



Winter 2023

Course Number	LAN608	Classroom	PF3160
Course Name	Landscape Responses to Climate Change, Energy, and Water		
Instructor	Dr. Douglas Robb	Office Hours/Location	By appointment Room PF3192
	Email: douglas.robb@ucalgary.ca		
Class Dates	In-person: Wednesdays, Jan 10 – June 15, 9:00am to 1:00pm		
Instructor Email Policy	For example: 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.		

Course Description:

Identifies landscape-oriented solutions to local and global issues of climate change, energy, and water problems through research and project proposals. Provides the opportunity to identify the most pressing local, regional or international issues and develop solutions. [Link to course description.](#)

Confronting the climate emergency is the preeminent challenge of our times. This undertaking will require unprecedented levels of collaboration and consensus on the part of communities, designers, and decision-makers. However, potential pathways toward a just and sustainable climate future(s) are often highly contested, from renewable energy land-grabs to emerging forms of “green” colonialism. Climate-conscious designs can either enact a progressive environmental politics rooted in a renewed commitment to land, or it can perpetuate unequal regimes of extraction, accumulation, and settler colonial dispossession.

Too often, climate is discussed in terms of abstract emissions targets and carbon-trading schemes. But designing for climate change is not an abstract concept. Rather, it is a collective project, embedded in landscapes where the material and socioecological dimensions of water, energy, and land intersect. Designers can play a central role in shaping this project towards conditions of collective prosperity. But in order to do so, we must first learn to see our climate as a biophysical, relational, and cultural process. Only then can we begin to envision new ways of living alongside our evolving landscapes.

Course Hours: 3 units; (2-2)

Course Learning Outcomes:

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

1. Identify geological, hydrological, and biophysical process at the landscape scale, and link these processes to parallel political, socioecological, and cultural dynamics;
2. Articulate responses to climate change through design research;
3. Situate design responses to climate change within disciplinary theory, as well as a broader intellectual and cultural frameworks;
4. Synthesize insights gained from reading and lectures through written and visual work.

Learning Resources:

All required readings and audio/visual materials will be provided in the [course D2L site](#).

Technology requirements (D2L etc.):

This course will be offered in-person, however there may be times when we will need to meet online/ In order to successfully engage in learning experiences at the University of Calgary, students are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security updates;
- A current and updated web browser;
- Webcam (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Internet connection.

Conduct and Related Information

Guidelines for Zoom Sessions in Online Classes

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
10%	Landscape Lexicon: To help us make sense and keep track of a set of the new terms, concepts, and systems introduced in this course, we will work collectively to develop an illustrative lexicon of key terms. These terms should cut across the weekly lecture themes (climate, land, water, and energy). This is a shared resource that I will grow throughout the course.	1, 3
10%	Field Guide: In addition to our Landscape Lexicon, you will work as a class to assemble a Field Guide of Alberta's Evolving Landscapes, organized around four thematic areas (climate, land, water, and	1, 3

	energy). This is a shared resource that I will grow throughout the course.	
10%	Seminar Leaders: Each week, we will have dedicated time for a seminar discussion of the assigned readings. For each seminar, 2-3 students will act as designated leaders to coordinate the conversation. You will give a brief (~10 minute) presentation to foreground critical themes, questions, and takeaways from the readings. You must also come up with a series of questions or discussion prompts that your classmates and I can respond to.	2, 3
70%	Material Ecologies of Climate, Energy, and Water: This is the major deliverable for this course, which is broken down into three sequential parts: Mapping Material Ecologies (15%); Deep Dive (15%); and Landscape Narrative (40%). Collectively, these assignments will help us understand the extent to which our lives are dependant upon Alberta's evolving landscapes. You will propose and select an everyday object, product, or site that engages the province's industrial, climatological, hydrological, agricultural, and/or energy systems for further investigation. You will develop drawings, writing, film, and/or other forms of content to situate your choice within broader biophysical, climatological, financial, political, and labour flows, and proposed landscape-based solutions to identified problems.	1, 2, 3, 4

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

Students are expected to complete all course assignments on time, and submit a digital copy their work on D2L by 9:00AM on the due date listed in the course schedule unless directed otherwise by the course instructor.

Final Examinations

The course evaluation will be based on the assignments completed during the term. There will be no final examination.

Expectations for Writing (<https://www.ucalgary.ca/pubs/calendar/current/e-2.html>):

This course will include a range of written assessments; the quality and clarity of writing will be a relevant factor in the evaluation of student work.

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. Late submission of coursework is not acceptable without express written permission from the instructor. A penalty of -5% per day will be added to late submissions.

Criteria that must be met to pass

Students must obtain an overall passing grade (i.e., minimum B-) to pass this course, however, if a student fails any phase of the course worth 30% or more they will fail the course. A student who feels that a piece of graded term work (term paper, essay, test, drawings, etc.) has been unfairly graded may request to have their work re-graded. The student shall discuss the work with the instructor within fifteen days of being notified about the mark or of the item's return to the class. More information can be found in the [Graduate Calendar](#).

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 and Readings	Notes
1	Jan 10	<p><u>Course Introduction</u></p> <p>Readings</p> <ul style="list-style-type: none"> No readings this week. <p>Workshop Resources</p> <ul style="list-style-type: none"> No additional resources this week. 	A1 Assigned A2 Assigned A3 Assigned A4.1 Assigned
2	Jan 17	<p><u>Climate I</u></p> <p>Readings</p> <ul style="list-style-type: none"> Klein, N. (2020). <i>On fire: The (burning) case for a Green New Deal</i>. New York: Simon & Schuster. Read "Introduction: We are the wildfire". Klein, S. (2022). A made-in-Canada Green New Deal. In Tienhaara, K. & Robinson, J. (Eds.). <i>Routledge handbook of the Green New Deal</i>, pp. 331-352. London: Routledge. Riofrancos, T. (2019, May 16). Plan, mood, battlefield: Reflections on the Green New Deal. <i>Viewpoint Magazine</i>. <p>Workshop Resources</p> <ul style="list-style-type: none"> Desimini, J. & Waldheim, C. (Eds.). (2016). <i>Cartographic grounds: Projecting the landscape imaginary</i>. Princeton Architectural Press. Misrach, R., & Orff, K. (2014). <i>Petrochemical America</i>. New York: Aperture. 	
3	Jan 24	<p><u>Land I</u></p> <p>Readings</p> <ul style="list-style-type: none"> Harris, A. (2019, Jul). The Green New Deal wants farmers to restore the land, not keep wrecking it. <i>Fast Company</i>. Hutton, J. (2020). <i>Reciprocal landscapes: Stories of material movements</i>. London: Routledge. Read "Introduction". Gordon, E., Davila, F., & Riedy, C. (2022). Transforming landscapes and mindscapes through regenerative agriculture. <i>Agriculture and Human Values</i>, 39(2), 809-826. <p>Workshop Resources</p> <ul style="list-style-type: none"> White, M. & Przybylski, M. (Eds.). (2010). <i>Bracket: On farming</i>. Barcelona and New York: Actar. 	A4.1 Due A4.2 Assigned
4	Jan 31	<p><u>Water I</u></p> <p>Readings</p> <ul style="list-style-type: none"> Alberta WaterPortal. (2017, Oct 4). The history of climate in Alberta and effects of climate change on Alberta's watersheds. Gies, E. (2022). <i>Water always wins: Living in an age of drought and deluge</i>. Chicago: University of Chicago Press. Read Chapter 1 "Descending into chaos". 	

		<ul style="list-style-type: none"> Overpeck, J. T., & Udall, B. (2020). Climate change and the aridification of North America. <i>Proceedings of the National Academy of Sciences</i>, 117(22), 11856-11858.. <p>Workshop Resources</p> <ul style="list-style-type: none"> Mazer, K., et al. (n.d.). Mapping a many-headed hydra. <i>Infrastructure Otherwise Report no. 001</i>. Robb, D., Cole, H., Baka, J., & Bakker, K. (2021). Visualizing water-energy nexus landscapes. <i>Wiley Interdisciplinary Reviews: Water</i>, 8(6), e1548. 	
5	Feb 7	<p><u>Energy I</u></p> <p>Readings</p> <ul style="list-style-type: none"> Buck, H. J. (2021). <i>Ending fossil fuels: Why net-zero is not enough</i>. New York: Verso. Read “Introduction” and “Chapter 13”. Hulse, M. (2023). Proposals for the Canadian Just Transition Act. <i>Ecojustice</i>. Martin, R. (2020, Jun). Abolish oil. <i>Places Journal</i>. <p>Workshop Resources</p> <ul style="list-style-type: none"> N/A; in-class presentations 	A4.2 Due
6	Feb 12-16	Winter SAPL Block week	
7	Feb 19-23	Winter Term Break	
8	Feb 28	<p><u>Designing the Past/Present/Future</u></p> <p>Readings</p> <ul style="list-style-type: none"> Raven, P. G., & Stripple, J. (2021). Touring the carbon ruins: towards an ethics of speculative decarbonisation. <i>Global Discourse</i>, 11(1-2), 221-240. Ward, M. (2019, Jul 23). Critical about critical and speculative design. <i>SpeculativeEDU</i>. Wilkinson, A. & Kupers, R. (2013, May). Living in the futures. <i>Harvard Business Review</i>. <p>Workshop Prompts</p> <ul style="list-style-type: none"> Where do the raw materials for your project come from? How and where are they processed/manufactured, and by whom? What kinds of labour and labour practices make my project possible? 	A4.3 Assigned
9	Mar 6	<p><u>Climate II</u></p> <p>Readings</p> <ul style="list-style-type: none"> Nelson, S. H., & Bigger, P. (2022). Infrastructural nature. <i>Progress in Human Geography</i> 46(1), 86-107. Simpson, M. (2019). Resource desiring machines: The production of settler colonial space, violence, and the making of a resource in the Athabasca tar sands. <i>Political Geography</i>, 74, 102044. 	

		<ul style="list-style-type: none"> • Van Nostrand, J. (2014, Sept 8). If we build it, they will stay. <i>The Walrus</i>. <p>Workshop Prompts</p> <ul style="list-style-type: none"> • What kinds of social and ecological relations does your project produce? What physical landscape transformations result from these processes? Over what spatial and temporal scales do these processes extend? 	
10	Mar 13	<p><u>Land II</u></p> <p>Readings</p> <ul style="list-style-type: none"> • Craft, A. & Plotkin, R. (2022, Sept). Governance back: Exploring Indigenous approaches to reclaiming relationships with the land. <i>David Suzuki Foundation</i>. • Estes, N. (2019, Aug 6). A red deal. Jacobin. • Wood, S. / Kwetásel'wet. (2020, Jul 31). Meet the people saving Canada's native grasslands. <i>The Narwhal</i>. <p>Workshop Prompts</p> <ul style="list-style-type: none"> • What are the broader subsidy regimes and policy frameworks that make it possible? How is your project financed, and by whom? How are profits derived and allocated? 	
11	Mar 20	<p><u>Water II</u></p> <p>Readings</p> <ul style="list-style-type: none"> • Cooper, D. (2020). Waving the magic wand: An argument for reorganizing the aridlands around watersheds. <i>The Plan Journal</i>, 5(1), 163-184. • Fitch, L. (2022, Apr 24). Shall we gather at the river? Irrigation and the future of southern Alberta's rivers. <i>Nature Alberta</i>. • Fleming, B. (2019). Boxed in, boxed out: Water, policy, and design in landscape architecture. In McGuire, M. P. & Henson, J. M. (Eds.). <i>Fresh water: Design research for inland water territories</i>, pp. 20-25. ORO Editions. <p>Workshop Prompts</p> <ul style="list-style-type: none"> • What are the technological and commercial aspects of your project? Where does the knowledge work to support this technology come from? 	
12	Mar 27	<p><u>Energy II</u></p> <p>Readings</p> <ul style="list-style-type: none"> • Alexander, C., & Stanley, A. (2022). The colonialism of carbon capture and storage in Alberta's Tar Sands. <i>Environment and Planning E: Nature and Space</i>, 5(4), 2112-2131. • Kolijn, E. (Ed.). (2023). <i>Reimagining fire: The future of energy</i>. Calgary: Durville Publications. [Book sections TBD]. 	

		<ul style="list-style-type: none"> Todd, Z. (2022). Fossil fuels and fossil kin: An environmental kin study of weaponised fossil kin and Alberta’s so-called “energy resources heritage”. <i>Antipode</i>. <p>Workshop Prompts</p> <ul style="list-style-type: none"> What are the social and political aspects that pervade your project? How do these debates and point of contestation influence your project’s form and function? 	
13	Apr 3	<p><u>Student Presentations</u></p> <p><i>Details TBD</i></p>	A1 Due A2 Due A3 Due A4.3 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 at <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