



COURSE NUMBER:	ARCH 406
COURSE NAME:	DESIGN THINKING IN THE BUILT ENVIRONMENT STUDIO I
Pre-Requisites:	ARST 201 or ARCH 201 Architecture and the Built Environment
Classroom:	PF2151
Class Dates:	In person, synchronous classes: M/W/F 11:00 to 11:50am (with the exception of holidays and Reading Week). Other asynchronous assignments due as described in the project briefs, throughout the duration of the course from September to December, 2021.
Instructor:	Barry Wylant bwylant@ucalgary.ca PF2104 Office Hours: by appointment, via Zoom
Email Policy:	Please note that all course communications must occur using your @ucalgary.ca email address. I will respond to emails within 2 business days.
Teaching Assistants:	Nooshin Esmaeili: nooshin.esmaeili@ucalgary.ca Mohammad Moezi: mohammadhossein.moez@ucalgary.ca Ji Song Sun: jisong.sun@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, 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 work largely individually to complete a series of experiential learning exercises 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 modelling, 2D representation and visual/oral presentation skills. Students will be evaluated based on project submissions and a final portfolio of course projects.

COURSE HOURS: 3 Units

IN-PERSON CLASS FORMAT

Given its studio format, this course will take place synchronously in PF2151 (M/W/F 11:00 to 11:50am) and supported by Desire2Learn (D2L). Students are required to participate in the synchronous classes, as per the noted times. Students will participate asynchronously, on their own time, to contribute to the D2L discussion board, watch videos (as required), and to complete class assignments, projects and exercises. If, due to unforeseen circumstances, a student is unable to participate in a class session, please advise your TA ahead of time via email, cc'ing the instructor. **Please do this at least 24 hours ahead of the scheduled class time.**

TECHNOLOGY REQUIREMENTS

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.

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

COURSE OBJECTIVES / LEARNING OUTCOMES

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

LEARNING RESOURCES / READINGS

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)

Droste, M. *Bauhaus*. Berlin: Bauhaus-Archiv Museum für Gestaltung, 1990.

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.

ASSESSMENT COMPONENTS / COURSE ASSIGNMENTS

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 09	Due Sep 18
P2	10%	3D F/G* reversible composition	Issued Sep 18	Due Sep 28
P3	10%	Linear 3D composition	Issued Sep 28	Due Oct 14
P4	10%	Curvilinear 3D composition	Issued Sep 28	Due Oct 14
P5	10%	Reflective Paper	Issued Oct 14	Due Nov 27
P6	15%	Composition of space	Issued Oct 14	Due Oct 30
P7	30%	Node design (Parts A, B, C)	Issued Nov 02	Due Dec 09
P8	10%	Portfolio	Issued Nov 16	Due Dec 14

*Figure/Ground

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.

Expectations for Writing (<https://www.ucalgary.ca/pubs/calendar/current/e-2.html>): Students are expected to write at a university level, demonstrating a highly 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.***

TOPIC AREAS AND DETAILED CLASS SCHEDULE

Week 1	Sep 08 Sep 10	Course Outline Form/space F/G lecture	<i>P1 Issued</i>
Week 2	Sep 13 Sep 15 Sep 17	P1 Crits (for all 'crits' students are expected to attend and have new work ready to review) P1 Crits P1 Due: Discussion P1	<i>P2 Issued</i>
Week 3	Sep 20	P2 3D F/G reversible lecture	

	Sep 22 Sep 24	P2 Crits P2 Crits	
Week 4	Sep 27 Sep 29 Oct 01	P2 Due: Discussion P2 P3 Form Lecture (linear, planar, massive, axial, hierarchy) P3 Crits	<i>P3 Issued</i>
Week 5	Oct 04 Oct 06 Oct 08	P3 Crits P3 Due: Discussion P3 P4 Curvilinear Form Lecture	<i>P4, P5 Issued</i>
Week 6	Oct 11 Oct 13 Oct 15	THANKSGIVING NO CLASS P4 Crits P4 Crits	
Week 7	Oct 18 Oct 20 Oct 22	P4 Due: Discussion P4 P6 Composition of Space Lecture P6 Crits	<i>P6 Issued</i>
Week 8	Oct 25 Oct 27 Oct 29	P6 Crits P6 Crits P6 Due: Discussion P6	<i>P7 Issued</i>
Week 9	Nov 01 Nov 03 Nov 05	P7A Intro to site photography and drawing Lecture P7A Crits P7A Due: Discussion P6A	
Week 10	Nov 08 Nov 10 Nov 12	NO CLASS READING DAYS NO CLASS READING DAYS NO CLASS READING DAYS	
Week 11	Nov 15 Nov 17 Nov 19	P7B site analysis lecture P7B Crits P7B Crits	
Week 12	Nov 22 Nov 24 Nov 26	P7B Due: Discussion P7B Site Analysis P7C design of public space lecture P7C Crits	<i>P8 Issued</i>
Week 13	Nov 29 Dec 01 Dec 03	P5 Due, P8 Portfolio lecture, P7C Crits P7C Crits	
Week 14	Dec 06 Dec 08	P7C Crits P7C Due	
Post Course:	Dec 13	P8 Due: uploaded to D2L	

GRADE 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.

GUIDELINES / CONDUCT 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.

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. Student must behave in a professional manner during the session. Students, employees, and academic staff are expected to demonstrate behaviour in class that promotes and maintains a positive and productive learning environment.

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

Please note that 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 (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 will be 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

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS

COVID-19 PROCEDURE FOR SICK STUDENTS: <https://ucalgary.ca/risk/sites/default/files/Covid-19%20Folder/COVID-19-Procedure-for-Sick-Students.pdf>

ACADEMIC ACCOMMODATION

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The Student Accommodations policy is available at <https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>.

Students needing an accommodation based on disability or medical concerns should contact Student Accessibility Services (SAS) in accordance with the Procedure for Accommodations for Students with Disabilities (<https://www.ucalgary.ca/policies/files/policies/procedure-for-accommodations-for-students-with-disabilities.pdf>). Students who require an accommodation in relation to their coursework based on a protected ground other than Disability should communicate this need in writing to their Instructor.

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 the course, academic matter, or a grade that they have been assigned, they must first communicate this concern with the instructor. If the concern cannot be resolved with the instructor, the student can proceed with an academic appeal, which normally begins with the Faculty. <https://www.ucalgary.ca/secretariat/student-appeals>

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