| **Course Number** | LAND 610 | **Classroom** | PF 2165 |
|---|---|---|---|
| **Course Name** | Green Infrastructure / Winter City Design | | |
| **Pre/Co-Requisites** | | | |
| **Instructor** | Kris Fox | Office Hours / Location | PF 3181, by appointment |
| | Email: mk.fox1@ucalgary.ca | Phone: 403-220-7428 | |
| **Class Dates** | Mondays, January 9 – April 3, 9:00 – 12:50. Please refer to course schedule for all meeting dates / times. NOTE: if applicable, any Zoom classes will be held at these times as well. | | |
| **Instructor Email Policy** | All course communications must occur through your @ucalgary email | | |
| **Name and Email of Teaching Assistant(s)** | NA | | |

## Course Description

An introduction to the systems of urban and regional resource management through targeted green infrastructure projects, particularly in a winter city context. Provides background on current methods, the state-of-the-art, and research and development that will shape future technologies. Identifies contemporary approaches, and sociocultural and ecological concepts for using plant material in landscapes, green roofs and biomass.

Calendar Description:
https://www.ucalgary.ca/pubs/calendar/grad/current/landscape-architecture-land.html#45311

**Course Hours:** 3 units; (2-2)

## Course Learning Outcomes

Upon completion of this course, students will:

1. understand the current state of knowledge (history and theory) and practice relating to the urban design of northern / winter cities, aka winter cities design.
2. understand the historical context of sustainability and application of sustainable design principles in northern cities.
3. understand the history and theory of green infrastructure and low impact development (LID) within the discipline of landscape architecture.
4. become familiar with the diversity of professional practice perspectives on the topics of winter cities design and green infrastructure / LID through guest lecturers.

5. understand the fundamental principles of storm runoff and stormwater management, and their role in the overall discourse on green infrastructure / LID.
6. recognize and develop individual critical positions with key theories, concepts, critiques and individual contributions to winter cities design and green infrastructure / LID
7. learn how to implement a range of effective research strategies and methodologies within the disciplinary scope of landscape architecture

# Learning Resources

**Required readings, textbooks and learning materials:**

Echols, & Pennypacker, E. (2015). *Artful Rainwater Design* (1st ed. 2015.). Island Press/Center for Resource Economics.

Strom, Steven, Kurt Nathan and Jake Woland. (2013). *Site Engineering for Landscape Architects* (6th ed.). New York: Wiley.
(Students should already have this textbook as it is required for corequisite LAND 606.)

The following text is highly recommended but not required:
Deming, M. E., & Swaffield, S. (2011). *Landscape architecture research: inquiry, strategy, design* (1st ed.). Hoboken, N.J: Wiley.

Each project will include a general bibliography for reference (with some being course reserves).

**Technology requirements (D2L etc.):**
Course materials and information will be posted on D2L. Students are responsible for accessing this information.

This course will utilize a combination of software to create slide presentations and printed / digital reports. Students are expected to identify and utilize the appropriate software to create their course deliverables, such as Adobe CC, CAD, GIS, 3D modeling, and Microsoft Office.

# Additional Classroom Conduct and Related Information

This course will be taught in person. Students are expected to be in attendance for the entirety of all lectures, presentations and other course activities. (Refer to Attendance and Participation Expectations section below)

## Guidelines for Zoom Sessions in Online Classes (if applicable)
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 Method | Description | Weight | Aligned Course Learning Outcome |
|---|---|---|---|
| Progress and Reviews of assignment | Project 1(P1) | 45% | 1, 2, 4, 6, 7 |
| Progress and Reviews of assignment | Project 2 (P2) | 55% | 3 – 7 |

## Assessment and Evaluation Information

Attendance and Participation Expectations:
Students are expected to be in attendance for the entirety of each class period.

Guidelines for Submitting Assignments:
Students are expected to complete all course assignments on time and submit a digital copy of the work on D2L by 9:00 AM on the day listed in the schedule unless otherwise directed by the instructor.

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

Expectations for Writing:
Please refer to the University of Calgary Calendar
(**https://www.ucalgary.ca/pubs/calendar/current/e-2.html**)

Late Assignments:
Late submission of material to be presented is not acceptable. Grades will be deducted for work submitted later than the deadline specified in the course/assignment brief or as discussed in class.

Criteria that must be met to pass:
All assignments will be evaluated by letter grades. Final course grades will be reported as letter grades, with the final grade calculated according to the 4-point range, as per the SAPL grading scheme.
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 have the 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: http://www.ucalgary.ca/pubs/calendar/grad/current/gs-o.html

Group work:
Work will be assigned individually or in groups. Normally, students will receive a common grade for work done in groups; but the instructor reserves the right to evaluate students individually, if it appears that the work has been distributed unequally. In this case, the instructor will have a conversation with the group to discuss the distribution of work.

## 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/salp-3-3.html)

## Topic Areas & Detailed Class Schedule

| Course Schedule Date | Topic | Assignments/Due Dates |
|---|---|---|
| Week 01: Jan 9 | Intro, Lecture | P1 Assigned |
| Week 02: Jan 16 | Lecture, Breakout/Discussion | |
| Week 03: Jan 23 | Lecture, Progress Review | **P1 Progress Presentations, Upload to D2L by 9:00am** |
| Week 04: Jan 30 | Lecture, Breakout/Discussion | |
| Week 05: Feb 6 | **P1 Presentations** | **P1 Final Presentations, Upload to D2L by 9:00am** |
| Week 06: Feb 13 | Lecture, Breakout/Discussion | **P1 Final Report Upload to D2L by 9:00am** / P2 Assigned |

| | | |
|---|---|---|
| *Week 07: Feb 19 -25* | *Term Break* | |
| *Monday Feb 20* | *Alberta Family Day Holiday* | |
| Week 08: Feb 27 | Lecture, Breakout/Discussion | |
| Week 09: Mar 6 | Lecture, Progress Review | **P2 Progress Presentations, Upload to D2L by 9:00am** |
| Week 10: Mar 13 | Winter Block Week | |
| Week 11: Mar 20 | Lecture, Breakout/Discussion | |
| Week 12: Mar 27 | Lecture, Breakout/Discussion | |
| Week 13: Apr 3 | Lecture, Breakout/Discussion | **P2 Final Presentations, Upload to D2L by 9:00am** |
| *Friday April 7* | *Good Friday* | |
| *Monday April 10* | *Easter Monday* | |
| Week 14: Apr 12 | | **P3 Final Report Upload to D2L by 12:00pm** |
| Special calendar notes:<br>• NA | | |

# Guidelines for Zoom Sessions

Zoom is a video conferencing program that will 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.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, 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 Zoom or other video conferencing sessions (such as MS Teams), 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 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 zoom sessions visit: https://elearn.ucalgary.ca/guidelines-for-zoom/

If you are unable to attend a Zoom session, please contact your instructor in advance to arrange an alternative activity for the missed session (e.g., to review the 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 Zoom 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 Zoom 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 Zoom session. These recordings will be used to support student learning only and will not be shared or used for any other purpose.

## Special Budgetary Requirements

NA

## University of Calgary Policies and Supports

**COVID-19 PROCEDURE FOR SICK STUDENTS:** https://www.ucalgary.ca/risk/covid-19-procedure-for-sick-students

**UNIVERSITY OF CALGARY COVID-19 UPDATES**: https://www.ucalgary.ca/risk/emergency-management/covid-19-response

**ACADEMIC ACCOMMODATION**
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/university-policies-procedures/accommodation-students-disabilities-procedure
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://ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf
https://ucalgary.ca/policies/files/policies/student-academic-misconduct-procedure.pdf
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 (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 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 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/policies/files/policies/sexual-violence-policy.pdf

**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](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](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