



GEOGRAPHY FINAL COURSE OUTLINE: WINTER 2017
GEOGRAPHY 647
H(3-3)

Advanced Research and Applications in Geographic Information Systems

Section	Days	Times	Location
LEC01	TuTh	11:00 – 12:15	ES 342
LAB01	We	09:00 – 11:45	ES 415

Instructor: Ryan Burns	Office: ES 448
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TA: Lucy Poley	Office:
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Please note: *The appropriate emergency evacuation assembly points for all classes taught in Earth Sciences is ICT Food Court.*

Official Course Description:

Focus on advanced GIS applications in core areas; methodological developments in GIS and current research directions in GIS.

Course Objectives

Spatial data help us tell stories about the world around us, and in 2017, our lives are increasingly oriented around these data: when will the bus arrive at my stop? Where can I go to get supplies during a flood or blizzard? How certain are we that a policy is having its intended impact? Geographers, researchers, and GIS practitioners now have unprecedented amounts of data available to us in the form of open data platforms, social media, and volunteered geographic information. However, these data introduce new analytic, theoretical, and conceptual challenges to traditional GIS approaches.

In this course we will explore some of these emergent transformations in GIS research and practice. How can we use new sources of data, with new uncertainties, and new methodological approaches? Driving this course will be the question: what new spatial stories can we tell using emerging data sources and processing tools? As a primarily student-driven graduate course, the content and navigation will be highly tailored to individual interests.

Prerequisite: Consent of the Department. Students are expected to have a thorough working and detailed knowledge of a major GIS software platform, preferably the ESRI ArcGIS suite of software.

Texts & Readings

Recommended Text: Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015). *Geographic Information Science and Systems* (4th ed.). (2016). New York: John Wiley & Sons.

Recommended Writing Guide: Northey, M., Knight, D. B., & Draper, D. (2012). *Making Sense in Geography and Environmental Sciences: a student's guide to research and writing* (5th ed.). Oxford University Press.

Additional Readings: Additional readings, laboratory guides, and links to electronic resources will be made available during the course, via D2L. They will not require purchase.

Assignments & Evaluation

Component	Description	Grade Portion
Laboratory exercises	Four laboratory exercises, each is worth 10%	40%
Discussion lead	Consists of: - Literature review (10%) - Lead classroom discussion (10%)	20%
Term Project	Consists of: - Project proposal (5%) - Project presentation (5%) - Project report (20%)	30%
Participation	Participation in classroom discussions	10%

There is no final examination for this course. For additional detailed course information posted by the instructor, please see the course D2L site.

Laboratory Exercises

There will be four lab assignments, each worth 10% of a student's overall grade for this course. Lab assignments provide a hands-on experience with advanced topics in GISc and give students the opportunity to explore issues of effective spatial analysis and the communication of geographic information. Lab assignments will be assessed using a standardized grading rubric. All exercises must be submitted using the Desire 2 Learn (D2L) online system. Email submissions will not be accepted.

Discussion Lead

The discussion lead component is worth 20% of the student's overall grade for this course. This element should be viewed as an opportunity to review relevant trends in the current literature, and to discuss with peers how best to decide upon, review, and evaluate academic literature in the fields of GISc and GIS. Detailed literature review guidelines will be provided to students mid-way through the course. The review is broken into two sections: a classroom discussion reviewing the provided literature, and a written journal review. Students must be present and participate for the classroom discussions to be eligible for the discussion component of the grade.

Term Research Project:

The term research project is worth 30% of a student's overall grade for this course. This project should be viewed as an opportunity to perform an insightful GISc analysis on a research topic relevant to the student's greater research agenda. Students will be responsible for formulating a research question, acquiring appropriate data, and performing appropriate spatial analyses or the development of a GIS tool towards answering this question. Detailed term project guidelines will be provided to students' mid-way through the course. The project is broken into three components: a proposal (worth 5%), a classroom presentation and discussion (worth 5%) to be held in the final weeks of the course, and the submission of a final project report (worth 20%). With the exception of the presentation, all project components must be submitted using the D2L system. Email submissions will not be accepted. See assignment schedule on D2L for specific project deadlines.

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

It is not necessary to pass all component areas in order to pass the course as a whole. Graduate students are reminded that at the graduate level they must receive a B- or higher to count towards their program.

Late Policy

Assignments submitted after the stated deadline will be penalized with the loss of a grade of 10% for **each day** late (including weekends). Exceptions to this policy must be discussed and confirmed with the lead instructor **in advance of the due date**. If a student fails to complete an assignment or similar set piece of work for legitimate reasons (for example: illness or domestic affliction), an alternative course of action must be discussed with the lead instructor or course assistant in a timely fashion and documentation will be required as per the University Calendar. Without appropriate documentation you will receive a zero for that portion of your grade.

For additional detailed course information posted by the Instructor Desire2Learn at <https://d2l.ucalgary.ca/d2l/home>

USRI

At the University of Calgary, feedback provided by students through the Universal Student Ratings of Instruction (USRI) survey provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses (www.ucalgary.ca/usri). Your responses make a difference - please participate in USRI Surveys.

Writing across the Curriculum

Writing skills are not exclusive to English courses and, in fact, should cross all disciplines. The University supports the belief that throughout their University careers, students should be taught how to write well so that when they graduate their writing abilities will be far above the minimal standards required at entrance. Consistent with this belief, students are expected to do a substantial amount of writing in their University courses and, where appropriate, members of faculty can and should use writing and the grading thereof as a factor in the evaluation of student work. The services provided by the Writing Support Services can be utilized by all undergraduate and graduate students who feel they require further assistance.

Principles of Conduct

The University of Calgary 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 the University's property. This statement applies in all situations where the members of the University community are acting in their University capacities. All Members of the University Community have a responsibility to familiarize themselves with this statement which is available at: <http://www.ucalgary.ca/pubs/calendar/current/j-2.html>

Plagiarism

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. Quite 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 proper referencing and 3) using work completed for another course. This activity will not be tolerated in this

course and students conducting themselves in this manner will be dealt with according to the procedures outlined in the calendar. <http://www.ucalgary.ca/honesty/plagiarism>

Academic Accommodations:

It is the student's responsibility to request academic accommodations according to the university policies and procedures listed below. The student accommodation policy can be found at: www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf

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. The procedure can be found at: www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities_0.pdf

Students needing an accommodation based on a Protected Ground other than Disability, should communicate this need, in writing, to the Instructor.

Freedom of Information and Protection of Privacy

FOIP: The Freedom of Information and Protection of Privacy (FOIP) legislation disallows the practice of having students retrieve assignments from a public place, e.g., outside 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 provide the instructor with a stamped, self-addressed envelope to be used for the return of the assignment.

Re: Posting of Grades and Picking-up of Assignments

- All assignments will be handled through D2L or personally.
- Their own grades will be available to each student on D2L by password access. Grades will not be available at Geography's main office.

Contact Information for Student and Faculty Representation

- SU VP Academic Phone: 220-3911 and e-mail: suvpaca@ucalgary.ca
- SU Faculty Rep. Phone: 220-3913 and e-mail: arts1@ucalgary.ca

The students ombudsman office information can be found at:

<http://www.su.ucalgary.ca/page/affordability-accessibility/su-structure/contact-info>

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, 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.