



DESIGN THINKING in the BUILT ENVIRONMENT STUDIO 1 ARST 431 H(3-0)

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PF2104
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Fall 2019 Lectures Monday, Wednesday, Friday
Time: 9:00 – 9:50 am
Location: PF2151

Description of the Course

This 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.

The course will take place within a studio space of the School of Architecture, Planning and Landscape (SAPL). As such, students will be exposed to the atmosphere and work of graduate students completing degrees in the SAPL professional design programs. Students will also be exposed to studio reviews, the Design Matters Lecture Series, and ongoing displays of student and professional design work in the SAPL Stantec Gallery.

Course Objectives and Learning Outcomes

This course has the following objectives:

- Introduce design thinking and its application in design processes;
- Explore abstract visual literacy in aspects of visual/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.

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)
- Schön, Donald. "Knowing in Action: The New Scholarship Requires a New Epistemology." *Change*. 27,6 (1995): 26-34.
- Wylant, Barry. "Design and Thoughtfulness." *Design Issues*. 32,1 (2016): 72-82
- Hara, Kenya *Designing Design*. 2014. Lars Müller Publishers. (Chapter 8 "What is Design")

Additionally, the following books provide strong references for foundational design skills and thinking. They are not required texts, but offered here as a useful reference and are all available in the U of C Library.

- 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 ten assignments in total for the term:

P0	10%	Studio attendance/participation		
P1	5%	2D F/G* composition	Issued Sep 06	Due Sep 13
P2	5%	2D F/G* reversible composition	Issued Sep 13	Due Sep 20
P3	5%	Linear 3D composition	Issued Sep 20	Due Sep 27
P4	5%	3D F/G* composition	Issued Sep 27	Due Oct 04
P5	5%	Curvilinear 3D composition	Issued Oct 04	Due Oct 11
P6	10%	Reflection Paper	Issued Oct 11	Due Nov 22
P7	10%	Composition of space	Issued Oct 17	Due Oct 25
P8	5%	Surface composition	Issued Oct 25	Due Nov 01
P9	30%	Node space design	Issued Nov 01	Due Dec 06
P10	10%	Portfolio	Issued Nov 01	Due Dec 16

*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. As noted above, 10% of the course grade is assigned to studio participation.

Guidelines for Submitting Assignments: All assignments will be due in class on the noted due date. Additionally, all assignments must be submitted digitally to D2L on the prescribed due date, in pdf format, including images of design projects, pdf presentations and papers.

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.**

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.

Topic Areas and Detailed Class Schedule

Week 1	Sep 06	Course Outline	<i>P1 Issued</i>
Week 2	Sep 09 Sep 11 Sep 13	Form/space F/G lecture P1 Crits P1 Due: Discussion P1	<i>P2 Issued</i>
Week 3	Sep 16 Sep 18 Sep 20	Intro to P2 F/G lecture P2 Crits P2 Due: Discussion P2	<i>P3 Issued</i>
Week 4	Sep 23 Sep 25 Sep 27	P3 linear, planar, massive lecture P3 Crits P3 Due: Discussion P3	<i>P4 Issued</i>
Week 5	Sep 30 Oct 02 Oct 04	P4 3D F/G lecture P4 Crits P4 Due: Discussion P4	<i>P5 Issued</i>
Week 6	Oct 07 Oct 09 Oct 11	P5 3D curvilinear composition lecture P5 Crits P5 Due: Discussion P5	<i>P6, P7 Issued</i>
Week 7	Oct 14 Oct 16 Oct 18	Thanksgiving P7 Composition of space lecture P7 drawing lecture, P7 Crits	
Week 8	Oct 21 Oct 23 Oct 25	P7 Crits P7 Crits P7 Due: Discussion P7	<i>P8 Issued</i>
Week 9	Oct 28 Oct 30 Nov 01	P8 surface lecture P8 Crits P8 Due: Discussion P8	<i>P9, P10 Issued</i>
Week 10	Nov 04 Nov 06 Nov 08	P9 intro to node design lecture P9 intro to site photography and drawing Lecture P9 photo, drawing crits	
Week 11	Nov 11 Nov 13 Nov 15	NO CLASS READING DAYS NO CLASS READING DAYS NO CLASS READING DAYS	
Week 12	Nov 18 Nov 20 Nov 22	P9 site analysis/ graphic design lecture P9 site analysis crits P6 Due; P9 site analysis pin up	
Week 13	Nov 25 Nov 27 Nov 29	P9 node design lecture P9 Crits P9 Crits	
Week 14	Dec 02	P9 crits	

Dec 04
Dec 06

P9 crits
P9 Due: Discussion P9

Post Course: Dec 16

P10 Due: uploaded to D2L

Media and Recording in Learning Environments

Part 1

University Calendar: <https://www.ucalgary.ca/pubs/calendar/current/e-6.html>

Recording of lectures (other than audio recordings that are pre-arranged as part of an authorized accommodation) is not permitted.

Students may not record any portion of a lecture, class discussion or course-related learning activity without the prior and explicit written permission of the course instructor or authorization from Student Accessibility Services. For any other use, whether by duplication, transcription, publication, sale or transfer of recordings, written approval must be obtained from the instructor for the specific use proposed. Any use other than that described above constitutes academic misconduct and may result in suspension or expulsion.

Part 2

The instructor may use media recordings to capture the delivery of a lecture.

The instructor will notify all students and guests in the class that the event is being recorded. If a student or guest wants to take steps to protect privacy, and does not want to be recorded, the instructor will provide the individual (s) with an alternative means of participating and asking questions (e.g., passing written notes with questions). Students cannot be penalized for choosing not to be recorded in situations where participation is part of the course. Students must be offered other ways of earning participation credit that do not involve recording.

Any video-recording would be intended to only capture the instructor and the front of the classroom. Students/other participants would not necessarily be visible on video recordings.

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. Additionally, the following design/drafting supplies will be needed to execute projects in the studio (some are noted as optional):

- 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 7 & 9 (detail will be provided when projects are issued)
- A roll of tracing paper is helpful for projects 7 & 9
- 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
- Drafting masking tape
- Matt knife
- Cutting pad
- Hot melt glue gun
- 18" cork-backed steel ruler

Supplies specific to each project will be noted in the project briefs, when the project is issued (see schedule above).

UNIVERSITY OF CALGARY POLICIES AND SUPPORTS

Academic Accommodation

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; 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/. 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. The full policy on Student Accommodations is available at <http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy.pdf>.

Academic Misconduct

Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Most commonly plagiarism exists when: (a) the work submitted or presented was done, in whole or in part, by an individual other than the one submitting or presenting the work, (b) parts of the work are taken from another source without reference to the original author, (c) the whole work (e.g., an essay) is copied from another source, and/or, (d) a student submits or presents work in one course which has also been submitted in another course (although it may be completely original with that student) without the knowledge of or prior agreement of the instructor involved. While it is recognized that scholarly work often involves reference to the ideas, data and conclusions of other scholars, intellectual honesty requires that such references be explicitly and clearly noted. Plagiarism is an extremely serious academic offence. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.

For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

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.

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.

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://ucalgary.ca/student-appeals/>

More Student Support and Resources (e.g. safety and wellness)

These can be found here: <https://www.ucalgary.ca/registrar/registration/course-outlines>