

GEOGRAPHY FINAL COURSE OUTLINE: WINTER 2020
Geography 633
H(3-3)

Research and Applications in Remote Sensing

Section	Days	Times	Location
LEC 01	MoWeFr	14:00 – 14:50	EEEL 151
LAB 01	Tu	15:30 – 18:15	ES 415

Instructor: Geoff Hay	Office: ES 304
Telephone: 403 220 4768	Email: gjhay@ucalgary.ca

Please note: The appropriate emergency evacuation assembly points for all classes taught in Energy, Environmental & Experiential Building and Earth Sciences is ICT Food Court.

Official Course Description:

Review and basic and advanced principles of image analysis. Includes advanced laboratory techniques, integration of remote sensing with GIS, current research in remote sensing, project organisation and data sources for remote sensing.

This seminar-based course examines the breadth of current research topics and techniques in remote sensing for Geographic applications. The topics and techniques will be examined in part through instructor and student led topic-of-interest lectures, lab assignments, and student led remote sensing journal article presentations. Lab exercises, to be held in ES 415, will explore the technical aspects of several major RS topics using remote sensing software.

Prerequisite: Consent of the Department

Learning Resources

No textbook is required for this course. However, numerous related textbooks are available for overnight sign out from the Resource room, or on request from the instructor who will provide them to the Resource Room. The Internet will serve as an invaluable resource for information in this course; published peer-reviewed journal articles will form the bulk of the sources for topics. There are, however, several recommended textbooks that make for good general reference material. It would be advantageous for students to own, or gain access to one or more of the following texts:

- **Highly recommended:** Jensen, J. R., 2015: Introductory Digital Image Processing: A Remote Sensing Perspective. Prentice Hall. 4th Edition. pp 623.
- *Lillesand, T. M, Keifer, R. W., Chipman, J. W., 2015. Remote Sensing and Image Interpretation. 7th Edition. Wiley, pp 720.*
- Northey, M. and D.B. Knight, 2012: *Making Sense, A Student’s Guide to Research and Writing in Geography and Environmental Sciences, Fifth Edition.* Oxford University Press.

Original Grading (Weighted)	Updated Grading (Weighted) March 17, 2020
1. Project Proposal (2-3 pgs) = 5%	1. Project Proposal (2-3 pgs) = 5%
2. 3 Lab Assignments (10% each) = 30%	2. 2 Lab Assignments (15% each) = 30%
3. Student TOI Presentation = 20%	3. Student TOI Presentation (Zoom) = 25%
4. 2 Submitted Reviews + 1 Letter to Editor = 10%	4. 1 Submitted Reviews + 1 Letter to Editor = 10%
5. Student TOI Paper (25 pgs) = 25%	5. Student TOI Paper (25 pgs) = 30%
6. Participation in-class = 10%	6. Participation in-class = 10%
TOTAL = 100%	TOTAL = 100%

****Please note** that changes to the proposed grading have been updated in **Red** and components that have been dropped have a ~~line through them~~.

There are **no midterm or final examinations** for this course. It is not necessary to pass each course component in order to pass the course as a whole.

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, domestic affliction, or religious conviction, 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.

If you miss an assignment or examination, and you provide the instructor with the appropriate documentation, you will have one opportunity to make arrangements for the missed work. Without appropriate documentation, you will receive a zero for that portion of your grade.

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

Human subjects

No research will be carried out on human subjects.

Supplementary Fees

No supplementary fees will be assessed.

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

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SUPPLEMENTAL INFORMATION

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, faculty members can and should consider quality of writing as a factor in the evaluation of student work. The services provided by Writing Support Services can be utilized by all undergraduate and graduate students who feel they require further assistance: www.ucalgary.ca/ssc/writing_support/overview.

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.

Internet and electronic communication device information

There are no 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, 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.