



Fall 2023

Course Number	ARCH 406	Classroom	
Course Name	Design Thinking in the Built Environment Studio I		
Pre/Co-Requisites	Prerequisite: ARCH 201		
Instructor	Prof. Barry Wylant	Office Hours/Location	By appointment.
	Email: bwylant@ucalgary.ca	Phone: 403-220-8456	
Class Dates	In-person: Mondays, Wednesdays, Fridays, Sept. 5 – Dec. 6, 11:00am to 11:50am		
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(s)	Hosna Bahonar: hosna.bahonar1@ucalgary.ca Fauzan Mirza: muhammadfauzan.mirza@ucalgary.ca Parnashi Patel: parnashi.patel@ucalgary.ca Alexandra Zabarka: alexandra.zabarka@ucalgary.ca		

Course Description:

A foundational introduction to design thinking as applied to the built environment of buildings, cities, and landscapes. Students will complete a series of experiential learning exercises that emphasize three-dimensional thinking and problem-solving skills. The course is offered in a studio environment, which along with the course work, will provide valuable experience to develop a portfolio.

<https://www.ucalgary.ca/pubs/calendar/current/architecture.html#47121>

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, offering an introduction to design, design thinking, design process, and aspects of design theory, as they may be applied to the built environment, specifically buildings, cities, and landscapes. As a studio course, students will complete a series of experiential learning projects that address visual literacy, visual composition in two and three dimensions, and problem solving. This includes aspects of form, space, visual hierarchy, scale, proportion, and context. The exercises offer an introduction to basic 2D/3D representation (drawing and physical models) and visual/oral presentation skills. Students will be evaluated based on completed projects and a final portfolio of course projects.

Course Hours: 3 units; (0-3)

Course Learning Outcomes:

In this course, students will be able to:

- Develop design thinking skills and their application in design processes;
- Develop abstract visual literacy in spatial 2D and 3D composition including: shape/form, hierarchy, space, scale, etc.;
- Develop basic 2D and 3D design and visual representation and composition skills;
- Develop visualization and design model making skills;
- Enhance individual abilities to generate design responses;
- Develop design approaches, and the understanding of design theories and methods.
- Develop one's ability to verbally present design work and discuss design ideas.

Learning Resources:

The following readings provide useful reference/learning resources and are available via the library online or via D2L:

Buchanan, Richard. "Wicked Problems in Design Thinking." *Design Issues*. 8, 2 (1995): 5-21

Simitch, A. & Warke, V. *The Language of Architecture: 26 Principles Every Architect Should Know*. 2014. Rockport Publishers.
(Ch. 1. Analysis, p 9-18; Ch. 2. Concept, p 19-26)
(Ch. 4. Program, p 37-48; Ch. 12. Scale, p 109-116)

Ching, F.D.K. *Architecture: Form, Space, and Order*. Hoboken, New Jersey: John Wiley & Sons, 2015. (available online at the U of C Library)

Ching, F.D.K. *Introduction to Architecture*. Hoboken, New Jersey: John Wiley & Sons, 2013. (available online at the U of C Library)

Hannah, G.G. *Elements of Design: Rowena Reed Kostellow and the Structure of Visual Relationships*. New York, New York: Princeton Architectural Press, 2002.

Itten, J. *Design and Form: the Basic Course at the Bauhaus and Later*. New York, New York: Van Nostrand Reinhold Company, 1975.

Lynch, K. *The Image of the City*. Cambridge, Massachusetts: The MIT Press, 1960.

Technology requirements:

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

*Note that most current laptops will have a built-in webcam, speaker, and microphone.

Assessment Components:

The course is evaluated based on submitted project assignments and there are seven projects in total for the term:

P1	5%	2D F/G* composition	Issued Sep 06	Due Sep 15
P2	5%	3D F/G* reversible composition	Issued Sep 15	Due Sep 25
P3	10%	Linear 3D composition	Issued Sep 25	Due Oct 11
P4	10%	Curvilinear 3D composition	Issued Sep 25	Due Oct 11
P5	10%	Reflective Paper	Issued Oct 11	Due Nov 27
P6	15%	Composition of space	Issued Oct 11	Due Oct 27
P7	35%	Node design (Parts A, B, C)	Issued Oct 31	Due Dec 06
P8	10%	Portfolio	Issued Nov 13	Due Dec 11

*Figure/Ground

Assessment and Evaluation Information

Attendance and Participation Expectations:

Given the studio format for the course, and the project-based course work, attendance for all classes is expected, with students preparing new work for each crit session noted. ***Please note that this attendance, and iterative work pattern, is crucial to effectively develop student design work for submission on project due dates.***

Guidelines for Submitting Assignments:

All assignments will be due in class on the noted due date. Additionally, all assignments must be submitted digitally to the designated Dropbox on D2L on the prescribed due date, ***in PDF format***, including images of design projects, PDF presentations and papers.

Final Examinations: There is no final examination for this course. Traditionally, for design studio courses, a final studio review is scheduled after the end of classes. ***For ARCH 406, there will be a final studio review on Thursday, December 7, from 1-4pm, in [REDACTED].***

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

Students are expected to write at a university level, demonstrating a proficient and professional use of English, proper citation methods, and compliance with academic regulations to negate instances of plagiarism and academic misconduct.

Late Assignments:

Late submission of project assignments will result in a half grade penalty, per day late. After 10 days late, the assignment will receive an 'F' grade. Note that in rare circumstances, students may seek an extension for a particular project. Students should advise their TAs as soon as the need is known, provide the reason for the extension, and most importantly, provide a **plan** as to when the project assignment will be submitted. Students must advise their TAs at least 48 hours in advance of a given due date to be eligible for an extension, otherwise the project assignment will be graded according to the late submission protocol noted above.

Criteria that must be met to pass: students must complete **all** assignments by the prescribed due dates to pass. **Failure to submit ANY assignment will result in an automatic "F" grade for the course.**

Grading Scale:

Final grades shall be reported as letter grades, correlating to the grade point value as per column 2 below. Final grades shall be calculated according to the 4-point range as noted in column 3. Assignments calculated by percentage grades will use the equivalent values shown in column 4.

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.

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.

A grade of "C-" or below may not be sufficient for promotion or graduation, see specific faculty regulations. The number of "D" or "D+" grades acceptable for credit is subject to specific undergraduate faculty promotional policy.

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 1	Sep 06	Course Outline	<i>P1 Issued</i>
	Sep 08	Form/space F/G lecture	
Week 2	Sep 11	P1 Crits (for all 'crits' students are expected to attend and have new work ready to review)	<i>P2 Issued</i>
	Sep 13	P1 Crits	
	Sep 15	P1 Due: Discussion P1	
Week 3	Sep 18	P2 3D F/G reversible lecture	
	Sep 20	P2 Crits	
	Sep 22	P2 Crits	
Week 4	Sep 25	P2 Due: Discussion P2	<i>P3 Issued</i>
	Sep 27	P3 Form Lecture (linear, planar, massive, axial, hierarchy)	
	Sep 29	P3 Crits	
Week 5	Oct 02	P3 Crits	<i>P4, P5 Issued</i>
	Oct 04	P3 Due: Discussion P3	
	Oct 06	P4 Curvilinear Form Lecture	
Week 6	Oct 09	THANKSGIVING NO CLASS	
	Oct 11	P4 Crits	
	Oct 13	P4 Crits	
Week 7	Oct 16	P4 Due: Discussion P4	<i>P6 Issued</i>

	Oct 18	P6 Composition of Space Lecture	
	Oct 20	P6 Crits	
Week 8	Oct 23	P6 Crits	
	Oct 25	P6 Crits	
	Oct 27	P6 Due: Discussion P6	<i>P7 Issued</i>
Week 9	Oct 30	P7A Intro to site photography and drawing Lecture	
	Nov 01	P7A Crits	
	Nov 03	P7A Due: Discussion P6A	
Week 10	Nov 06	P7B site analysis lecture	
	Nov 08	P7B Crits	
	Nov 10	P7B Crits	
Week 11	Nov 13	Remembrance Day Observed	
	Nov 15	NO CLASS READING DAYS	
	Nov 17	NO CLASS READING DAYS	
Week 12	Nov 20	P7B Due: Discussion P7B Site Analysis	
	Nov 22	P7C design of public space lecture	
	Nov 24	P7C Crits	<i>P8 Issued</i>
Week 13	Nov 27	P5 Due, P8 Portfolio lecture,	
	Nov 29	P7C Crits	
	Dec 01	P7C Crits	
Week 14	Dec 04	P7C crits	
	Dec 06	P7C Crits	
	Dec 07	P7C Due	
Post Course:	Dec 13	P8 Due: uploaded to D2L	

Special Budgetary Requirements

Please note that students will incur the cost of project materials necessary to complete the design project 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 are listed below and will be noted in specific project briefs (see project schedule above). Additionally, the following design/drafting supplies will be needed to execute projects in the studio (some are optional, as noted):

- drawing pencils: 3H, 2H, HB, 4B, 6B
- pencil sharpener
- mechanical pencils and leads (either 0.5mm or 2mm) are optional
- White drawing eraser

- fine point drafting markers for projects 6 & 7 (detail provided when projects are issued)
- A roll of tracing paper is helpful for projects 6 & 7
- Drawing straight edges (drafting set squares a.k.a. triangles, plastic ruler, etc.)
- T-square is optional
- Circle and elliptical templates are useful, but optional and not required.
- A metric drafting scale is optional, a metric ruler is required
- Drafting masking tape
- Matt knife
- Cutting pad
- Hot melt glue gun
- 18" cork-backed steel ruler

Project Materials:

- P1: White foam core, and 1 sheet Black artist paper (good for P1 and P2, recommended brand Fabriano Tiziano).
- P2: P1 materials plus standard sugar cubes.
- P3: Reworkable artist's plasticine (one color only, recommended brand Van Aken Plastalina)
- P4: Reworkable artist's plasticine (one color only, recommended brand Van Aken Plastalina)
- P5: No materials required.
- P6: Student choice.
- P7: Student choice.
- P8: No materials required.

Note that art supplies and materials are available at various art supply stores throughout the city, though Mona Lisa Artist Materials (<https://www.monalisayyc.com/>) is recommended because I know for sure they have the listed items in stock. Also, remember to show your student card for the 10% student discount.

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://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).

[Student Accessibility Services](#) 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 Procedures 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://www.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 and Gender-Based Violence Policy guides us in how we respond to incidents of sexual and/or gender-based violence, including supports available to those who have experienced or witnessed sexual/gender-based violence, or those who are alleged to have committed sexual/gender-based 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.

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