ORIGINAL COURSE IMPLEMENTATION DATE: September 2018
REVISED COURSE IMPLEMENTATION DATE: September 2026
COURSE TO BE REVIEWED (six years after UEC approval)**:** March 2032
Course outline form version: 29/08/2024

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: GEOG 357	**Number of Credits:**3 Course credit policy (105)
Course Full Title: Conservation GIS **Course Short Title:** Conservation GIS	
Faculty: Faculty of Science	**Department/School:** Planning, Geography and Environmental Studies

Calendar Description:

Concepts in conservation planning and management will be investigated through the application of spatial analysis techniques and Geography Information Systems (GIS).

Note: This course is offered as GEOG 357 and BIO 357. Students may take only one of these for credit.

Note: Field trips outside of class time may be required. Please refer to the department website for field trip scheduling information.

Prerequisites (or NONE):	45 university-level credits.
Corequisites (if applicable, or NONE):	
Pre/corequisites (if applicable, or NONE):	

Antirequisite Courses *(Cannot be taken for additional credit.)*

Former course code/number: **GEOG 300J**

Cross-listed with: **BIO 357**

Equivalent course(s):

(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)

Typical Structure of Instructional Hours

Lecture/seminar	20
Supervised laboratory hours (computer lab)	20
Tutorials/workshops	5
Experiential (internship)	
Total hours	**45**

Scheduled Laboratory Hours

Labs to be scheduled independent of lecture hours: **No**

Course Details

Special Topics course: **No**
(If yes, the course will be offered under different letter designations representing different topics.)

Directed Study course: **No**
(See policy 207 for more information.)

Grading System: **Letter grades**

Delivery Mode: **May be offered in multiple delivery modes**

Expected frequency: **Annually**

Maximum enrolment (for information only)**: 36**

Prior Learning Assessment and Recognition (PLAR)

PLAR is available for this course.

Transfer Credit *(See bctransferguide.ca.)*

Transfer credit already exists: **No**

Submit outline for (re)articulation: **No**
(If yes, fill in transfer credit form.)

Department approval	**Date of meeting:**	December 8, 2025
Faculty Council approval	**Date of meeting:**	January 23, 2026
Undergraduate Education Committee (UEC) approval	**Date of meeting:**	March 27, 2026

Learning Outcomes *(These should contribute to students' ability to meet program outcomes and thus Institutional Learning Outcomes.)*

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

1. Demonstrate GIS concepts and skills related to spatial planning for conservation.
2. Apply basic and intermediate spatial analysis techniques to problems in conservation biology through the creation and refinement of conservation plans.
3. Describe how geographic information is represented and managed on computers as GIS data.
4. Convert geographic information into GIS data that has location and attribute characteristics.
5. Conduct a GIS analysis to address a conservation issue.
6. Reflect on decolonized mapping techniques that show how land and resource gathering areas are conserved in Indigenous cultures.
7. Communicate findings in written, spatial, and visual forms.

Recommended Evaluation Methods and Weighting *(Evaluation should align to learning outcomes.)*

Project:	25%	Assignments:	50%	Quizzes/tests/midterm:	25%
	%		%		%

Details:

Assignments include successful creation of a map package (40%), a map layout (30%) which may be static or interactive, and communication materials (30%) such as formal letters, e-mails, and posters.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Instructional Methods *(Guest lecturers, presentations, online instruction, field trips, etc.)*

The course typically includes lectures, guest lecturers, laboratory exercises, and online learning activities.

Texts and Resource Materials *(Include online resources and Indigenous knowledge sources. Open Educational Resources (OER) should be included whenever possible. If more space is required, use the Supplemental Texts and Resource Materials form.)*

	Type	Author or description	Title and publication/access details	Year
1.	Textbook	Craighead and Convis	Conservation Planning: Shaping the Future	2013
2.	Textbook	Tom Mueller (Editor), Gretchen F. Sassenrath	GIS Applications in Agriculture, Volume Four: Conservation Planning	2021
3.				

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

Course Content and Topics

1. Introduction to course.
2. Using GIS to examine hotspot biodiversity and endemism
3. GIS as an integrating tool for human communities, ecosystem services, and economics in conservation
4. Vegetation assessment of natural areas and land cover in conservation planning
5. Selecting species as targets for conservation
6. Using GIS in the identification and assessment of habitat quality
7. Identification and mapping of habitat cores using GIS