



Course Number	LAND 612	Classroom	PF 2165
Course Name	Site Technology II: Construction and Materials		
Pre/Co-Requisites			
Instructor	George Harris	Office Hours/Location	by appointment
	Email:George.harris@ucalgary.ca	Phone: 403.369.0064	
Class Dates	Tuesday 8:50 am to 12:50 pm		
Instructor Email Policy	Please note that all course communications must occur through George.harris@ucalgary.ca, and I will respond to emails sent via student's @ucalgary emails within 48 hours.		
Name and Email of Teaching Assistant(s)	Jenna McIntyre <jenna.mcintyre@ucalgary.ca>		

Course Description

This course is an introduction to the detailed design and construction of landscape features and structures. Throughout the course the construction methods and materials that are particular to traditional and contemporary practices of landscape architecture are discussed. Lectures provide a foundation in traditional and emerging materials and methods, including earth, stone, poured and pre-cast concrete wood, and metal. Other materials, including brick, glass and polymers may be touched on. Sustainable methods and materials are presented throughout the course and include discussions of materials, production methods, energy use, recycled materials, local materials, labor issues and related topics. Historical and contemporary landscape design case studies are presented throughout the term to illustrate specific technologies and to establish a basis for understanding materials and structures within the context of larger projects.

Students will learn about construction drawings relevant to the materials noted, including how to draw and label drawings. Students will also be introduced to construction documents by using standard construction specifications as the template for learning about each specific material. The three sections of a standard specification; General, Products, and Execution will guide the learning process.

Guest lectures by specialists will provide contemporary examples of the various materials used in today's practice. Field observation of construction materials and procedures will be encouraged through an assignment that requires students to document as-built work in the landscape. Field trips may be included to show students real-life Calgary applications of materials.

Teaching Approach

The course will consist of a series of inter-related lectures, reading assignments, site visits, and assignments. Students will participate in class discussions and research, as well as problem solving assignments. Some in-class work may occur under the supervision of guest lecturers and the instructors will give the students hands on experience with contract document preparation.

Guest lecturers will present information on a number of specialized topics.

Content

The course will be organized around lectures on five key building materials.

1. Stone
2. Earth/Turf
3. Wood
4. Concrete
5. Metal

The information covered about each material will include the history of its use, the technical aspects of the material and how the material is used, the contemporary use of the material, source of the material, and local sources.

Students will be required to develop a photo journal of materials and construction techniques throughout the course. For each construction material the students will prepare specifications and details that demonstrate their understanding of the topic.

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

Online Delivery (If applicable)

This course will take place **in person at** the University. Some lectures may be offered online, in which case the course will be available via Desire2Learn (D2L) and Zoom. Students are required to participate in the asynchronous learning tasks using the D2L learning environment and synchronous Zoom sessions. If unable to participate live due to unforeseen circumstances, inform the instructor in advance to work out an alternative participation activity (e.g., review the available presentation slides recordings and actively contribute to the follow-up online discussion).

Course Learning Outcomes

The objectives are for students to develop skills and knowledge regarding the following:

1. To understand how the materials and methods of construction in landscape architecture have changed over time.
2. To learn standard methods of technical drawing for detail design of landscape structures, systems and features.
3. To learn about the role of specifications in contract documents and how they can affect the quality of construction.
4. To learn the fundamentals of conventional earth form, stone, concrete, wood, metal, and other materials and construction methods.
5. To understand the relationship between landscape materials, construction techniques and design decisions through lectures, case study analysis and field observations.
6. To learn the basic requirements for the design of landscape walls, screens, stairs, ramps, pavements and related structures.
7. To integrate sustainable materials and practices into the design and construction of landscape structures.
8. To explore emerging materials and methods such as polymers, textiles, green walls, green roofs and porous pavements.
9. To develop a practical and critical approach to working in the rapidly changing contemporary construction industry.

Learning Resources Some reading material will be provided on D2L. Students are required to check D2L regularly.

The following books and resources are recommended but not required.

Holden, Robert, and Jamie Liversedge. 2011. *Construction for Landscape Architecture*. London, UK: Laurence King Publishing.

Hopper, Leonard J., 2007. *Landscape Architectural Graphic Standards, Student Edition*. Hoboken, NJ. Wiley.

City of Calgary Development Guidelines and Specifications for Landscape Construction; [Park development guidelines \(calgary.ca\)](#)

Technology requirements (D2L etc.): In order 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;
- Webcam (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Broadband internet connection
- [Student IT Resources](#)

Additional Classroom 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 Method	Description	Weight	Aligned Course Learning Outcome
Assignment #1 (Part A)	History of a Material Presentation (Part A)	10%	1 and 5
Assignment #1 (Part B)	History of a Material Presentation (Part B)	10%	1 and 5
Assignment #2 (Part A)	Photo Journal (Part A)	10%	4, 5, 6, 8 and 9
Assignment #2 (Part B)	Photo Journal (Part B)	10%	4, 5, 6, 8 and 9
Assignment #3	Material Details and Specifications (Part A) 1. Details and specifications for a variety of features a. Earth/Turf b. Stone	30%	2, 3, 4, 5, 6, 7, 8, and 9
Assignment #4	Material Details and Specifications (Part B) 1. Details and specifications for a variety of features a. Wood b. Concrete c. Metals	30%	2, 3, 4, 5, 6, 7, 8, and 9

Assessment and Evaluation Information

Attendance and Participation Expectations:

Students are expected to attend all lectures as no recordings or lecture notes will be provided.

Guidelines for Submitting Assignments:

All assignments to be submitted on D2L.

Final Examinations:

There will be no final examination. Assessment will be done based on the quality of work submitted.

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

Late Assignments:

Assignments submitted late will be penalized at then equivalent of 5% per day (at the discretion of the Instructor).

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		
<i>Refer to D2L for a detailed class schedule and reading list</i>		
Course Schedule Date	Topic	Assignments/Due Dates
Sept 6	First Day of Class	
Sept 13	Details and Specifications will be taught online.	
Sept 20	Details and Specifications will be taught online.	
Friday September 30	National Day for Truth and Reconciliation	
Oct 3 - 7	Fall Block Week	
Monday October 10	Thanksgiving Holiday	
Nov 4		Assignment #2 Part A Due
Nov 7 – 10	Term Break	
Friday November 11	Remembrance Day	
Nov 15		Assignment #3 Part A Due
Dec 7 th		Assignment #2 Part B Due, Assignment #3 Part B Due

Guidelines for Zoom Sessions

Zoom may be used in extenuating circumstances.

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.

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 unauthorized 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>) 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