EVDA 543 GRAPHICS II
Winter 2011 (Half course)

Course days:	Mon/Wed 09:30 - 13:20 hrs.	
Room:	PF 2160	
Instructors:	Matt Knapik	graphics@mattknapik.com
	Alison MacLachlan	alimaclac@gmail.com
TAs:	Jodi James	evdsgraphicsta@gmail.com
	Stephen Rowe	evdsgraphicsta@gmail.com
Course coordinator:	Josh Taron	josh@synthetiques.net

INTRODUCTION

EVDA 543 is the continuation of the graphics sequence in the Master of Architecture. Content focuses on digital modes of drawing, modeling, and rendering while framing architecture as a discipline primarily concerned with information production, management, communication, and fabrication. Lectures explore the challenges facing architecture as cities and populations become increasingly informationalized. Students are exposed to a series of related design exercises that simultaneously develop their software, fabrication and design thinking skills. These exercises will yield a series of models (digital and material) and renderings (digital animations and stills) over the course of the term.

The following CACB Student Performance Criteria will be covered in this course at a primary level: A3: Graphic Skills. The following CACB Student Performance Criteria will be covered in this course at a secondary level: B1: Design Skills; C3: Technical Documentation.

OBJECTIVES

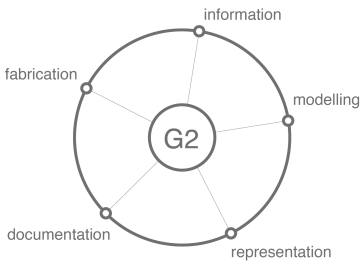
In this course, students will:

1. Continue to develop a discourse on technique, representation, and making in architecture.
2. Discuss and critique the role of the architect as a manager of information and geometry.
3. Compose and manipulate information and geometries through relationships through digital means.
4. Produce, manage, and manipulate information and geometries through parametric software.
5. Represent information and geometries through the production of digital models, diagrams, and renderings.
6. Design, organize, and assemble physical constructs via digital fabrication methods.

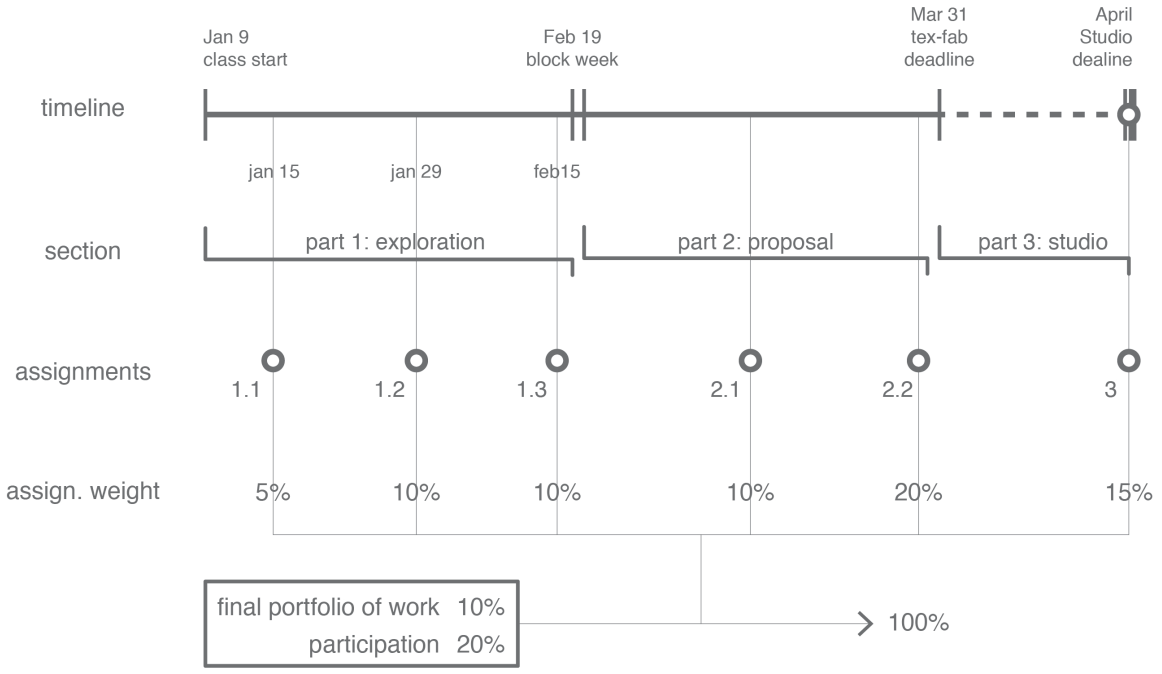
TEACHING APPROACH

The course will involve lectures, hands on tutorials, working sessions, discussions and group and individual critiques. Students are expected to attend and contribute to all course sessions. Students will 'learn through doing' through a combination of assignments and applied lab exercises. The assignments are designed to challenge students to develop their own process with an emphasis on parametric variations and their visual representation.

Throughout the course, assignments will explore modes of information management, modeling, representation, documentation, and fabrication (see diagram). The assignments will vary in their path through these modes and the emphasis they place on each component. Students will have the opportunity to explore multiple design trajectories throughout the course.



COURSE MAP



CONTENT

Part I: Exploration

Part one, which runs up to reading week, will explore one full cycle of the course content. Students will be exposed to fabrication, information management, parametric modeling, digital representation, and assembly documentation. The purpose of part one is to introduce new techniques, explore translation between modes and processes, and gain a conceptual framework for these activities. Throughout part one students will be searching for moments of ingenuity, genius, poetry, and performance in their research.

Key lecture questions:
How are architectural graphics evolving to deal with increasingly complex bodies of information? How can geometry and form create a range of effects through ordered manipulation? How can this form, and its effects, be communicated in digital outputs? What performances do we ask of particular spaces? How can geometry be manipulated by parametric software to support/create these performances? What do parametric techniques offer to the creation of assembly documentation for building complex geometries?

****Reading Week****

Part II: Proposal

In part two, which runs from the end of reading week to the end of March, students will prepare an entry for the tex-fab computational fabrication design competition. Students will once more have the opportunity to explore all modes of production, but will explore increased complexity, scale, technical requirements, and performance expectations throughout. Key insights from part 1 will form a foundation for this proposal.

Key lecture questions:

How can geometry respond dynamically to systems? What types of inputs can drive parametric function? How can parametric systems create iterative responses to complex data sets? How can animation be used to communicate parametrically-driven outcomes? What are the implications of parametric systems in the process of making? What digital fabrication methods enable the translation of parametric models to real-world constructs? How are these processes integrated into the parametric model? What types of communication are sponsored by digital fabrication techniques?

Part III: Studio

Part three, which runs from the end of March until the studio deadline, will offer students an opportunity to enrich their studio projects by integrating graphic techniques and concepts. This offers students a unified deadline and the chance to focus their time and efforts on the creation of graphic support material for the studio. There will remain an expectation of graphics deliverables in the weeks leading to the final studio presentation, which will be clearly communicated to students at the beginning of part three.

COURSE EXPECTATIONS AND MEANS OF EVALUATION

Students will be expected to complete all assignments and attend all lectures. Students will have the ability to revisit assignments to improve their standing in the final portfolio evaluation. Assignment weighting will be as follows:

Part 1: Exploration	**25%**
Assign. 1.1	(5%)
Assign. 1.2	(10%)
Assign. 1.3	(10%)
Part 2: Proposal	**30%**
Assign. 2.1	(10%)
Assign. 2.2	(20%)
Part 3: Studio	**15%**
Participation (lab updates + reading responses)	**20%**
Final portfolio	**10%**
TOTAL	**100%**

All assignments will be evaluated in terms of focus (clarity), research effort (iteration + exploration), organization (structure) and support (documentation).

At the discretion of the instructor, assignments submitted after the deadline **may** be penalized with the loss of a grade (e.g.: A- to B+) for each day late. The following equivalencies (the University of Calgary has no official percentage scale system) will be used in calculating grades: **A+** (92-100); **A** (87-91.9); **A-** (82-86.9); **B+** (77-81.9); **B** (72-76.9); **B-** (67-71.9); **C+** (62-66.9); **C** (57-61.9); **C-** (52-56.9); **D+** (47-51.9); **D** (42-46.9); **F** (0-41.9).

READINGS

There are no textbooks or reading packages for this course, but individual readings may be assigned throughout the term and students are expected to complete readings when required. A series of digital files (grasshopper definitions, corresponding rhino template files, default Maya rendering files, etc will be provided to students on a per-assignment basis)

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.
2. It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. (http://www.ucalgary.ca/drc/node/46) Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. 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/su-structure/contact-info); 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).