Brightspace throughout the course.

EVALUATION

Assessment	Weight
Midterm Exam #1 (October 14, 2026)	10%
Midterm Exam #2 (November 17, 2026)	15%
Open Book Quizzes (5 × 1%)	5%
Laboratory Assignments	30%
Final Examination	40%
Total	100%

COURSE SCHEDULE

Week	Dates	Topic	Lab Activity	Assessments & Due Dates
1	Sept. 9-11	Course Introduction	None	None
2	Sept. 14-18	Orientation Module: Getting Started with R and RStudio	Lab 0 (0%)	Completed in Lab
3	Sept. 21-25	Topic 1: Describing Data and Understanding Distributions	Lab 1 Released (5%)	None
4	Sept. 28-Oct. 2	Work Period	Work Period	Quiz 1 (1%)
5	Oct. 5-9	Topic 2: Sampling and Confidence Intervals	Lab 2 Released (5%)	Lab 1 Due (5%)
6	Oct. 12-16	Topic 2 Continued	Work Period	Midterm Exam #1 (10%) - Wednesday, Oct. 14 Quiz 2 (1%)
7	Oct. 19-23	Topic 3: Hypothesis Testing and Statistical Significance	Lab 3 Released (5%)	Lab 2 Due (5%)
8	Oct. 26-30	Topic 3 Continued	Work Period	Lab 3 Work Period
9	Nov. 2-6	Topic 4: Non-Parametric Tests and Distributional Analysis	Lab 4 Released (5%)	Lab 3 Due (5%) Quiz 3 (1%)
10	Nov. 9-13	Reading Break	None	None
11	Nov. 16-20	Topic 5: Using Statistical Models to Answer Geographic Questions	Lab 5 Released (10%)	Midterm Exam #2 (15%) - Tuesday, Nov. 17 Lab 4 Due (5%)
12	Nov. 23-27	Topic 5 Continued	Work Period	Quiz 4 (1%)
13	Nov. 30-Dec. 4	Topic 5 Continued	Work Period	Quiz 5 (1%)
14	Dec. 7	Course Review and Wrap-Up	None	Lab 5 Due (10%) - Dec. 7 at 5:00 PM Last Day of Classes
Final Exam Period	TBA	Final Examination	None	Final Exam (40%)

ADVICE FOR SUCCESS

Some laboratory assignments can be challenging and time-consuming. Please plan your time carefully and begin assignments early.

The two-hour laboratory period is an important component of the course. Students should plan to attend the entire laboratory session whenever possible. Laboratory activities are designed to complement and reinforce lecture material, and neither the laboratory assignments nor the lecture slides are intended to replace class attendance.

This course is designed not only to introduce statistical concepts, but also to help students develop problem-solving, critical thinking, and independent learning skills. An important part of learning statistics is learning how to locate, evaluate, and apply information effectively.

No course can provide every answer or every possible example. Part of your development as a university student involves learning how to identify, evaluate, and use appropriate resources independently.

If you find that an assignment or problem is taking an unreasonable amount of time, or you are unsure whether you are on the right track, please contact your TA or the instructor for assistance.

No audio or video recordings are permitted unless approved in writing (in advance) by the course instructor.

EXAM FORMAT

Midterm examinations and the final examination will be based on lecture material, laboratory activities, assigned readings, posted learning resources, and class discussions.

The final examination is cumulative and may include material from all topics covered during the semester.

Examinations may include a combination of:

- Multiple-choice questions
- Short-answer questions
- Interpretation questions
- Statistical calculations

Electronic devices are not permitted during examinations except for approved non-programmable scientific calculators, unless otherwise authorized by the instructor.

GEOGRAPHY DEPARTMENT INFORMATION

Geography Department website: uvic.ca/socialsciences/geography/

Undergraduate Advising: geogadvising@uvic.ca

Department Chair: Dr. Chris Bone geogchair@uvic.ca

IMPORTANT COURSE POLICIES

A high level of student cooperation and participation, involving asking and answering questions is expected. Students are expected to attend all lectures, take notes and be punctual for class.

Cell phones and portable music players must be **turned off or silenced** during lectures and labs.

To earn credit, students must complete all components. Failure to submit a lab will result in a zero for that lab. Additionally, all examinations must be completed to receive credit.

Students will not be permitted to write make-up tests except for medical or compassionate reasons. Please inform the instructor of your situation promptly. Any make-up test or examination may not follow the same format as the in-class one.

LATE ASSIGNMENT POLICY

Laboratory assignments are due at the beginning of your scheduled laboratory section.

Each laboratory assignment includes a built-in 48-hour grace period. Assignments submitted within 48 hours of the deadline will be accepted without penalty and without the need to request an extension.

Assignments submitted more than 48 hours after the deadline will receive a grade of zero (0) unless an approved academic concession has been granted in accordance with University policy.

Examples

- An assignment due at 12:30 p.m. on Wednesday may be submitted until 12:30 p.m. on Friday without penalty.
- An assignment submitted 24 hours late will receive full credit if all other requirements are met.
- An assignment submitted more than 48 hours after the deadline will receive a grade of zero.

QUIZ POLICY

Open-book quizzes must be completed by the posted deadline. Because quizzes are available over an extended period, **no extensions or grace periods are available for quizzes** unless an approved academic concession has been granted.

Details regarding your labs and their marks are managed by the course Lab Instructors. Please discuss any issues or questions on labs with your Lab Instructor first. Any discrepancy with lab grades must be reported to your Lab Instructor, then the Course Instructor within **seven days** of receiving the marked assignment.

Please attend only the laboratory section for which you are registered. If you must miss a lab for exceptional circumstances, please plan with your TA in advance to attend another section. This, however, does not change the due date of your lab assignment.

Conflicts with holidays or travel plans are not considered an acceptable reason to apply for a deferred examination or an assignment extension.

Unless otherwise stated students are expected to complete assignments **independently**.

ACADEMIC INTEGRITY

Academic dishonesty (plagiarism, cheating) is a very serious matter in any academic institution and is dealt with severely at the University of Victoria. *The responsibility of the institution:* Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects. *The responsibility of the student:* Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations or for referencing your sources, ask your instructor.

GenAI not allowed

Please be advised that in this course you are not authorized to use any form of generative AI. To successfully complete course activities, generative AI is not required nor welcomed. Students should not make any use of generative AI tools such as ChatGPT, Grammarly, among others that use AI for content generation and editing. As the University of Victoria states on its Academic Integrity Policy “Academic integrity requires commitment to the values of honesty, trust, fairness, respect, and responsibility.” Therefore, I expect you to comply with the course syllabus and I encourage you to enhance your academic experience in this course by refraining from use generative AI.

Infractions will be dealt with in accordance with University policy. Commonly, the penalty for any form of cheating/plagiarism is a grade of F on the tests or laboratory assignments, or a final grade of F in the course. However, depending on the severity of the case other penalties may include a record on the student’s transcript or expulsion.

Please familiarize yourself with the University policy on academic integrity found in the Undergraduate Calendar at the following [website](#). Please contact me if you have any questions.

ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. If you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (<https://www.uvic.ca/services/cal/>). The sooner you let us know your needs the quicker we can assist

you in achieving your learning goals in this course. **Please note:** You are under no obligation to disclose.

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. To ensure that all class members feel welcomed and equally able to contribute to class discussions, we will all endeavour to be respectful in our language, our examples, and the manner in which we conduct our discussions and group work. If you have any concerns about the climate of the class, please contact me.

SEXUALIZED VIOLENCE PREVENTION AND RESPONSE AT UVIC

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR; Sedgewick C119

Phone: 250.721.8021

Email: svpcoordinator@uvic.ca

Web: uvic.ca/svp

COURSE EXPERIENCE SURVEY (CES)

We value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

NOTES

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

COPYRIGHT NOTICE

All course content and materials are made available by instructors for educational purposes and for the exclusive use of students registered in their class. The material is protected under copyright law, even if not marked with a ©. **Any further use or distribution of materials to others requires the written permission of the instructor, [except under fair dealing or another exception in the Copyright Act](#).** Violations may result in disciplinary action under the [Resolution of Non-Academic Misconduct Allegations policy \(AC1300\)](#).

GRADING SYSTEM

As per the Academic Calendar:

Grade	Grade point value	Grade scale	Description
A+	9	90-100%	An A+, A, or A- is earned by work which is technically superior, shows mastery of the subject matter, and in the case of an A+ offers original insight and/or goes beyond course expectations. Normally achieved by a minority of students.
A	8	85-89%	
A-	7	80-84%	
B+	6	77-79%	A B+, B, or B- is earned by work that indicates a good comprehension of the course material, a good command of the skills needed to work with the course material, and the student's full engagement with the course requirements and activities. A B+ represents a more complex understanding and/or application of the course material. Normally achieved by the largest number of students.
B	5	73-76%	
B-	4	70-72%	
C+	3	65-69%	A C+ or C is earned by work that indicates an adequate comprehension of the course material and the skills needed to work with the course material and that indicates the student has met the basic requirements for completing assigned work and/or participating in class activities.
C	2	60-64%	
D	1	50-59%	A D is earned by work that indicates minimal command of the course materials and/or minimal participation in class activities that is worthy of course credit toward the degree.
F	0	0-49%	F is earned by work, which after the completion of course requirements, is inadequate and unworthy of course credit towards the degree.
N	0	0-49%	Did not write examination or complete course requirements by the end of term or session; no supplemental.