
COURSE OUTLINE
ADVANCED TOPICS IN GEOGRAPHICAL INFORMATION SCIENCES

Contact: jfitterer@uvic.ca or 250-516-1993

Office Location:

<https://uvic.zoom.us/j/81549462449?pwd=UJ3OXlqdE1jM2d5TVg4NlRTZFowdz09>

Office Hours: Wed 9:30am to 11:30am; Thur 2:30pm to 4:30pm, *or by appointment*

Class Meetings: Mondays 2:30pm to 4:30pm

<https://uvic.zoom.us/j/81236750731?pwd=S1pyTUdBRlllbnNyTG5LeXNEM3NFQT09>

Course Background

In this course, students will learn how to utilize computer programming, web maps, and space-time analysis techniques to conduct geographic research. Topics covered include: automation of geoprocessing tasks with python, web mapping for data collection, space-time statistics, and data mining with spatial data. Students will use ArcGIS Pro, Python, RStudio, and open source GIS software.

- Demonstrate the ability to develop geospatial workflows to solve spatial data problems
 - Exhibit competency in utilizing Python for geoprocessing in ArcGIS Pro
 - Build web maps to collect research focused data
 - Analyze and predict spatial patterns and integrate spatial datasets
 - Demonstrate the ability to effectively communicate research findings in both web and oral venues.
-

REQUIRED TEXT

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

EVALUATION

40% Laboratory Assignments x 5

10% Project Proposal

40% GIS Project

10% Project Presentations

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

COURSE INFORMATION

- All UVic students are automatically provisioned with access to Zoom for lectures. To access the live zoom components you will first log into [Brightspace](#). Select **Geog428**.
- Click **Course Tools** > Scroll to **Zoom** > Select the **name of the instructor** to access the course meetings.

Tentative Schedule – **subject to change**

Week	Dates	Lab	Lab	Due Dates
1	Jan 11 th to 15 th	Introduction to the course	No Lab	
2	Jan 18 th to 22 nd	GIS Skills for the Workplace	Lab 1	
3	Jan 25 th to 29 th	Automation with Model Builder	Lab 2	Lab 1
4	Feb 1 st to 5 th	Python coding		
5	Feb 8 th to 12 th	Web Mapping for Citizen Science	Lab 3	Lab 2
6	Feb 15 th to 19 th	Reading Break		
7	Feb 22 nd to 26 th	Space-time statistics	Lab 4	Lab 3
8	Mar 1 st to 5 th	Data Mining with ArcGIS Pro	Lab 5	Lab 4
9	Mar 8 th to 12 th	Project Proposal and ideas		
10	Mar 15 th to 19 th	Project discussion and consultation		Lab 5
11	Mar 22 nd to 26 th	Guest Lecture		
12	Mar 29 th to Apr 2 nd	Guest Lecture		
13	Apr 5 th to 9 th	Project Presentations		

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+ C	3 2	65-69% 60-64%	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.
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.

GEOGRAPHY DEPARTMENT INFORMATION

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

Undergraduate Advising: geogadvising@uvic.ca

Department Chair: Dr. David Atkinson geogchair@uvic.ca

Brightspaces

Brightspaces <https://bright.uvic.ca/d2l/home> is a learning management systems (LMS) that will serve as the main avenue of communication. Please monitor the page on a regular basis for course announcements. If you are having difficulty logging in or password problems, contact the Computer Help Desk Email: helpdesk@uvic.ca, Tel: 250-721-7687

TECHNOLOGY REQUIREMENTS

- **Technology requirements:** You will need reliable access to the internet and a computer (preferably with webcam/microphone) or a smartphone to connect with the class for the online lessons (through Zoom). You should be comfortable using a word processor such as MS Word (Office 365) and will be required to submit some assignments in .doc or .pdf formats.
- **Technology requirements for Labs:** You will need reliable access to the internet and a computer. You will be unable to complete the labs with a smartphone or tablet. The Labs employ a variety of GIS software requirements available through remote access to the Geomatics Teaching labs <https://remotelab.uvic.ca/my.policy>.

POLICY ON LATE ASSIGNMENTS

Late assignments will be penalized 10% per day. Assignments will not be accepted after 5 days past the due date.

PLAGIARISM

Plagiarism is not permitted. For more information about what constitutes plagiarism, please visit:

<http://www.uvic.ca/learningandteaching/students/resources/expectations/> Policy on Academic

Integrity: <http://web.uvic.ca/calendar2015-01/FACS/UnIn/UARe/PoAcl.html>

ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a documented disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <http://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.

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)

I 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.