



Fall 2023

Course Number	PLAN600	Classroom	PF 2160
Course Name	Landscape Ecology and Planning		
Instructor	Dr. Douglas Robb	Office Hours / Location	By appointment Room PF3192
	Email: douglas.robbs@ucalgary.ca		
Class Dates	Wednesday, September 6 – December 6, 9:00am to 1:00pm		
Instructor Email Policy	Please note that all course communications must occur through your @ucalgary email, and I will respond to emails sent via student's @ucalgary emails within 48 hours.		
Name and Email of Teaching Assistant	Chetna Sidhu Email: chetna.sidhu@ucalgary.ca		

Course Description

This course explores key concepts in ecology, landscape ecology and environmental science relevant to planning at landscape scales. Principles of urban ecology, regional landscape ecology, watershed management and parks and protected area design are coupled with knowledge of landscape processes, ecosystem services, ecological infrastructure, and habitat to assess planning interventions in the built and natural environments. Skills are developed in geographic information systems (GIS) for monitoring the current state of landscapes and potential challenges to landscape function and for proposing solutions to these challenges. Includes guest speakers from government and industry, GIS exercises, and field visits to various areas within the region. This course may not be repeated for credit. Further information can be found on [SAPL's online course listings page](#).

Course Learning Outcomes

Upon completion of this course, students will know and be able to:

1. Understand and identify basic landscape ecology principles and processes
2. Identify habitat and ecosystem types that occur in southern Alberta
3. Understand the interrelationship between ecological processes and socioecological systems
4. Perform, develop, and modify various geospatial workflows
5. Develop familiarity and dexterity with geospatial data
6. Apply ecological concepts and processes in planning and design problem-solving

Learning Resources

Readings and other digital learning materials will be posted on the course D2L site. For the purposes of accessing D2L, you must make sure you are registered with your U of C email address. The following texts are recommended but not required:

- Gail Hansen and Joseli Macedo (2021). *Urban Ecology for Citizens and Planners*. Gainesville: University of Florida Press. [Link to text on UCalgary Library](#)
- Richard Forman (1995). *Land Mosaics: The Ecology and Landscapes and Regions*. Cambridge: Harvard University Press.

Technology Requirements

ArcGIS Pro (English version 3.1)

You are required to download ArcGIS Pro (English version 3.1). This program is provided to all University of Calgary Students at no cost. Follow the steps on the [University of Calgary IT page for ArcGIS](#) to download the program. It is highly recommended that your computer or laptop meet the minimum required technical specifications to run ArcGIS Pro. Please consult [Esri's technical specifications page](#) for guidance. The University of Calgary also offers [additional guidance](#) on the technical specifications required to run the program.

NB: ArcGIS Pro runs natively on a Windows-based operating system. If you have a Mac, you will either need to partition your hard drive, or you must use a virtual machine (VM) to download and use ArcGIS Pro. For more information, please consult Esri's page on how to [Run ArcGIS Pro on a Mac](#).

ArcGIS Field Maps (mobile app)

This course uses the ArcGIS Field Maps mobile app to conduct landscape inventories and spatial analysis in the field. This app is available on both Android and iOS platforms. It is recommended that your mobile phone meet the minimum technical requirements for this app. More information can be found on [Esri's Field Maps page](#).

Additional Required Materials

- External mouse (more reliable and avoids unnecessary battery usage)
- External monitor (highly recommended for your personal workstation)
- Adobe Creative Cloud preferred
- Google Earth (free download)

Additional Classroom Conduct and Related Information

Guidelines for Zoom Sessions in Online Classes

This course will be delivered in-person. However, in the event that we must transition to online learning, students are expected to participate actively in all Zoom sessions and to turn on their webcam. Please join our class in a quiet space that will allow you to be fully present and engaged in the Zoom sessions. Students must behave in a professional manner during the session. Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment.

Assessment Components

Assessment (Weight%)	Description	Aligned Course Learning Outcome
Ecological Land Classification (35%)	Working in groups of 2, students will conduct field-based ecological investigations of local sites within the City of Calgary. You will use GIS software to produce an ecological land classification map and a written report of found ecological conditions. This assignment will familiarize you with geospatial software and workflows, and develop your abilities to recognize and interpret ecosystems in the local landscape. Due Oct 11 by 11:59pm.	1, 2, 4, and 5
Ecological Design Proposal (30%)	Working individually or in groups of up to 3 students, you will prepare a written proposal for an ecological design approach that could be implemented in the City of Calgary. Drawing from international precedents and scholarly research, you will submit a detailed proposal for a new ecological design project. Due Nov 1 by 11:59pm.	1, 2, 3, 4, 5, and 6
Wildlife Corridor Proposal (35%)	Building on your work from Assignment 2, you will utilize the geospatial skills covered in the course to situate your ecological design proposal on a site in/around the City of Calgary. The final format for this work will be a detailed site plan. There is no final exam; students will present their work to the class over the final two weeks. Due in-class on Nov 22 or 29 (presentation date TBD).	1, 2, 3, 4, 5, and 6

Assessment and Evaluation Information

Attendance and Participation Expectations

Attendance of all classes and field trips is expected and required unless there are medical or accommodation situations that arise. If you know you are not going to be able to attend a class or go on a field trip due to unexpected circumstances, please contact me by email; preferably in advance of your absence if possible. If you are absent from two consecutive classes or field trips or fail to submit two consecutive assignments without contacting or advising the instructor of your situation you may be required to withdraw from the course.

Guidelines for Submitting Assignments

Digital submission of assignments will be made via D2L or email, unless the instructor explicitly requested a hard copy or verbal presentation.

Final Examinations

There will be no final exam. Participants will be evaluated on the basis of a series of course-based assignments as outlined in the course schedule.

Expectations for Writing

Written assignments are expected to be at the graduate level of written English consistent with the University of Calgary's [guidelines for expectations on written work](#). Note that the University provides [Writing Support](#) through the [Student Success Centre](#); please be sure to take advantage of these excellent resources.

Late Assignments

Late assignments will not be accepted except on medical or compassionate grounds and unless there is a formal accommodation letter provided to the instructor at the beginning of the term. However, the instructor understands that sometimes, despite our best intentions, plans and schedules don't work out. Therefore, course participants will be allowed one late assignment during the course. If you wish to exercise this option you must contact the instructor in advance to receive one extension, the period for which will be determined by your instructor based on your circumstances and will normally not be more than 1 to 3 days.

Criteria that must be met to pass

Course assignments are progressive, meaning that each assignment is sequentially more complex and thus worth more. The grade assigned to each participant for the course will be based on the cumulative results of all assignments.

Grading Scale

Grade	Grade Point Value	4-Point Range	Percent	Description
A+	4.00	4.00	95-100	Outstanding - evaluated by instructor
A	4.00	3.85-4.00	90-94.99	Excellent - superior performance showing comprehensive understanding of the subject matter
A-	3.70	3.50-3.84	85-89.99	Very good performance
B+	3.30	3.15-3.49	80-84.99	Good performance
B	3.00	2.85-3.14	75-79.99	Satisfactory performance
B-	2.70	2.50-2.84	70-74.99	Minimum pass for students in the Faculty of Graduate Studies
C+	2.30	2.15-2.49	65-69.99	All final grades below B- are indicative of failure at the graduate level and cannot be counted toward Faculty of Graduate Studies course requirements.
C	2.00	1.85-2.14	60-64.99	
C-	1.70	1.50-1.84	55-59.99	
D+	1.30	1.15-1.49	50-54.99	
D	1.00	0.50-1.14	45-49.99	
F	0.00	0-0.49	0-44.99	

A student who receives a "C+" or lower in any one course will be required to withdraw regardless of their grade point average (GPA) unless the program recommends otherwise. If the program permits the student to retake a failed course, the second grade will replace the initial grade in the calculation of the GPA, and both grades will appear on the transcript

The School of Architecture, Planning and Landscape will not permit the Flexible Grade Option (CG Grade) for any course offered by the School.

<https://www.ucalgary.ca/pubs/calendar/current/f-1-3.html>

Topic Areas & Detailed Class Schedule

Week	Date	Topic	Key Dates and Notes
1	Sept 6	Course Introduction First Principles of Landscape Ecology	
2	Sept 13	Alberta's Landforms and Hydrology Introduction to ArcGIS Pro	A1 issued
3	Sept 20	Alberta's Ecologies GIS Foundations + Getting Ready for Fieldwork	
4	Sept 27	Ecological Land Classifications (ELCs) Vector Data 1: Points, Lines, and Polygons	
5	Oct 4	Ecological Remediation and Restoration Vector Data 2: Creating Maps	
6	Oct 11	Stormwater Management and Erosion Raster Data 1: Topography	A1 due A2 issued
7	Oct 18	Habitat Fragmentation and Wildlife Corridors Raster Data 2: Connectivity	
8	Oct 25	Wildfire Ecology Raster 3: Landscape Transformation	
9	Nov 1	Climate Change and New Energy Landscapes Raster 4: Suitability Modelling	A2 due A3 issued
10	Nov 8	Fall SAPL Block week	No class
11	Nov 15	Fall Term Break	No class
12	Nov 22	Caring for Novel Ecologies	
13	Nov 29	Assignment 3 – Final student presentations	A3 due
14	Dec 6	Assignment 3 – Final student presentations	A3 due

**subject to change*

University of Calgary Policies and Supports

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: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-accommodation-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: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>. Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, preferably in writing, to their instructor (contact information on first page above).

SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/.

Academic Misconduct

Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

For information on the Student Academic Misconduct Policy and Procedure, please visit: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-policy>

Additional information is available on the Academic Integrity Website: <https://ucalgary.ca/student-services/student-success/learning/academic-integrity>.

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 Policy (<https://www.ucalgary.ca/pubs/calendar/current/k.html>).

Instructor Intellectual Property

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Freedom Of Information And Protection Of Privacy

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary.

Sexual And Gender-Based 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. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy>.

University Student Appeals Office

If a student has a concern about a grade that they have received, they should refer to Section I of the Undergraduate Calendar (<https://www.ucalgary.ca/pubs/calendar/current/i-3.html>) which describes how to have a grade reappraised. In addition, the student should refer to the SAPL's Procedure for reappraisal of grades

Other Important Information

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk