



ORIGINAL COURSE IMPLEMENTATION DATE: September 2018  
 REVISED COURSE IMPLEMENTATION DATE:  
 COURSE TO BE REVIEWED: (six years after UEC approval) October 2023  
 Course outline form version: 09/15/14

## OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

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

<b>Course Code and Number:</b> GEOG 357	<b>Number of Credits:</b> 4 <a href="#">Course credit policy (105)</a>																
<b>Course Full Title:</b> Conservation GIS <b>Course Short Title (if title exceeds 30 characters):</b>																	
<b>Faculty:</b> Faculty of Social Sciences	<b>Department (or program if no department):</b> Geography and the Environment																
<b>Calendar Description:</b> 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: Students with credit for GEOG 300J cannot take this course for further credit. Note: Field trips outside of class time may be required. Please refer to the department website for field trip scheduling information.																	
<b>Prerequisites (or NONE):</b>	45 university-level credits.																
<b>Corequisites (if applicable, or NONE):</b>																	
<b>Pre/corequisites (if applicable, or NONE):</b>																	
<b>Equivalent Courses (cannot be taken for additional credit)</b> Former course code/number: <b>GEOG 300J</b> Cross-listed with: <b>BIO 357</b> Equivalent course(s): <b>BIO 357</b> <i>Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.</i>	<b>Transfer Credit</b> Transfer credit already exists: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Transfer credit requested (OREg to submit to BCCAT): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (if yes, fill in transfer credit form)  Resubmit revised outline for articulation: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No To find out how this course transfers, see <a href="http://bctransferguide.ca">bctransferguide.ca</a> .																
<b>Total Hours: 60</b> <b>Typical structure of instructional hours:</b> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr><td>Lecture hours</td><td style="text-align: center;">20</td></tr> <tr><td>Seminars/tutorials/workshops</td><td></td></tr> <tr><td>Laboratory hours</td><td style="text-align: center;">35</td></tr> <tr><td>Field experience hours</td><td></td></tr> <tr><td>Experiential (practicum, internship, etc.)</td><td></td></tr> <tr><td>Online learning activities</td><td style="text-align: center;">5</td></tr> <tr><td>Other contact hours:</td><td></td></tr> <tr><td style="text-align: right;"><b>Total</b></td><td style="text-align: center;"><b>60</b></td></tr> </table>	Lecture hours	20	Seminars/tutorials/workshops		Laboratory hours	35	Field experience hours		Experiential (practicum, internship, etc.)		Online learning activities	5	Other contact hours:		<b>Total</b>	<b>60</b>	<b>Special Topics</b> Will the course be offered with different topics? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  If yes, different lettered courses may be taken for credit: <input type="checkbox"/> No <input type="checkbox"/> Yes, repeat(s) <input type="checkbox"/> Yes, no limit  <i>Note: The specific topic will be recorded when offered.</i>
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Other contact hours:																	
<b>Total</b>	<b>60</b>																
<b>Maximum enrolment (for information only):</b> 28  <b>Expected frequency of course offerings (every semester, annually, every other year, etc.):</b> annually																	
<b>Department / Program Head or Director:</b> Steven Marsh	<b>Date approved:</b> September 2017																
<b>Faculty Council approval</b>	<b>Date approved:</b> September 8, 2017																
<b>Campus-Wide Consultation (CWC)</b>	<b>Date of posting:</b> October 13, 2017																
<b>Dean/Associate VP:</b> Dr. Jacqueline Nolte	<b>Date approved:</b> September 8, 2017																
<b>Undergraduate Education Committee (UEC) approval</b>	<b>Date of meeting:</b> October 27, 2017																

**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. Identify the role and appropriateness of existing GIS vector and raster data for analyzing, managing and communicating geographic information.
5. Convert geographic information into GIS data that has location and attribute characteristics.
6. Conduct a GIS analysis to address a conservation issue.
7. Investigate spatial issues in conservation planning and management.
8. Communicate findings in written, spatial, and visual forms.

**Prior Learning Assessment and Recognition (PLAR)**

Yes     No, PLAR cannot be awarded for this course because

**Typical Instructional Methods (guest lecturers, presentations, online instruction, field trips, etc.; may vary at department's discretion)**

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

**Grading system:** Letter Grades:  Credit/No Credit:     Labs to be scheduled independent of lecture hours: Yes  No

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

**Typical Text(s) and Resource Materials (if more space is required, download Supplemental Texts and Resource Materials form)**

Author (surname, initials)	Title (article, book, journal, etc.)	Current ed.	Publisher	Year
1. Carr and Zwick	Smart Land-Use Analysis. The LUCIS Model	<input type="checkbox"/>	ESRI Press	2007
2. Craighead and Convis	Conservation Planning: Shaping the Future	<input type="checkbox"/>	ESRI Press	2013
3. Scally	GIS for Environmental Management	<input type="checkbox"/>	ESRI Press	2006
4.		<input type="checkbox"/>		
5.		<input type="checkbox"/>		

**Required Additional Supplies and Materials (software, hardware, tools, specialized clothing, etc.)****Typical Evaluation Methods and Weighting**

Final exam:	15%	Assignments:	40%	Midterm exam:	%	Practicum:	%
Quizzes/tests:	25%	Lab work:	%	Field experience:	%	Shop work:	%
GIS Project:	20%	Other:	%	Other:	%	Total:	100%

**Details (if necessary):**

**Typical 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. The role of scale in conservation planning.
5. Vegetation assessment of natural areas and land cover in conservation planning.
6. Calculating timber sales from forest lands.
7. Selecting species as targets for conservation.
8. Using GIS in the identification and assessment of habitat quality.
9. Identification and mapping of habitat cores using GIS.
10. Assessing habitat connectivity through GIS.
11. GIS in marine and freshwater conservation.