



Land Acknowledgement:

<https://www.ucalgary.ca/indigenous/cultural-teachings/territorial-land-acknowledgement>

Course Number	ARCH 406	Classroom	PF 2170
Course Name	Design Thinking in the Built Environment: Studio I		
Pre/Co-Requisites	Prerequisite(s): ARST 201 or ARCH 201		
Instructor	Mathieu Denis	Office Hours/Location	By appointment ([REDACTED] or virtual).
	Email: mathieu.denis@ucalgary.ca		Phone: N/A
Class Dates	Mandatory in-person classes; Tuesdays and Thursdays, 11:00 AM - 12:15 PM at [REDACTED] September 2 – December 5		
Instructor Email Policy	Please note that all course communications must occur through your @ucalgary email, and I will try to respond to emails within 48 hours.		
Name and Email of Teaching Assistant(s)	T1: Sean Kohli sean.kohli@ucalgary.ca T2: Rojin Mir rojin.mir@ucalgary.ca		

Course Description:

This studio course is intended for undergraduate students, from any discipline, interested in learning about architecture, design and the built environment. It is a foundational studio course that offers an introduction to design, design thinking, the design process, and aspects of design theory as they apply to the built environment, specifically buildings, cities, and landscapes. As a studio course, students will work largely individually to complete a series of experiential learning exercises that address visual literacy, composition in two and three dimensions, design communication, and problem-solving. The exercises offer an introduction to basic modelling, representation and visual/oral presentation skills. Students will be evaluated based on project submissions and a final portfolio of course projects.

Academic Calendar description: <https://calendar.ucalgary.ca/courses/1651631>

Course Hours: 3 units (0-3).

Requisites: See [Section 3.3.5](#) of the Academic Calendar for more information regarding School of Architecture, Planning and Landscape courses.

- Prerequisite(s): ARST 201 or ARCH 201.
- Corequisite(s): None.

Course Delivery:

This course will take place in-person in an architecture studio format. Students will also participate asynchronously by contributing to discussions, completing required readings, and submitting class assignments. If a student is unable to participate in a class session, please advise your TA and instructor ahead of time via email.

Course Learning Outcomes:

Upon successful completion of this course, students will acquire the following competencies:

1. Introduce design thinking and its application in design processes;
2. Develop abstract visual literacy in spatial 2D and 3D composition;
3. Introduce basic 2D and 3D design and visual representation skills;
4. Introduce model-making skills;
5. Enhance individual abilities to generate design responses;
6. Introduce design approaches, theories and methods; and
7. Develop one's ability to present design work and discuss design ideas verbally.

Learning Resources:

- Mandatory readings, textbooks, and learning materials (To accommodate students, all required reading materials will be provided electronically through D2L. Purchasing physical books is optional):

Introduction to Architecture

Ching, Francis D.K, and J. Eckler. Wiley, 2012.

"Wicked Problems in Design Thinking."

Buchanan, Richard. M.I.T., 1995.

Elements of Design

Hannah, Gail Greet. Princeton, 2002.

Form, Space and Order

Ching, Francis D.K. Wiley, 2015.

The Language of Architecture

Simitch, A. & Warke, V. Rockport, 2014.

The Image of the City

Lynch, Kevin. M.I.T., 1960.

- Technology requirements:

To successfully engage in their learning experience, students taking the course are required to have reliable access to a computer with a supported operating system, as well as the latest

security and malware updates; a current and updated web browser; an antivirus and/or firewall software enabled; and a reliable broadband internet connection.

- Special budgetary requirements:

Students will incur the cost of project materials necessary to complete the design exercise assignments. Assignments are structured to minimize these costs; however, they are contingent upon the student's creative design work and cannot therefore be precisely anticipated. Supplies specific to each project will be noted in the project briefs when the project is issued. Additionally, the following design/drafting supplies are recommended:

- | | | |
|--|---|----------------------------|
| • Sketchbook | • Drafting set squares | • Masking tape |
| • Drawing pencils: 3H, 2H, HB, 4B, 6B | (a.k.a. triangles, plastic ruler, etc.) | • Matt knife/Exacto |
| • Mechanical pencils and leads (either 0.5mm or 2mm) | • Circle and elliptical templates | • Cutting pad |
| • White drawing eraser | • A metric drafting scale is optional; a metric steel ruler is required | • Liquid adhesive |
| • Fine point drafting markers | | • A roll of tracing paper |
| | | • White foam core sheets |
| | | • Black construction paper |
| | | • Pink polystyrene foam |

Additional Classroom Conduct and Related Information:

- The SAPL Studio spaces and other SAPL/University-provided facilities and equipment are governed by the [University's Student Non-Academic Misconduct Policy](#). Professional and courteous behavior is expected at all times. For more information, please refer to [Appendix 1: Prohibited Conduct](#), including the following categories: 1. Protection of Individuals; 2. Protection of Property; 3. Protection of University Functions, Activities and Services; 4. False Information and Identification; 5. Possession or Use of Dangerous Objects, Drugs or Alcohol; 6. Aiding in the Commission of an Offence; 7. Contravention of Other Laws and University Policies; and 8. Failure to Comply with a Sanction.
- Students are expected to participate actively in all lectures and tutorials and behave professionally during the sessions. Students, employees, and academic staff are also expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment.
- Communication with Instructor(s) Outside of Class Time: To communicate with the Instructor(s) outside of class time, please use your UCalgary email account (unless otherwise noted). Email is a widely used professional communication tool. Please specify the course name and section number in the subject line of all emails (e.g., ARCH406, S1). Please check spelling, grammar, salutations, and other professional etiquette requirements for email communications. Instructors will not respond to emails that do not contain this information. Please provide at least two business days for the Instructor(s) to reply. While email is most commonly used by students to communicate with their Instructors, it can sometimes limit the effectiveness of communication and may not be the best way to answer all student questions. When replying, if the Instructor

determines that communicating via email is not optimal, they may request a phone call or a virtual/in-person meeting.

Assessment Components:

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the Academic Calendar. In determining the overall grade in the course, the following weights will be used:

Assessment Method	Date of Assessment	Description	Weight	Aligned Course Learning Outcome
P – Participation	Sept 2 to Dec 5	Attendance, contribution to discussions, participation in group activities, and in-progress work.	5%	1,7
A1 – 2D Composition	Sept 11	Design abstract figure-ground compositions using simple shapes.	10%	2,3,4,7
A2 – 3D Composition	Oct 2	Create three-dimensional sculptural compositions using polystyrene foam.	15%	2,3,4,7
A3 – Design Thinking: Prosthesis	Oct 23	Design and build a full-scale wearable object that responds to a person's sensory experience.	25%	1,3,4,5,6,7
A4 – Environmental Design: Shelter	Dec 2	Analyze an existing bus shelter through technical and exploratory drawings. Design a new one based on your findings.	35%	1,3,4,5,6,7
A5 – Portfolio	Dec 12	Synthesize your work from this semester through the design of a portfolio.	10%	2,3

Assessment and Evaluation Information:

- If a student misses (or is late for) a required component of the course for a valid excuse or absence, they must contact the instructor in writing within 24 hours to discuss applicable options to submit and/or make-up for that component.
- Alternate arrangements for missed in-person assessments with a valid excuse will be made on a case-by-case basis at the discretion of the Instructor and upon review of the student's class participation and attendance record.
- For example, students who have missed an in-person assessment (e.g., oral presentation) as a result of an excused absence may be asked—if *applicable to the assessment*—to submit a self-recorded video (via Zoom's auto-record feature) in lieu of an in-person engagement.

- For assessments submitted online (e.g., D2L), late assignments *with a valid excuse* may be considered for grading without penalty at the instructor's discretion and upon review of the student's class participation and attendance record. Otherwise, the course's standard grade penalties (indicated below) will apply.
- For assessments submitted online (e.g., D2L), all late assignments *without a valid excuse* will lose 5% every 24 hours after the submission date/time. Late assignments submitted more than seven days late will constitute an automatic zero (0).
- Missed in-person assessments (e.g., oral presentation, exam, etc.) as a result of an *unexcused* absence will receive an automatic zero (0).

Attendance and Participation Expectations:

- Students are expected to attend and come prepared to meaningfully engage in all class sessions. This includes producing or preparing content necessary for discussion and contributing to individual and class-wide discussions and/or conversations/assessments with the Course Instructor.
- **Excused Absences:** In the event of an exceptional circumstance (e.g., illness, bereavement, etc.) or an exceptional opportunity (e.g., varsity athletic competition, national conference or awards ceremony, pow wow, etc.) up to four excused absences (for courses that meet twice or more per week) and up to two excused absences (for courses that meet once per week) are allowable per semester before jeopardizing one's own course grade and ability to pass the course. However, any such arrangements must be approved by the instructor with advance notice by the student.
- **Unexcused Absences:** Attendance at all class sessions and participation in all assessments is mandatory. Unexcused absences in excess of two per semester (for courses that meet twice per week) and one per semester (for courses that meet once per week) are grounds for failure in the course.
- **Total Number of Absences:** The combined total number of excused AND unexcused absences per semester cannot exceed four per semester (for courses that meet twice per week) or two per semester (for courses that meet once per week). Any number in excess are grounds for failure in the course.

Additional University Policies are detailed here [G.2.3 Absence from In Course Assessments](#).

Guidelines for Submitting Assignments:

- All assignments (e.g., projects, papers, presentations, etc.) must be turned in on time. Failure to submit an assignment will result in a grade of zero.
- Please submit all assignments electronically through Dropbox in D2L. Assignments may be submitted in PDF format (unless otherwise stated). Assignments should have a file name as follows: "Coursenumber_semester_Lastname-Firstname_assignment-title"

(e.g., DSGN201_F24_Smith-Alex_Plan-Drawings). Students are responsible for keeping a copy of each submitted assignment and ensuring that the proper version is submitted.

- Any text, books, or images not authored by the students must be appropriately cited in accordance with academic standards.
- Group assignments will receive a collective grade. Each group is responsible for ensuring equitable task distribution among members. Should any challenges arise within the group, concerns must be communicated to the Teaching Assistants (TAs) or the instructor before the assignment's submission deadline.
- Both analog and digital tools are permitted for representation. Students opting to use digital tools should assess their proficiency with the chosen graphic software, as inadequate representation due to unfamiliarity with a program may negatively impact their grade. It is recommended that students select tools with which they are most comfortable.
- The use of AI tools is permitted; however, students must acknowledge their use within the assignment and provide a detailed description of how these tools were utilized. Please see the “Copyright and Legislation” Section of the University of Calgary Policies and Supports for more information on the use of AI in this course.

Late Assignments:

- Please see above for the course’s policy on late assignments/assessments.

Final Examinations:

- There will be no final examinations for this course.

Expectations for Writing

- For written assignments, the quality of the writing will be one of the factors addressed in the grading rubric. Should students feel the need for extra support in this regard, the services provided by the Writing Support, part of the Student Success Centre, can be utilized by all undergraduate and graduate students.
- (<https://calendar.ucalgary.ca/pages/2c2d1ce47b8c4d008aec9cc3da49876e>)

Criteria that must be met to pass:

- The criteria for passing the course entail the submission of all mandatory assignments and achieving a minimum overall grade of 55% (C- or above).

Grading Scale:

Based on [Section F.1.1](#) of the Academic Calendar.

Grade	Grade Point Value	4-Point Range	Percent	Description
A+	4.00	4.00	95-100	Outstanding performance
A	4.00	3.85-4.00	90-94.99	Excellent performance
A-	3.70	3.50-3.84	85-89.99	Approaching excellent performance
B+	3.30	3.15-3.49	80-84.99	Exceeding good performance
B	3.00	2.85-3.14	75-79.99	Good performance
B-	2.70	2.50-2.84	70-74.99	Approaching good performance
C+	2.30	2.15-2.49	65-69.99	Exceeding satisfactory performance
C	2.00	1.85-2.14	60-64.99	Satisfactory performance
C-	1.70	1.50-1.84	55-59.99	Approaching satisfactory performance. Minimum grade requirement for prerequisite courses.
D+	1.30	1.15-1.49	50-54.99	Marginal pass. Insufficient preparation for subsequent courses in the same subject.
D	1.00	0.50-1.14	45-49.99	Minimal Pass. Insufficient preparation for subsequent courses in the same subject.
F	0.00	0-0.49	0-44.99	Failure. Did not meet course requirements.

Flexible Grade Option (CG Grade):

- As per [Section 3.5.1](#) of the Academic Calendar, the School of Architecture, Planning and Landscape will not permit the Flexible Grade Option (CG Grade) for any course offered by the School, with the exception of the following courses:
 - Architecture 201
 - Landscape 201
 - Planning 201

Topic Areas & Detailed Class Schedule

Please note that the schedule is subject to change. Should the lecture topics change, an updated schedule will be sent out with as much notice as possible.

Week	Date	In-Class Activity	Issued / Due Dates
1	Sep 2	Introduction and Course Outline + A1 Intro: 2D Composition Lecture	A1.1 Issued

	Sep 4	A1 Crits	A1.1 Due / A1.2 Issued
2	Sep 9	A1 Crits	
	Sep 11	A1 Reviews	A1.2 Due / A5 Issued
3	Sep 16	A2 Intro: 3D Composition Lecture	A2.1 Issued
	Sep 18	A2 Crits	A2.1 Due / A2.2 Issued
4	Sep 23	A2 Crits	
	Sep 25	A2 Crits	A2.2 Due / A2.3 Issued
5	Sep 30	National Day for Truth and Reconciliation - University Closed	
	Oct 2	A2 Reviews	A2.3 Due
6	Oct 7	A3 Intro: Design Thinking Lecture	A3.1 Issued
	Oct 9	A3 Crits	A3.1 Due / A3.2 Issued
7	Oct 14	A3 Crits	
	Oct 16	A3 Crits	
8	Oct 21	A3 Crits	
	Oct 23	A3 Reviews	A3.2 Due
9	Oct 28	A4 Intro: Drawing Lecture + <u>Site Visit</u>	A4.1 Issued
	Oct 30	A4 Crits	
10	Nov 4	A4: Site Analysis Lecture	A4.1 Due / A4.2 Issued
	Nov 6	A4 Crits	
11	Nov 11	Term Break – No Class	
	Nov 13		
12	Nov 18	A4: Design of Public Space Lecture	A4.2 Due / A4.3 Issued
	Nov 20	A4 Crits	
13	Nov 25	A4 Crits	
	Nov 27	A4 Crits + A5 Intro: Portfolio Lecture	
14	Dec 2	A4 Final Reviews – Day 1	A4.3 Due
	Dec 4	A4 Final Reviews – Day 2	
	Dec 12	Portfolio Due	A5 Due

Scheduled Out-of-Class Activities:

There will be one site visit on campus during class hours on October 28th for Assignment 4. We will walk to the site; no vehicle transportation is required.

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS

UNIVERSITY OF CALGARY COVID-19 UPDATES AND PROCEDURES

<https://www.ucalgary.ca/risk/emergency-management/covid-19-response/covidsafe-campus>

ACADEMIC ACCOMMODATION

<https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>

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://ucalgary.ca/student-services/access/current-students/academic-accommodations>.

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:

- Student Academic Misconduct Policy: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-policy>
- Student Academic Misconduct Procedure: <https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-procedure>

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.

Notice to Students Regarding Use of Generative Artificial Intelligence (AI) Applications and Tools in Learning Environments

- **Some Use Permitted:** Students may use generative AI tools in this course in accordance with the instructions and guidelines outlined for each course assignment or assessment. The use of generative AI tools must be referenced and cited following citation instructions outlined by the course instructor. Use of generative AI outside assessment or assignment guidelines or without citation will constitute academic misconduct. It is the student's responsibility to be clear on the limitations on the use of generative AI tools for each assessment or assessment, on the expectations for citation and referencing, and on fact checking statements created by generative AI tools. If you are in doubt as to the use of generative AI tools in this course, please discuss your situation with the course instructor.

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.

PROTECTION OF PRIVACY ACT

The University of Calgary (University) respects your privacy and is committed to ensuring the privacy of all students, staff, and community members. UCalgary's collection, use, and disclosure of your personal information is authorized under section 4(c) of the Alberta [Protection of Privacy Act](#) (POPA). It will be collected, used and disclosed as permitted under POPA and in accordance with the University's [Privacy Policy](#) and [Notice of Collection, Use and Disclosure of Student Personal Information](#). All student assignments and personal information provided to your course instructor will remain confidential unless otherwise stated

before submission. It will not be disclosed to anyone else without your permission unless permitted under POPA.

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://calendar.ucalgary.ca/uofcregs/university-regulations/reappraisal-term-work>) which describes how to have a grade reappraised.

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