



## Quantitative Geography – GEOG 251 University Studies Program

### Course Outline

COURSE IMPLEMENTATION DATE: September 2020  
OUTLINE EFFECTIVE DATE: September 2020  
COURSE OUTLINE REVIEW DATE: March 2025

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#### GENERAL COURSE DESCRIPTION:

This course will introduce methods for collecting, analyzing, and reporting geographic data. Course topics include gathering samples, describing data and theoretical distributions, testing significance, and exploring spatial relationships. Real-world examples from both physical and human geography as well as other related subject areas will provide a foundation for more advanced courses and applications. All lab activities are computer based using statistical software.

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**Program Information:** This course can be used as either a required course or an elective in several University Arts and Sciences Programs. Refer to the College Program Guide for additional information.

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**Delivery:** This course is delivered face to face

**COTR Credits:** 3

**Hours for this course:** 90 hours

**Typical Structure of Instructional Hours:**

Instructional Activity	Duration
Lecture Hours	45
Seminars / Tutorials	
Laboratory / Studio Hours	45
Practicum / Field Experience	
Other Contact Hours	
<b>Total</b>	<b>90</b>

**Practicum Hours (if applicable):**

Type of Practicum	Duration
On-the-Job Experience	
Formal Work Experience	
Other	
<b>Total</b>	

**Course Outline Author or Contact:**

Katie Burles, M.Sc.

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Signature

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**APPROVAL SIGNATURES:**

Department Head  
Erin Aasland Hall  
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Department Head Signature

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Valid from: September 2020 – March 2025

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Education Council Approval Date

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**COURSE PREREQUISITES AND TRANSFER CREDIT:**

**Prerequisites:** GEOG 101

**Corequisites:** None

**Flexible Assessment (FA):**

Credit can be awarded for this course through FA  Yes  No

Learners may request formal recognition for flexible assessment at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

**Transfer Credit:** For transfer information within British Columbia, Alberta and other institutions, please visit <http://www.cotr.bc.ca/Transfer>.

Student should also contact an academic advisor at the institution where they want transfer credit.

## Textbooks and Required Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

McGrew, J., Lembo, A., Monroe, C. (2014). *An Introduction to Statistical Problem Solving in Geography*, 3<sup>rd</sup> Edition. Waveland Press. ISBN-13: 978-1-4786-1119-6

Please see the instructor's syllabus or check COTR's online text calculator <http://go.cotr.bc.ca/tuition/tCalc.asp> for a complete list of the currently required textbooks.

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## LEARNING OUTCOMES:

Upon the successful completion of this course, students will be able to

- explain the role of quantitative information in geographic research and applications;
  - demonstrate understanding of basic descriptive statistics and regression methods as they apply to problem solving;
  - evaluate the roles of probability theory and sample distributions in drawing inferences about populations based on samples;
  - identify when and where statistical procedures are appropriate for real-world applications;
  - produce figures, tables, and maps to display data results;
  - design and implement quantitative analysis projects for problem solving; and
  - demonstrate competence in using statistical software tools for data analysis (e.g. Excel, R, SPSS).
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## COURSE TOPICS:

- Defining quantitative geography
- Scientific research
- Types of data
- Descriptive statistics
- Distributions
- Probability
- Elements of sampling
- Inferential problem solving
- Inferential spatial statistics
- Non-parametric statistics
- Correlation and regression
- Basic figures, tables, and maps

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

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## EVALUATION AND ASSESSMENT (Face-to-Face Delivery):

Assignments	% of Total Grade
Lab Assignments	40%
Term Project	10%
Midterm(s)	20%
Final	<u>30%</u>
Total:	100%

*Please see the instructor's syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments and use of electronic aids.*

**Note:** Students must attain a 50% average on all lab-based assignments and exams and a 50% average on all class-based assignments and exams to pass Geography 251.

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### EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

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### COURSE GRADE:

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Mark (Percent)	≥ 90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	< 50

A grade of "D" grants credit, but may not be sufficient as a prerequisite for sequential courses.

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### ACADEMIC POLICIES:

See [www.cotr.bc.ca/policies](http://www.cotr.bc.ca/policies) for general college policies related to course activities, including grade appeals, cheating and plagiarism.

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**COURSE CHANGES:**

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.