

FINAL COURSE OUTLINE: WINTER 2020

GEOGRAPHY 639

H(3-3)

Advanced Spatial Analysis and Modelling

Section	Days	Times	Location
LECO1	TuTh	14:00 – 15:15	ES 342
LAB01	Tu	08:00 – 10:45	ES 415

Instructor: Stefania Bertazzon	Office: ES 336
Telephone: 403 220 7355	Email: bertazzs@ucalgary.ca

Please note: *The appropriate emergency evacuation assembly point for all classes taught in Earth Sciences is the ICT Food Court.*

Official Course Description:

History of spatial modelling in geography; comprehensive coverages of techniques, spatial analysis and spatial modelling as currently used within GIS and remote sensing.

Course Content:

The course will provide students with analytical tools to help them understand spatial phenomena and to stimulate their critical thinking about spatial processes. The course will focus on the properties of spatial data and their effects on quantitative analysis. Students will learn an array of spatial analytical models, understanding their hypothesis, power and limitations; they will learn to choose the most appropriate techniques for different research questions and spatial data. Concepts and theories of spatial analysis will be discussed, with reference to landmark and current literature.

Prerequisites: No prerequisites required

Consent of the Department. Basic GIS skills are recommended.

Learning Resources

Recommended: one or more of the following textbooks:

Rogerson, P.A., 2015. *Statistical Methods for Geography*. Sage Publications Ltd., London.

Fotheringham, A. S., Brunson, C., Charlton, M., 2000. *Quantitative Geography. Perspectives on Spatial Data Analysis*. London: SAGE.

Fortin, M.-J., Dale, M. R. T., 2005. *Spatial Analysis. A Guide for Ecologists*. Cambridge: Cambridge University Press.

Lloyd, C.D., 2006. *Local Models for Spatial Analysis*. CRC Press.

Additional material will be suggested in class and made available on D2L.

Grading (Weighting)

Labs and assignments	35%
Tests	35%
Final project	30%

Class Participation is not formally graded, but students are strongly encouraged to share their ideas, contributions, and questions in class.

In order to obtain the minimum graduate level passing grade (B-), *students must obtain no less than 70% in each of the following course components:*

- Total sum of all the labs and assignments;
- Total sum of Test 1 and Test 2;
- Total sum of the project component (proposal, literature review, written project, and presentation).

Lab exercises are due at the beginning of the lab session the week after the assignment (unless otherwise specified).

The final project is an opportunity to perform an insightful spatial statistical analysis on a research topic chosen by each individual student. Detailed guidelines for the project completion will be provided in class. The final project (literature review, written project, and presentation) must be consistent with the project proposal. If the final project is not consistent with the proposal, the proposal will receive a 0 grade.

Late Policy:

Lab assignments, short papers, project proposal, and final project are due on the date specified in the calendar provided in class. They are due at the beginning of the lab session or class on that date. There are no exceptions and any piece of work handed in late will be subject to an immediate 10% penalty followed by a 10% reduction in grade for each day thereafter (weekends and holidays included). Medical related circumstances will require a note from a physician. Appropriate documentation shall be provided in support of other circumstances.

There is no final examination for this course.

Exemptions to the Examination and Tests Regulations (if applicable)

N/A.

Grading System

96 – 100	A+	77 – 80	B	59 – 61	C-
90 – 95	A	71 – 76	B-	55 – 58	D+
86 – 89	A-	65 – 70	C+	50 – 54	D
81 – 85	B+	62 – 64	C	0 – 49	F

Please insert information on what students should do if they miss a required component of the course.

In the event that a student misses a midterm or any course work due to illness, supporting documentation, such as a medical note or a statutory declaration will be required see:

<https://www.ucalgary.ca/pubs/calendar/current/m-1.html>

Please refer to <https://www.ucalgary.ca/registrar/registration/appeals/student-faq> for frequently asked questions concerning the provision of a medical note/statutory declaration.

Supplementary Fees

N/A.

For additional detailed course information posted by the instructor, visit the course Desire2Learn page online at <https://d2l.ucalgary.ca/d2l/home>.

SUPPLEMENTAL INFORMATION

Principles of Conduct

The University Calendar includes a statement on the principles of conduct expected of all members of the university community (including students, faculty, administrators, any category of staff, practicum supervisors, and volunteers), whether on or off university property. This statement applies in all situations where members of the university community are acting in their university capacities. All members of the university community have a responsibility to familiarize themselves with the principles of conduct statement, which is available at: www.ucalgary.ca/pubs/calendar/current/k.html.

Plagiarism, Cheating, and Student Misconduct

The University of Calgary is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect.

Academic dishonesty is not an acceptable activity at the University of Calgary, and students are **strongly advised** to read the Student Misconduct section in the University Calendar at: www.ucalgary.ca/pubs/calendar/current/k-3.html. Often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are (1) presenting another student's work as your own, (2) presenting an author's work or ideas as your own without adequate citation, and (3) using work completed for another course. Such activities will not be tolerated in this course, and students suspected of academic misconduct will be dealt with according to the procedures outlined in the calendar at: www.ucalgary.ca/pubs/calendar/current/k-5.html.

Instructor Intellectual Property

Information on Instructor Intellectual Property can be found at <https://www.ucalgary.ca/policies/files/policies/Intellectual%20Property%20Policy.pdf>

Freedom of Information and Protection of Privacy

Freedom of Information and Protection of Privacy (FOIP) legislation in Alberta disallows the practice of having students retrieve assignments from a public place, such as outside an instructor's office, the department office, etc. Term assignments will be returned to students individually, during class or during the instructor's office hours; if students are unable to pick up their assignments from the instructor, they must provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

Human subjects

N/A.

Internet and electronic communication device information

There are restrictions on the use of laptops and tablets in class if they are used to take notes or find information relevant to the class, and if there is no disturbance or distraction of other students or the

instructor. Phones must be turned off during class, unless you have previously identified yourself to the instructor as a health care or law enforcement professional.

Posting of Grades and Picking-up of Assignments

Graded assignments will be returned by the instructor or teaching assistant personally during scheduled lecture or laboratory periods, unless they are made available electronically through the course D2L webpage. Grades and assignments will not be available at the Department of Geography's main office.

Academic Accommodations

It is the student's responsibility to request academic accommodations, according to the university policies and procedures listed in the University Calendar.

The student accommodation policy can be found at: www.ucalgary.ca/access/accommodations/policy. Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf.

Students needing an accommodation based on a protected ground other than disability should communicate this need, preferably in writing to their instructor or the Department Head (email: david.goldblum@ucalgary.ca).

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Act.

Wellness and Mental Health Resources

The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness, and academic success and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support, or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, <https://www.ucalgary.ca/wellnesscentre/services/mental-health-services>) and the Campus Mental Health Strategy website (<http://www.ucalgary.ca/mentalhealth/>).

Contact Information for Student and Faculty Representation

- Student Union VP Academic 403-220-3911, suvpaca@ucalgary.ca
- Students Union Representatives for the Faculty of Arts – 403-220-3913, arts1@su.ucalgary.ca, arts2@su.ucalgary.ca, arts3@su.ucalgary.ca, arts4@su.ucalgary.ca
- Student Ombuds Office information can be found at: www.ucalgary.ca/ombuds/

Campus Safewalk

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day, to any location on Campus, including the LRT station, parking lots, bus zones, and university residences. Contact Campus Security at 220-5333 or use a help phone, and Safewalkers or a Campus Security officer will accompany you to your campus destination.

