Design Media and Exploration I EVDA 541 H(2-8T)/ARST 451

Fall 2018
MW 0840-1250

INSTRUCTORS
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CACB SPC: graphics skills [primary] /design skills [secondary]

Introduction

Design Media and Exploration I is a skill-building course, taught in conjunction with Studio One. The course begins by framing the notion of representation, the drawings and models that are the architect's tools to explore communicate and ultimately anticipate a future. To this end, the course covers a range of digital and analog techniques for communication, production and design thinking. Three modes of representation will be developed: descriptive explorations, interpretive explorations, and transformative explorations. The course offers a series of graphic exercises with an emphasis placed on the connections between design thinking and making for communication, design iteration, and design resolution.

Objectives

1. To develop a critical understanding of representation and its connection to the generative processes of architecture.
2. To develop communication skills across a number of platforms (digital and physical drawing and making).
3. To connect critical thinking with design thinking through the development of design processes and the application of strategic tools to assess, interpret, transform and create bodies of knowledge.
4. To develop critical-productive positions regarding the use of various techniques and technologies as they relate to architectural design.
5. To develop skills and familiarity around the use of diagramming, orthographic projection, constructed drawings, scale and measurement, visual notes and sketching, composition and layout, modeling by hand and by machine, and material communication, as well as familiarity with the software packages Illustrator, Photoshop, In-Design, Rhinoceros and Grasshopper.

Teaching Approach

The course is taught using lectures, tutorials and hands-on production. Typically, a lecture in the specific topic will be given alongside a related assignment handed out at the conclusion of the lecture. The following class, a series of tutorials and demonstrations by the course Teaching Assistants will introduce techniques for completing the assignments. The faculty team and Teaching Assistants will provide desk crits, tutorials and reviews of work as specified in each problem statement. Students should be productive during the time allotted in the course for working on projects and should expect to spend additional time outside of the class completing the assignments. Class participation is vital to student success in the course and attendance to lectures and tutorials is mandatory. A maximum of 2 unexcused absences will be allowed.

Sketching will be deployed throughout the term and within projects as a means to evaluate and iterate ideas around each graphics project. A portfolio of sketching will be maintained throughout the term. Completed graphic work is to be posted by the students to the course D2L website. Assignments will not be accepted by email.

CONTENT: TOPIC AREAS AND CLASS SCHEDULE (SUBJECT TO CHANGE)

SEPTEMBER

M10 **Considering the Object: Descriptive Explorations**
Course Introduction
Lecture: Introduction to Representation, Plane and Parallel Projections (JJ)
Assignment 1A – 2D Hand Drawing – Found Objects
Introduction to Teaching Assistants and D2L (Teaching Assistants)

W12 Drawing Session 2D Orthographics
Break
Tutorial 11:00 Photoshop & InDesign (TAs)

M17 Assignment 1A – Pinup Review – (30 mins)
Lecture/Tutorial: 2 Dimensional Graphic Standards &Techniques in Rhino (MP)
Assignment 1B – Representation/Procedure/Object -Cube Explorations
In Class Drawing Session (TAs)
Illustrator: Line Weights, Fills, Annotation Techniques

W19 Lecture/Tutorial: Mapping Material Dimensions: Volume, Mass and Scale (Rhino 3D) (MP)
In Class Drawing + Modeling Session (TAs)

M24 Lecture: Diagrams in Architecture (JJ)
Tutorial – Base Rendering in Rhino + Context in Photoshop (TAs)
In Class Work Session – Rendering & Photoshop

W26 Assignment 1B Review
Lecture/Tutorial: Visual Communication: Rendering Materiality, Form and Light & Working with Meshes (MP)
In Class Work Session – Rebuilding Objects
Assignment 1C: Reconstructing the Object Part 1: Digital & Material Processes

OCTOBER

M01 Lecture: Ubiquitous Simultaneity: Data, Form and Interface (JJ)
Tutorial: Sectioning, Editing and Linework + 3D Printing
In Class Work Session: Orthographic + Perspectival Editing

W03 Review Session Module 1 : Meshes, Prints, Models and Line Drawings

M08 Thanksgiving: no classes

W10 Project 1C Pin Up and Review
Considering Synthesis: Interpretive and Transformative Explorations
Lecture: Grasshopper in Rhino Part 1- Surfaces (MP)
Assignment 2A
*Module 1 Grades Distributed

15-19 BLOCK WEEK COURSES

M22 Assignment 2A Review
Lecture: Grasshopper in Rhino Part 2 – Object Description (MP)
Assignment 2B
In Class Work Session : Grasshopper
W24 Psuedo Code, Trouble Shooting & Progress Review
In Class Work Session
M29 Assignment 2B Review
Lecture: Grasshopper in Rhino Part 3 – Information Drivers (MP)
Assignment 2C:
W31 Tutorial and Working Session – Data & Grasshopper (MP & TAs)

NOVEMBER

M05 Module 2 Pin Up and Review
Considering the Tectonic and the Technical: Descriptive and Interpretive Explorations
Lecture: Tectonics and the Technical (JJ)
Assignment 3A & 3B – Communication & Making
In Class Formation of Teams, Site Selection and Documentation

W07 Lecture: Situated Assemblies and Fabrication (MP)
Preliminary Drawings & Design Review
In Class Working Session – Project Design
*Module 2 Grades Distributed

12-16 Fall Break – No Courses

M19 Pin Up Review – Site Documentation & Design Proposal (Interim)
W22 Component Prototype Review
In Class Work Time – Fabrication, Documentation and Assembly
M26 WORKING SESSION & DESK CRITS
W28 Module 3 Presentations – FINAL PROJECT DUE

DECEMBER
M03 Lecture/Tutorial: Course Portfolios
Porfolio Assignment & Course Evaluations
W05 OPEN for Review of Studio Deliverables

Readings and References
Although there are no required readings for this course, the following will be useful as references for both the technical aspects of communication and the conceptual underpinnings of the course. In addition your instructors will provide suggested readings throughout the term to augment this list:

Project examples similar to those required in this course can be found in
Johnson, Jason & Josh Vermillion, *Digital Design Exercises for Architecture Students*
Conceptual Background
Balmond, Cecil, *Informal*
Corner, Paul, *Taking Measure Across the American Landscape*

Technical Background

Browning, Hugh, *The Principles of Architectural Drafting*

C Ching, Francis, D.K., *Design Drawing*

Ramsay and Sleeper, *Architectural Graphic Standards*

Communication

Tufte, Edward, *Envisioning Information*

Resources

Illustrator:
Lynda.com: https://www.lynda.com/Illustrator-training-tutorials/227-0.html
Adobe TV: https://helpx.adobe.com/illustrator/tutorials.html

InDesign:
Lynda.com: https://www.lynda.com/InDesign-training-tutorials/233-0.html
Adobe TV: https://helpx.adobe.com/indesign/tutorials.html

Photoshop:
Lynda.com: https://www.lynda.com/InDesign-training-tutorials/233-0.html
Adobe TV: https://helpx.adobe.com/photoshop/tutorials.html

AutoCAD:
My Cad Site: http://www.mycadsite.com/tutorials/
CADTutor: http://www.cadtutor.net/tutorials/
Lynda.com: https://www.lynda.com/AutoCAD-training-tutorials/160-0.html
First Level 2D Fundamentals: http://www.sdcpublications.com/pdfsample/978-1-58503-959-3-1.pdf

Rhinoceros:
Learning to Use Rhino: https://www.rhino3d.com/tutorials
Rhino Tutorials: https://vimeo.com/rhino
Lynda.com: https://www.lynda.com/Rhino-training-tutorials/302-0.html
McNeel WiKi: http://wiki.mcneel.com/rhino/tutoriallinks
Plethora Project: http://www.plethora-project.com/2012/01/18/rhino-modeling-the-lf-one-by-zaha-hadid/

Grasshopper:
Grasshopper Primer: http://modelab.is/grasshopper-primer/
Grasshopper Blog: http://www.grasshopper3d.com/
Plethora Project: http://www.plethora-project.com/education/2012/02/05/rhino-grasshopper/
Generative Landscapes: https://generativelandscapes.wordpress.com/index-of-examples/

Maya:
Maya 2016 Essential Training (Lynda.com): https://www.lynda.com/Maya-tutorials/Maya-2016-Essential-Training/370380-2.html
A Basic Modeling Workflow: http://cgi.tutsplus.com/tutorials/creating-a-temple-in-maya-a-basic-modeling-workflow--cg-14076
Simply Maya: http://simplymaya.com/autodesk-maya-training/?p=0&s=n&q=23#menu Maya Tutorial for Beginners: https://www.youtube.com/watch?v=tElsku3aKQI

Evaluation

The course evaluation will be based on the assignments completed during the term. Each assignment has to be completed in order to pass the course. Each assignment in this course is worth 20 points. 5 of those points are awarded upon submission of the assignment on or before the deadline. Late work will only be graded if submitted before the end of a module or with the permission of the instructor. Evaluation will be as follows:

Assignments 80%
Class Participation and In Class Assignments 10%
Monograph Assignment 10%

Grading Scale

Final grades will be reported as letter grades, with the final grade calculated according to the 4-point range. Assignments will be evaluated by percentage grades, with their letter grade equivalents as shown.

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	

Notes:

- 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.

Notes

1. Written work, term assignments and other course related work may only be submitted by e-mail if prior permission to do so has been obtained from the course instructor. Submissions must come from an official University of Calgary (ucalgary) email account.

2. 2. Academic Accommodations. Students who require 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 or the designated contact person in EVDS, Jennifer Taillefer (jtaillef@ucalgary.ca). Students who require an accommodation unrelated to their coursework or the requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Vice-Provost (Student Experience). For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/

3. Plagiarism - 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 (this includes having another impersonate the student or otherwise substituting the work of another for one's own in an examination or test),(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. It is recognized that clause (d) does not prevent a graduate student incorporating work previously done by him or her in a thesis. Any suspicion of plagiarism will be reported to the Dean, and dealt with as per the regulations in the University of Calgary Graduate Calendar.

4. Information regarding the Freedom of Information and Protection of Privacy Act (http://www.ucalgary.ca/secretariat/privacy) and how this impacts the receipt and delivery of course material

5. Emergency Evacuation/Assembly Points (http://www.ucalgary.ca/emergencyplan/assemblypoints)

6. Safewalk information (http://www.ucalgary.ca/security/safewalk)

7. Contact Info for: Student Union (http://www.su.ucalgary.ca/page/affordability-accessibility/contact); Graduate Student representative(http://www.ucalgary.ca/gsa/) and Student Ombudsman's Office (http://www.su.ucalgary.ca/page/quality-education/academic-services/student-rights).

8. Appeals: 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: http://www.ucalgary.ca/provost/students/ombuds/appeals