

GEOGRAPHY FINAL COURSE OUTLINE: WINTER 2021
GEOGRAPHY 647
H(3-3)

Advanced Research and Applications in Geographic Information Systems

Section	Location	Meeting Time	Meeting Day
LEC01	Web Based Course	11:00 – 12:15	Th- Synchronous session on Thursday 11:00 – 12:15
LAB01	Web Based Course	08:00 – 10:45	Th - Synchronous session on Thursday 10:00 – 10:45

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Official Course Description:

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

Course Objectives

This course is designed for students with strong GIS knowledge and skills, and it examines advanced topics in GIS such as geodatabase design, enterprise GIS, web GIS and distributed GIS, designing GIS workflows, automating workflows, GIS scripting, and advanced spatial analysis techniques. The course will also provide learning opportunities for students to explore advanced topic areas that are of personal interest – each student will be given the opportunity to choose special topic areas to pursue individually, which will include an oral presentation and student-led classroom discussion.

Prerequisites: Consent of the department. Students must have strong GIS skills, such as the skills obtained in courses like GEOG 607 or GEOG 682, and they must be proficient with the ArcGIS software suite.

Learning Resources

There is no required textbook for this course. Required readings will be made available and will draw from academic articles, technical documentation, and industry white papers.

Learning Technologies and Requirements

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote, and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security and malware updates.
- A current and updated web browser.
- Webcam (built-in or external).
- Microphone and speaker (built-in or external) or headset with microphone.
- Broadband internet connection.

Online Learning Resources

This course will use the Microsoft Teams for Education online learning management system for most online course materials and interaction (e.g., video calls, text-based chat, posting of lecture materials, recorded videos, assignment submission, online gradebook, etc.). **To use Microsoft Teams, students are required to enable multi-factor authentication (MFA) on their UCalgary Office365 accounts.** For more information on multi-factor authentication and how to get started, see: https://ucalgary.service-now.com/it/?id=kb_article&sys_id=74c52bfbdb901b806b3e777a8c9619c4. For information on obtaining

and installing Microsoft Teams, see: <https://docs.microsoft.com/en-us/microsoftteams/get-clients>.

A Microsoft Teams software client capable of video calls will be required for some course components. Enrolled students will receive an invitation to the course Microsoft Teams workspace during the first week of the term.

Note that Microsoft Teams will replace Desire2Learn (D2L) and Zoom for the delivery of online content in this course.

Student Licences for ArcGIS Pro Software

The exercises and assignments in this course will use Esri's ArcGIS Pro software, and students may obtain a licence to install ArcGIS Pro on their personal computers. ArcGIS Pro runs on the Windows operating system only, and system requirements for the software can be found on the software vendor's website here: <https://pro.arcgis.com/en/pro-app/get-started/arcgis-pro-system-requirements.htm>.

For Apple Mac users, it may be possible to install the Windows operating system on a Mac computer using either [Apple's Boot Camp](#) option or a commercial virtualization client, such as [Parallels Desktop](#) or [VMware Fusion for Mac](#), although these options are supported by the University of Calgary, and students must obtain and install necessary software themselves (student discounts are often available to offset the cost of purchasing commercial virtualization software and a licence for the Windows operating system). Interested students are advised to contact their instructor for more information.

For students who are unable to run ArcGIS Pro on their home computers, shared access to a campus computer via a remote connection will be available. For remote access, students will require a recent Windows- or Mac-based computer and a reliable broadband connection. Details on how to schedule time on a shared computer using a remote desktop session will be provided at the beginning of the course.

Grading – Evaluation Components

The following online evaluation components will be used to determine the overall grade in this course.

Component 1 – Examinations & In-class assignments:

Midterm exam (begins 4 March @ 08:00, ends 5 March @ 08:00)	15%
End of term oral test (individually scheduled for 12 – 15 April)	15%
In-class assignments (worksheets, quizzes, etc.)	5%

Component 2 – Lab assignments & participation:

GIS lab assignments (weights vary with assignment)	30%
Online participation and engagement	5%

Component 3 – Term project assignment:

Oral presentation (to be scheduled 11 March – 8 April)	15%
Term project report (due by 11:59 pm on 15 April)	15%

Details about each evaluation component, such as lecture topics, assignment topics and deadlines, participation expectations, etc., will be provided at the beginning of the course.

Note: To successfully pass this course, students must earn a passing grade for each of Evaluation Components 1, 2, and 3 above (see Grading System below).

Exams

An online midterm exam will be scheduled on 4 March 2020, and it is mandatory that you complete this exam on the scheduled date and time. The midterm test is a time-limited exam (150 minutes duration; expected completion time is 75 minutes) that must be completed anytime within the 24-hour examination period. The end-of-term oral test (week of 12 April) will be a comprehensive exam of all course materials and will be completed during the last week of lectures (the exact date and time will be arranged in consultation with your instructor). Oral tests will be conducted online using Microsoft Teams video calls.

All written and oral examinations in this course will be online and open-book. During examinations, students are welcome to consult any resource materials they like, including course notes, web pages, textbooks or other literature, etc. However, once a student has begun an examination, they may not communicate with another person regarding the substance of the exam until the 24-hour exam period has closed.

Late Assignments and Missed Evaluations

Late assignments will be assessed a penalty of 10% per day or portion thereof past the assigned deadline. If you anticipate that you will not meet a deadline for an assignment, contact your instructor or teaching assistant at least one business day before the deadline to discuss whether an extension can be granted. No extensions will be provided after the deadline.

Missed term tests or assignments will automatically receive a grade of zero (0). If a student has missed a required component of the course, they must contact the instructor immediately to discuss whether accommodations can be made. If extenuating circumstances contributed to a missed component, accommodations might include options such as assigning an alternate evaluation component or waiving the component and reweighting of the overall course grade, at the instructor's discretion (see the University Calendar – Academic Regulations section G.1.1 Course Assessments and Absences for procedures on missed term tests and assignments).

Grading System

97 – 100	A+	77 – 82	B	59 – 61	C-
93 – 96	A	71 – 76	B-	55 – 58	D+
88 – 92	A-	65 – 70	C+	50 – 54	D
83 – 87	B+	62 – 64	C	0 – 49	F

All grades of "C+" or lower are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements.

Administrative Policies and Procedures

This section describes the administrative policies and procedures that students are expected to follow for this course. If you have questions or concerns about these policies or procedures, please speak to your instructor immediately.

1. All materials presented in this course are examinable, including lecture materials, information presented orally by the instructor during lectures, assigned readings, online exercises, materials presented in the weekly assignments, etc.
2. You will be required to complete several assignments during this course. A due date and time will be posted for each assignment, and these deadlines are strict. If extenuating circumstances arise that will prevent you from completing an assignment by the deadline, you must request an extension from your lab Teaching Assistant at least **one day in advance** of the deadline. Late submissions will be

accepted at a penalty of 10% per calendar day, or any portion thereof, past the deadline (e.g., 1 hour late = 10% penalty, 25 hours late = 20% penalty).

3. All assignments must be submitted online using Microsoft Teams following the instructions provided. Submissions that do not follow the instructions will be penalized or rejected entirely (e.g., email submissions will not be accepted).
4. **Plagiarism is a serious academic offence that will be vigilantly monitored and reported in this course.** Essentially, plagiarism can arise whenever a student submits material for evaluation that was not entirely their own work (e.g., copied from another student, “borrowed” from another source without proper citation, based on ideas that were not your own) and the source of that work was not appropriately acknowledged. All students in this course are required to review and become familiar with university policies and regulations regarding plagiarism and academic misconduct in the University Calendar.

Supplementary Fees – Not applicable.

For additional detailed course information posted by the instructor, visit the course Microsoft Teams workspace after the semester has begun.

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 **required to read and understand** 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: <https://ucalgary.ca/policies/files/policies/student-academic-misconduct-procedure.pdf>

Instructor Intellectual Property

Information on Instructor Intellectual Property can be found at the following URL: <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

Students will not participate as subjects or researchers on human subjects in this course.

Guidelines for Online Sessions

Online face-to-face meetings in this course will use the video calls capabilities of Microsoft Teams. These video calls allow us to meet at specific times for a "live" video conference, so that we can have the opportunity to meet each other virtually and discuss relevant course topics as a learning community.

Class recordings and materials presented in Microsoft Teams and Microsoft OneNote, including any teaching materials, must not be shared, distributed or published without the instructor's written permission.

The use of video calls relies on participants to act ethically, honestly and with integrity; and in accordance with the principles of fairness, good faith and respect (as per the [Code of Conduct](#)). When entering video conferencing sessions, you play a role in helping create an effective, safe, and respectful learning environment. Please be mindful of how your behavior in these sessions may affect others. Participants are required to use names officially associated with their UCID (legal or preferred names listed in the Student Centre) when engaging in these activities. Instructors/moderators can remove those whose names do not appear on class rosters. Non-compliance may be investigated under relevant University of Calgary conduct policies (e.g., Student Non-Academic Misconduct Policy). If participants have difficulties complying with this requirement, they should email the instructor of the class explaining why, so the instructor may consider whether to grant an exception, and on what terms. For more information on how to get the most out of your video conferencing sessions visit: <https://elearn.ucalgary.ca/guidelines-for-zoom/>.

If you are unable to attend an online meeting, please contact your instructor to arrange an alternative activity for the missed session (e.g., to review a recorded session). Please be prepared, as best as you are able, to join class in a quiet space that will allow you to be fully present and engaged in video meetings. **Students are expected to participate in scheduled weekly video sessions with their web camera enabled.**

The instructor may record online class sessions for the purposes of supporting student learning in this class – such as making the recording available for review of the session or for students who miss a session. Students will be advised before the instructor initiates a recording of a video meeting. These recordings will be used to support student learning only and will not be shared or used for any other purpose.

Posting of Grades and Picking-up of Assignments

Graded assignments will be made available electronically through Microsoft Teams online. Grades and assignments will not be available at the Department of Geography 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:

https://www.ucalgary.ca/policies/files/policies/student-accommodation-policy_0.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: 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 <https://www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright-policy.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, suypaca@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.