

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

Fall 2017

MW 0900-1250

## 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 from ideation to fabrication.

## Objectives

1. To develop a critical understanding of representation and its connection to worldviews and intentionality in 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, AutoCad, Maya, Rhinoceros and Grasshopper.

## Teaching Approach

The course is taught through the use of 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 blog. The blog for the course is <http://evdsgraphics.ucalgaryblogs.ca/>

**Content: Topic Areas and Class Schedule** (subject to change)

SEPTEMBER

- M11 **Considering the Object: Descriptive Explorations**  
Course Introduction  
Lecture: Introduction to Representation, Plane and Parallel Projections (MB)  
Assignment 1 Handout: 2D Object Drawings  
Blog Setup Tutorial (Teaching Assistants)
- W13 Tutorial: 2Dimensional Digital Tools: Introduction to Rhino, Illustrator. Plans, Sections, Elevations, Axonometric
- M18 Lecture: The Diagram as an Analytical and Interpretive Tool (MB)  
Assignment 1 In Class Review  
Assignment 2 Handout: Precedent Documentation Orthographic Projections
- W20 Tutorial: Rhino and AutoCAD: 2D Drafting Techniques  
Illustrator: Line Weights, Fills, Annotation Techniques
- M25 Assignment 2 In Class Review  
Lecture: Mapping Material Dimensions: Volume, Mass and Scale (MP)  
Assignment 3: Precedent Documentation 3D Chunk/Fragment Annotation
- W27 Tutorial: Maya/Rhino 3D Modeling  
Illustrator 3D Export to 2D Drawings

OCTOBER

- M02 **Considering Context: Descriptive, Interpretive and Transformative Explorations**  
Assignment 3 In Class Review  
Mapping Physical Dimensions (MB)  
Mapping Immaterial Dimensions: Processes, Flows, Senses (MP)  
Assignment 4 Handout: Immaterial Flows Digital Site Models
- W04 Tutorial: Maya/Rhino, Photoshop: Rendering, Post-Production & Animation
- M09 Thanksgiving and Block Week: no classes
- M16 **Considering Synthesis: Interpretive and Transformative Explorations**  
Assignment 4 In Class Review  
Lecture: Critical Thinking, Design Thinking, Visual Literacy (MB)  
Lecture: Visual Communication: Rendering Materiality, Form and Light (MP)  
Assignment 5 Handout:
- W18 Tutorial: Rendering Techniques – Teaching Assistants
- M23 Assignment 5 In Class Review  
Lecture: Generative Tools 1 (MP)  
Assignment 6 Handout:
- W25 Tutorial :
- M30 Assignment 6 In Class Review  
Lecture: Generative Tools 2  
Assignment 7 Handout:

NOVEMBER

- W01 Tutorial: Grasshopper
- M06 Assignment 7 In Class Review  
Lecture: Generative Tools 3
- W08 **Considering the Tectonic and the Technical: Descriptive and Interpretive Explorations**  
Lecture: Tectonics and the Technical (MB)  
Assignment 8 Handout: Tectonic Model of Precedent House

- M13 University Holiday: Remembrance Day Celebration  
W15 Tutorial on Tectonic Model  
M20 **Considering Fabrication**  
Assignment 8 In Class Review in Gallery  
Lecture: Situated Assemblies and Fabrication (MP)  
Assignment 9 Handout: Measuring and Documenting, Designing and Fabricating a Situated Assembly  
Assignment 9 Pin-up and In Class Review  
W23 Tutorial: Documentation  
M27 Assignment 9 Part One In Class Review and Pin-up  
Assignment 9 Part Two Discussion  
Lecture: Rendering and Photoshop (MP)  
W29 Tutorial: Fabrication, Rendering and Photoshop
- DECEMBER
- M04 Assignment 9 Part Two In Class Review  
Course Evaluations  
W06 OPEN for Review of Studio Deliverables

### **Readings and References**

Although there are no required readings for this course, the following list should be used as reference material.

#### Technical

Browning, Hugh, *The Principles of Architectural Drafting*  
C Ching, Francis, D.K., *Design Drawing*  
Ramsay and Sleeper, *Architectural Graphic Standards*

#### Conceptual

Balmond, Cecil, *Informal*  
Corner, Paul, *Taking Measure Across the American Landscape*  
Johnson, Jason & Josh Vermillion, *Digital Design Exercises for Architecture Students*

#### 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/pdfsamples/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/tutorialslinks>

Plethora Project: <http://www.plethora-project.com/2012/01/18/rhino-modeling-the-1f-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. The late work will receive 10% reduced grade per week. Students are required to post all assignments to the class blog. Evaluation will be as follows:

Weekly assignments 70%

Class Participation and In Class Assignments 20%

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.

<b>Grade</b>	<b>Grade Point Value</b>	<b>4-Point Range</b>	<b>Percent</b>	<b>Description</b>
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. Academic Accommodations. The Academic Accommodations Policy can be found at: <http://www.ucalgary.ca/access/accommodations/policy>. It is the students' responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodations and have not registered with Student Accessibility Services, please contact them at 403.220.6019. Students who have not registered with Student Accessibility Services are not eligible for formal academic accommodations. More information about academic accommodations can be found at [www.ucalgary.ca/access](http://www.ucalgary.ca/access). You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.
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>).