COURSE OUTLINE
ADVANCED SPATIAL ANALYSIS

Office Hours: THURSDAYS 3:30 – 4:30 and by appointment
Office Location: DTBA 237
Contact: chrisbone@uvic.ca

COURSE DESCRIPTION

This course introduces students to a variety of spatial analysis techniques that can be used for understanding geographic phenomena. Topics covered in this course include descriptive spatial analysis, spatial sampling, inferential spatial analysis, spatial interpolation, spatial correlation and geographic regression. Lectures focus on the geographic theory and equations behind each method, while labs provide an opportunity for students to implement a variety of techniques to address questions that are geographic in nature. All labs and exercises are completed using the scientific programming language R and ArcGIS. Students who successfully complete this course will not only have more analytical tools at their disposal, but will also become versed in spatial analysis discourse, which will allow them to interrogate scientific research employing a range of spatial analytical approaches.

KEY THEMES: Spatial analysis, statistics, programming, communicating science

REQUIRED TEXTS

Advanced Spatial Analysis. Provided by TopHat (details will be given in first lecture)

LEARNING OUTCOMES

x   Define appropriate spatial analysis methods needed for specific geographical questions.
x   Analyze geographic data to characterize spatial patterns of observations and spatial relationships between variables.
x   Analyze and interpolate spatial data in order to create continuous surfaces.
x   Demonstrate the ability to implement a suitable spatial analytical workflow for providing answers to geographic questions.

x   Demonstrate familiarity with spatial analysis language in order to effectively interrogate scientific research employing relevant methods.

EVALUATION

Assignments (4)	= 55%*
Final Project	= 25%
Reading and In class Questions	= 15%
Statsa thon (final day of classes)	= 5%

*Assignments are not equally weighted

GRADING SYSTEM

As per the Academic Calendar:

Grade	Gradepoint value	Gradescale	Description
A+ A A r	9 8 7	90 f100% 85 89% 80 84%	Exceptional, outstanding and excellent performance. Normally achieved by a minority of students. These grades indicate a student who is self initiating, exceeds expectation and has an insightful grasp of the subject matter.
B+ B B r	6 5 4	77 79% 73 76% 70 72%	Very good, good and solid performance. Normally achieved by the larges to o i n t

COURSESPACES

Please visit your CourseSpaces site to access the website for Geog 418/518.

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/PoAcI.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

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WEEKLY CALENDAR

WEEK	DATE	
1	Sept. 6	Welcome and Review of Descriptive Statistics