

GEOG 380 LEC01 Geospatial Communication

GFC Hours 3-2

Fall 2023 classes: September 5th – December 6th, 2023.

Section	Days	Time	Location
LEC 01	TuTh	9:30-10:45 AM	EDC179
B01	W	8:00-9:50 AM	<u>ES407</u>
B02	M	11:00AM-12:50PM	ES415
B03	Tu	3:30-5:20PM	ES415
B04	M	2:00PM-3:50PM	ES415
B05	Tu	11:00AM-12:50PM	<u>ES407</u>
B06	F	8:00-9:50AM	ES415
Instructor: Dr. Geoff Hay		Office: ES 304	
TA: Azadeh Alihosseini (AA)		TBA:	
TA: Homayoun Rezaie (HR)		TBA:	
Telephone: (403) 220-4768 (Hay - office)		Email: gihay@ucalgary.ca	
		Email: azadeh.alihosseini@ucalgary.ca	
		Email: ali.rezaiefarhadabad@ucalgary.ca	
Email communication will be through your UCalgary email address.		Office hours: By Appointment Only. Virtual appointments will be on Zoom.	

The **Department of Geography** condemns the longstanding and continued injustices against those marginalized by racism, sexism, homophobia, transphobia, classism, xenophobia, able-bodied normativity, mental health profiling, and other forms of prejudice. We are pained by the fact that injustices are unevenly borne. <https://arts.ucalgary.ca/news/anti-racism-statement>

Territorial Acknowledgement

The Department of Geography would also like to acknowledge the traditional territories of the people of the Treaty 7 region in southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III. <https://www.ucalgary.ca/indigenous/cultural-protocol>

Official Course Description

An introduction to fundamentals in cartography, remote sensing, geographic information systems, and descriptive spatial statistics.

Course Objectives

The primary objective of this course is to provide the theoretical knowledge, technical skills, and practical experience necessary to pursue advanced courses in cartography, Geographic Information Systems (GIS), remote sensing, and statistics. Successful students will have a working knowledge of state-of-the-art GIS software and be able to produce cartographic products using real-world geospatial data.

Course Learning Outcomes

The Department of Geography is committed to student knowledge and skill development. The table below lists the key learning outcomes for this course, the program-learning outcomes to which they contribute, and the expected level of achievement.

Course Learning Outcomes	PLO(s)*	Level(s)**
<i>By the end of the course, a successful student will be able to:</i>		
Describe conceptual & data models and evaluate their use	4,6,7	1
Describe electromagnetic radiation interactions with matter	4,6	1
Explain and apply different types of scale and resolution	4,6	1
Explain and apply abstraction and generalization concepts	4,6	1

Explain the linkages among scale, geometry, and spatial representations	4,6,7	1
Explain spatial and non-spatial descriptive statistical methods	3,4	1
Manipulate geographic and projected coordinate systems in software	6,7	1
Apply basic vector GIS operations	6,7	1
Implement elements of manual and automated image classification	3,4,6,7	1
Implement principles of map design	6,7	1
Implement spatial sampling techniques	3	1
Create maps using ArcGIS Pro and ArcGIS Online	6,7	1

**PLOs = Program Learning Outcomes: 1 = reflect and communicate diverse human-environment perspectives, 2 = identify and explain human-environment processes, 3 = implement sampling, data collection, analyses and communication methods, 4 = analyze spatial and temporal aspects of human-environment systems, 5 = employ knowledge, arguments, and methodologies for solving human-environment problems, 6 = evaluate geospatial data and manipulate it to create cartographic products, 7 = communicate geographic concepts using oral, written, graphic, and cartographic modes, and 8 = demonstrate literacy skills.*

***Levels: 1 = Introductory, 2 = Intermediate, and 3 = Advanced.*

Prerequisites

There are no prerequisites for this course.

As an introductory geospatial course, students are not expected to have advanced computer skills with geospatial software. Students taking this course must be willing to learn basic computer skills, particularly with the Microsoft Windows operating system (e.g., students should be able to navigate the contents of a drive, create folders, copy files, create, and unpack .zip archives, etc.). These skills, in addition to using specialized geospatial software, will be taught in the lab exercises. Students should also possess or be willing to self-learn basic proficiency with standard office productivity software, such as Microsoft Word, Excel, and PowerPoint as these will not be explicitly taught in the course.

Course Format

This course will follow a traditional format where theory is taught in the lecture component and practical application of theory will occur in the lab component. Usually, relevant theory will be presented in lecture before the associated labs, but, due to the length of the term and scheduling restrictions, this will not always be the case.

Lecture component will operate as follows:

- Lectures will occur Tu/TH from 9:30 - 10:45am in EDC 179.
- The lectures will be dominated by PowerPoint presentations with episodic demonstrations and in-class activities/guest lectures when deemed appropriate.
- The instructor will have in-person and virtual office hours for additional assistance with course materials based on appointment only.

Midterm Exam

- The midterm exam will take place during a scheduled lecture period. There cannot be an online accommodation for this exam so all students must complete the exam in the lecture theatre at the scheduled time (see Course Schedule).

Laboratory component will operate as follows:

- Students are expected to attend the lab section in which they are registered.
- There will NOT be a virtual (Zoom) option for the labs, but it is possible to install the (related lab) software on your own computer (PC only) or use the remote login options (see below).
- Teaching assistants will provide introductory videos for each lab which are to be **watched by all students prior to attending the in-person lab** to ensure the most productive use of the lab period.
- Teaching assistants will be available during the lab period to answer questions and facilitate completion of the labs.
- Teaching assistants will have scheduled office hours outside the lab for additional help but will NOT be always available.

- All labs will be completed digitally and submitted through D2L (no exceptions!).
- Due to space and scheduling restrictions, it may, or may not, be possible to attend other scheduled lab times (in which you are not registered) for additional help completing the lab exercises.
- There will be additional technical support and remote login options for accessing the software when the lab rooms are not available (more information below – and on D2L).

Learning Resources – Textbook and Readings

The following textbook is **Required**. Older versions of the textbook are a reasonable substitution. Recommended readings will be provided out of this version of the text. (Both ebook and/or paper books are available online – **A purchase link and instructions will be provided online in D2L**).

Introduction to Geospatial Technologies, 6th edition. Bradley A. Shillito, MacMillan Learning, New York, 2023.

Required & recommended readings from other sources will be assigned with the relevant topic as the term progresses. These readings will be posted on D2L. These additional readings will not require purchase and will be available through the UofC Library or free web sources.

Learning Resources - Technologies and Requirements

The lectures and labs will operate in a traditional manner where computer resources are provided. However, if students wish to engage remotely (see above) in any component of the course, they should 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

Learning Resources – D2L Learning Management System and Online Tutorials

This course will use D2L learning management system for most online course materials and interaction (e.g., recorded lectures, text-based chat, discussion, posting of lecture materials, videos, assignment submission, online gradebook, etc.).

In some of the labs you will be provided links to tutorials which have been produced by Geography Department staff. **To access these resources, 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 [LINK](#).

Learning Resources – ArcGIS Pro and ArcGIS Online software

The exercises and assignments in this course will primarily use Esri's ArcGIS Pro and ArcGIS Online software. Students may obtain a license 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 [LINK](#).

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

IMPORTANT: **You will need an Esri account to complete this course.** Anyone with a University IT account can create an Esri Account for access to ArcGIS Online, Esri Training and ArcGIS Pro *without having to submit a request*. Updated instructions are available in the following articles.

- [ArcGIS – Esri Account](#) (How to access ArcGIS Online, ArcGIS Pro and Esri Training)
- [ArcGIS Pro - Personal Computer](#) (How to install and license ArcGIS Pro on a personal computer)

Existing ArcGIS Online users have a couple of options; continue to use their existing Esri Account or create a new Esri Account accessible through their University IT login. For details, please see the '[ArcGIS – Esri Account Options](#)' article.

** 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 Windows or Mac-based computer and a reliable broadband connection. Remote login instructions will be provided in an accompanying document posted on D2L.

In addition to the assistance provided by your teaching assistants and instructor, there will be additional technical support provided by the department. If the teaching staff for GEOG 380 are unavailable or you have a technical concern (e.g., why isn't my computer working, or the GIS tool not working) you can contact [technical support](#) (403-210-9300). Note: The individuals who are offering the support cannot help with deadlines, what to do for full marks, grading rubric etc. For these types of questions, you will need to contact your teaching assistant. To access this additional technical support please see the accompanying document posted on D2L.

Assessment Methods

Lab Assignments	50%	(See Schedule in D2L for 10 labs, grade % and readings) Labs 1,2,3,5,9 @ 3%; Labs 4, 6, 7,8, 10 @ 7%
Midterm Exam	20%	In-class exam on Tuesday, Oct 17, 2022.
Final Exam	30%	Registrar scheduled exam.

*See course schedule for details and due dates.

Notes:

- There WILL BE a **registrar-scheduled final exam** in this class.
- It is NOT essential to pass all elements/components to pass the course as a whole.
- Only pens, pencils and erasers are allowed in exams. No other materials or devices are allowed – this includes no apple watches, or any other electronic devices.
- Late assignments will be assessed a penalty unless accompanied by the documentation indicated in the section "Missed Course Components" (below).

Policy on Late Assignments

Deliverables will be submitted through D2L and, as a result, they will be automatically time-stamped. A deliverable is considered late if the time stamp is later than the published due date/time. **Deliverables received within 1 minute to 24 hours of the due date will be assessed a 10% penalty.** This means if your assignment receives a grade of 78% it will be entered as 68% (i.e., 78 – 10 = 68) on the grade sheet. If it is received between 24 and 48 hours, it will be assessed a 20% penalty. If the assignment is received greater than 48 hours from the due date it will be assessed a penalty of 30%, and so forth. Having said that, please contact the instructor if you are experiencing extenuating circumstances.

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

Flexible Grade Option (CG Grade): <https://www.ucalgary.ca/pubs/calendar/current/f-1-3.html>

Exams & Deferrals: <https://www.ucalgary.ca/registrar/exams>

Supplementary Fees: Not applicable

Missed Course Components

- **For all missed components**
 - Notify the instructor as soon as possible, preferably **before** the deadline.
- **For Missed Exams** please follow the steps below.
 - Get documentation as outlined at <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>
 - If the justification is accepted, the instructor will allow a deferred exam or alternatively, (at the discretion of the instructor) *a missed examination may be reweighted onto other exams*. A deferred exam will be administered by the Department of Geography. Times to be determined.
 - If the justification is not accepted, a grade of “0” will be recorded.
- **Missed lab assignment deadlines** follow the steps below and see *Policy on Late Assignments* (Above)
 - Get documentation as outlined at <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>
 - If the justification is accepted, the instructor will grant an extension.
 - If the justification is not accepted, a late penalty will be assessed.

Referencing Standard

In written work presented in this class, the accepted method for referencing the work of others will be the Chicago Manual of Style: <https://www.chicagomanualofstyle.org/home.html>

Important Dates

See: <https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html> for important dates such as the last day to drop courses and receive a tuition fee refund, the last day to add or swap a course, the last day to withdraw from this course, and university closures.

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

Resources and Writing support

Please note writing support resources provided by the Student Success Centre <https://ucalgary.ca/ssc/resources/writing-support> and the library <https://libguides.ucalgary.ca/guides/>

University of Calgary Academic Integrity Policy

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. 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

- 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: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>.
- For information on what constitutes plagiarism and how to properly cite the work of others, the Department of Geography recommends that they attend Academic Integrity workshops offered through the Student Success Centre: <https://www.ucalgary.ca/student-services/student-success/learning/academic-integrity>

Instructor Intellectual Property

Information on Instructor Intellectual Property can be found at <https://www.ucalgary.ca/legal-services/university-policies-procedures/intellectual-property-policy>

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.

Research

Students will NOT participate as subjects or researchers on human subjects.

Posting of Grades and Picking-up of Assignments

Graded assignments will be returned by the instructor or teaching assistant through D2L. Grades and assignments **will not** be available at the Department of Geography's main office and assignments **cannot** be dropped off at the Department 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/pubs/calendar/current/b-6-1.html>. 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: <https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>

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: freeman@ucalgary.ca).

Learning Technologies and Requirements

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
- Broadband internet connection
- Optional technology: webcam (built-in or external) / microphone and speaker (built-in or external) or headset with microphone

Use of internet and electronic devices in class

- The internet and electronic devices (laptops, iPads, etc.) can be used in class but only for accessing class-related materials.
- **Recordings require the permission of the instructor.**

Guidelines for Video Sessions

- Video sessions may be used in the event of instructor absence, for work within peer groups, or for other communication related to course obligations. To help ensure video sessions are private, do not share links or passwords with others via any medium, including social media platforms. Links and passwords are only intended for students registered in the course. Recordings and materials presented, including any teaching materials, must not be shared, distributed or published without the instructor's permission.
- The use of video conferencing programs 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 behaviour 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 the 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

sessions visit: [eLearn @ UCalgary](#)

- If you are unable to attend a session, 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 sessions. Students will be advised by their instructor when they are expected to turn on their webcam

(for group work, presentations, etc.).

- 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 class session. These recordings will be used to support student learning only and will not be shared or used for any other purpose.

Media Recording (if applicable)

- **Students DO NOT have permission to record lectures without the express permission of the instructor.**
- Please refer to the following statement on media recording of students: https://elearn.ucalgary.ca/wp-content/uploads/2020/05/Media-Recording-in-Learning-Environments-OSP_FINAL.pdf

Course evaluations and student feedback

Student feedback will be sought at the end of the course through the standard University Student Ratings of Instruction (USRI) and Faculty course evaluation forms.

Accessibility

As most of this course involves the creation, use and editing of visual media (i.e., digital mapping and images), students will need to see the lecture (visually) to get all of the course information.

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/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy> 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/>).

Students requiring assistance are encouraged to email the **Student at Risk line** if they or others appear to need wellness assistance: sar@ucalgary.ca For more immediate response, please call: 403-210-9355 and select option #2.

Sexual Violence Policy

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. Please see the policy available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy>

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/

Emergency Evacuation/Assembly Points

Assembly points for emergencies have been identified across campus. Assembly points are designed to establish a location for information updates from the emergency responders to the evacuees, from the evacuated population to the emergency responders. For more information, see the University of Calgary's Emergency Management website: <https://www.ucalgary.ca/risk/emergency-management>. In case of emergency the Assembly Point for this classroom is **Scurfield Hall Atrium**.

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.