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**COURSE OUTLINE**  
**GIS ANALYSIS**

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This course focuses on developing and using geographic data to answer spatial research questions, conduct basic statistics, spatial interpolations, and carrying-out multi-criteria modelling.

<b>Class Meetings:</b>	Tuesdays and Wednesdays 13:30 to 14:20			
<b>Classroom:</b>	Cornett Building A225			
<b>Lab information:</b>	B01	Thursday	12:30 – 14:20	DTB A251
	B02	Thursday	14:30 – 16:20	DTB A251
	B03	Friday	10:30 – 12:20	DTB A251

**Office Hours:** Tuesday 9:00 to 10:30 **DTB B204**

**INSTRUCTOR INFORMATION**

**Dr. Kate McAnally**, Department of Geography, **DTB B204**, [kmcanally@uvic.ca](mailto:kmcanally@uvic.ca)

When emailing me please include 'GEOG 328 - your name - brief subject' in the subject line, this helps me sort through emails and makes it easier to respond to your message.

**Profile:** I am a sessional instructor in the Geography Department. My research considers issues of flooding and most recently the use of unpiloted aerial vehicles (UAV) to acquire images of floods to derive the velocity and extent of floodwater at all time steps of the inundation.

**LEARNING OUTCOMES**

1. Understand how GIS can be used to solve spatial problems (theoretically and practically) in Geography and other disciplines.
2. Build a foundation in using GIS to: create summary statistics for geographic data, conduct terrain analysis, calculate the least cost path and interpolate data with open-source software (*Q-GIS and R*).
3. Acquire a strong academic skills foundation - specifically research - to find the resources you need, to collect, analyse and interpret data, to present results effectively and communicate findings in a report format.
4. Be able to evaluate the capabilities and limitations of GIS analysis critically.

## REQUIRED TEXTS AND LEARNING RESOURCES

Many of the assigned readings for this course will come from a free online e-resource entitled, Geospatial Analysis -6th Edition, 2018 by: de Smith, Goodchild, Longley (<http://www.spatialanalysisonline.com/HTML/index.html>). Also, a list of supplemental readings and learning materials available on CourseSpaces.

If you are interested, the recommended print textbook for this course is below. You may be able to find a used copy in the Bookstore or Student Union. Chang, K. T., Introduction to Geographic Information Systems., New York: McGraw-Hill

## EVALUATION

Laboratory Assignments x 6	50%
Midterm Exams x 2	20% (10% each)
Final Exam (during Final Exam period)	30%

Exam Format: The questions for the midterm exam and final exam are based on lectures, course learning resources and in-class discussion. The midterm tests will only cover the topics discussed immediately preceding it. The final exam is comprehensive but will be weighted more heavily on material not previously tested. The format includes a combination of multiple-choice and short-answer questions. Examples are provided during the lectures.

## GRADING SYSTEM

As per the Academic Calendar:

Grade	Grade point value	Grade scale	Description
<b>A+</b> <b>A</b> <b>A-</b>	9 8 7	90-100% 85-89% 80-84%	<b>Exceptional, outstanding and excellent</b> 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> <b>B</b> <b>B-</b>	6 5 4	77-79% 73-76% 70-72%	<b>Very good, good and solid</b> performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one area balanced with satisfactory grasp in the other area.
<b>C+</b> <b>C</b>	3 2	65-69% 60-64%	<b>Satisfactory, or minimally satisfactory.</b> These grades indicate a satisfactory performance and knowledge of the subject matter.
<b>D</b>	1	50-59%	<b>Marginal</b> Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter.
<b>F</b>	0	0-49%	<b>Unsatisfactory</b> performance. Wrote final examination and completed course requirements; no supplemental.
<b>N</b>	0	0-49%	Did not write examination or complete course requirements by the end of term or session; no supplemental.

## Tentative Lecture Schedule

WEEK	DATE	
1	Jan 7, 8	Topic 1
2	Jan 14, 15	Topic 2
3	Jan 21, 22	Topic 2
4	Jan 28, 29	Topic 3
5	Feb 4, 5	Topic 4
6	Feb 11, 12	<b>Feb 11th Midterm Exam 1, topics 1 and 2, No class Feb 12th</b>
7	Feb 18, 19	Reading Break
8	Feb 25, 26	Topic 4
9	March 3, 4	<b>March 3rd Midterm Exam 2, topics 3 and 4 March 4th topic 5</b>
10	March 10, 11	Topic 5
11	March 17, 18	Topic 6
12	March 24, 25	Topic 6
13	March 31 April 1	Review

Topic 1: Introductory Concepts and Review

Topic 2: Spatial Analysis Building Blocks

Topic 3: Least-cost path

Topic 4: Interpolation

Topic 5: Regression

Topic 6: Special Topics in Research

### University of Victoria Important Dates

January 22 Last day for adding courses that begin in the second term

February 29 Last day for withdrawing from full year and second term courses without penalty of failure

Additional important dates through the link below.

<https://web.uvic.ca/calendar2019-09/general/dates.html>

### DISCLAIMER

The presented schedules, policies, procedures, and assignments in this course are subject to change in the event of extenuating circumstances.

### COURSE COMMUNICATION

CourseSpaces learning management systems (LMS) will serve as the main avenue of communication in this course (<http://coursespaces.uvic.ca>). This is where I will put important resources that I think will help you including course information, topic handouts, important dates, announcements, lab materials, and TA information (email addresses and office hours). Please go here first and visit often. If you are having

difficulty logging in or password problems, contact the Computer Help Desk Email: [helpdesk@uvic.ca](mailto:helpdesk@uvic.ca), Tel: 250-721-7687

## **GEOGRAPHY DEPARTMENT INFO**

- Geography Department website: [uvic.ca/socialsciences/geography/](http://uvic.ca/socialsciences/geography/)
- Undergraduate Advising: [geogadvising@uvic.ca](mailto:geogadvising@uvic.ca)

## **IMPORTANT COURSE POLICIES**

Students are expected to attend all lectures and labs, take notes and be punctual. A high level of student cooperation and participation, involving asking and answering questions is expected.

Students must complete all evaluation components to obtain credit. Failure to complete an evaluation component without permission from the instructor, will result in an 'N' grade, which equals a Grade Point Value of 0. *The exception to this rule is Lab 0 in this course.*

Topic handouts based on lecture presentations will be provided before the beginning of class meetings on CourseSpaces.

Late assignments will be penalized 20% per day (including weekends and holidays). Exceptions will only be granted for documented medical or compassionate reasons. Please inform the instructor of your situation promptly (within 1-week). You may be required to provide written proof from a medical practitioner. *Only the course instructor can grant exceptions.*

Students will not be permitted to write make-up tests except for documented medical or compassionate reasons. Any make-up test or examination may not follow the same format as the in-class one. Please inform the instructor of your situation promptly (within 1-week). You may be required to provide written proof from a medical practitioner. *Only the course instructor can grant exceptions.*

As an Instructor, I can refuse a student admission to a lecture, laboratory, learning activity or exam because of lateness, misconduct, inattention or failure to meet the responsibilities of the course. Students who neglect their academic work may be assigned a final grade of 'N' (which equals a Grade Point Value of 0) or debarred from final examinations. Please refer to the University of Victoria academic calendar in the section on student academic conduct for further information.

Cell phones must be turned off or silenced during lectures and labs and **ONLY** be used during field activities if pertinent to do so.

Conflicts with holidays or travel plans are not considered an acceptable reason to apply for a deferred exam or assignment extension.

Please attend only the laboratory section for which you are registered. If you must miss a lab for exceptional circumstances, please decide with your TA and Instructor in advance to attend another section. In this situation, you may be asked to attend a specific lab section because of space requirements, and this may result in your missing content from other classes. This however does not change the due date of your lab assignment.

Details regarding your labs and their marks are managed by the course TA. Please discuss any issues or questions on labs with your TA first and then come to see me if you would like further clarification.

Unless otherwise stated students are expected to complete assignments independently.

## **ACADEMIC INTEGRITY**

Academic dishonesty (plagiarism, cheating) is a very serious matter in any academic institution and is dealt with severely at the University of Victoria.

*The responsibility of the institution:* Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects.

*The responsibility of the student:* Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations, for referencing your sources, or unauthorized use of an editor.

Please familiarize yourself with the University policy on academic integrity found in the Undergraduate Calendar at the following website [web.uvic.ca/calendar2019-09/undergrad/info/regulations/academic-integrity.html](http://web.uvic.ca/calendar2019-09/undergrad/info/regulations/academic-integrity.html)

If you have any questions or doubts, talk to me, your course instructor. For more information, see [uvic.ca/learningandteaching/cac/index.php](http://uvic.ca/learningandteaching/cac/index.php).

Infractions will be dealt with in accordance with University policy. Commonly, the penalty for any form of cheating/plagiarism is a grade of F on the tests or laboratory assignments, or a final grade of F in the course. However, depending on the severity of the case other penalties may include a record on the student's transcript or expulsion.

## **ACCESSIBILITY**

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

## **SEXUALIZED VIOLENCE PREVENTION AND RESPONSE AT UVIC**

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting [uvic.ca/svp](http://uvic.ca/svp). If you or someone you know has been impacted by

sexualized violence and needs information, advice, and/or support please contact the sexualized violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR; Sedgewick C119

Phone: 250.721.8021

Email: [svpcoordinator@uvic.ca](mailto:svpcoordinator@uvic.ca)

Web: [uvic.ca/svp](http://uvic.ca/svp)

## **COURSE EXPERIENCE SURVEY (CES)**

We 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.

### **NOTE:**

A note to remind you to take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

Counselling Services - *Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students.* [uvic.ca/services/counselling/](http://uvic.ca/services/counselling/)

Health Services - *University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives.* [uvic.ca/services/health/](http://uvic.ca/services/health/)

Centre for Accessible Learning - *The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations* [uvic.ca/services/cal/](http://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.*

Elders' Voices - *The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.*  
[uvic.ca/services/indigenous/students/programming/elders/index.php](http://uvic.ca/services/indigenous/students/programming/elders/index.php)