



theverymany

GRAPHICS WORKSHOP II

EVDA 543 / ARST 453

Winter 2013 (Half course)

Course days: Mon + Wed 09:30 - 12:50

Room: PF 2160

Instructors: **Jodi James**
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Matt Knapik
MEDes, MArch (candidate)
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Alison MacLachlan
MArch
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Office meetings with course instructors can be scheduled through e-mail.

TAs: **Shane Oleksiuk**
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Stephen Rowe
Architecture M1
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Prerequisites: Graphics Workshop 1. Students not enrolled in the Master of Architecture or the Minor in Architectural Studies programs must seek permission from the instructor.

1 COURSE INTRODUCTION

EVDA 543 is the continuation of the graphics sequence in the Master of Architecture. The course 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.

2 OBJECTIVES

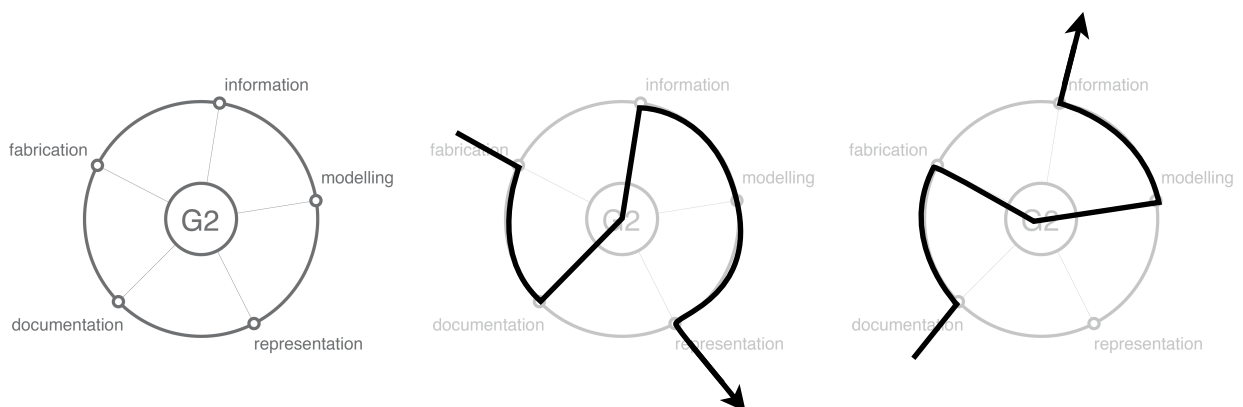
In this course, students will:

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. Produce, manage, and manipulate information and geometries through parametric software.
4. Represent information and geometries through the production of digital models, diagrams, and renderings.
5. Design, organize, and assemble physical constructs via digital fabrication methods.

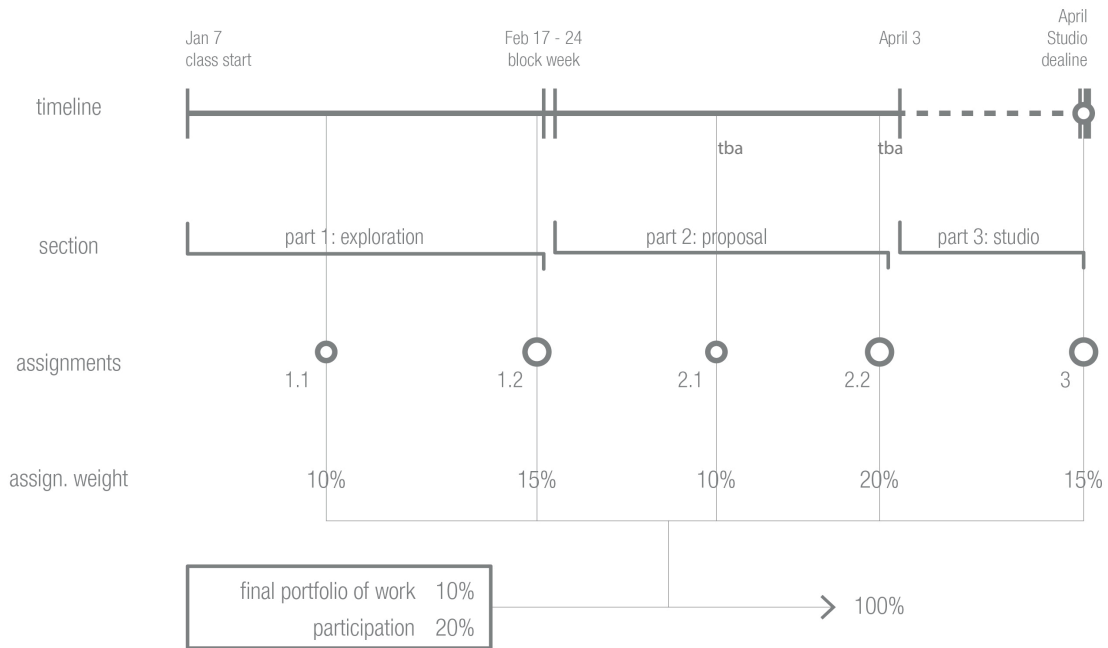
3 TEACHING APPROACH

The course will involve lectures, hands on tutorials, independent 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 design and graphics 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 below). 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.



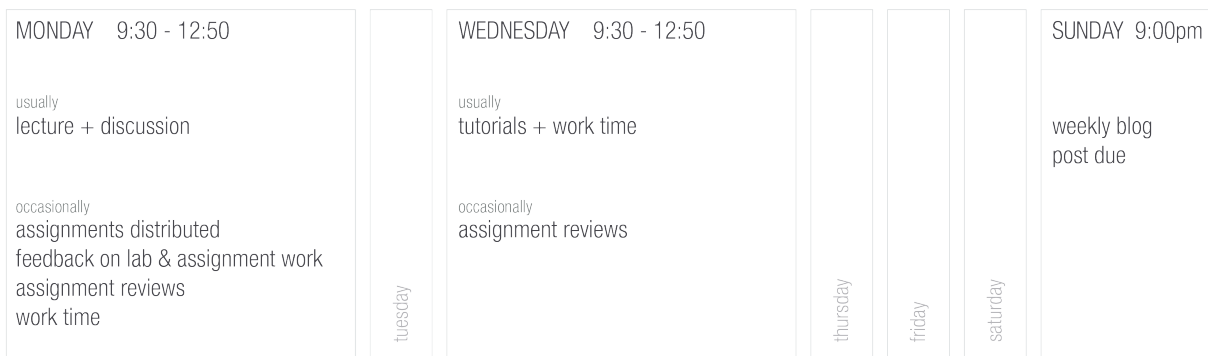
4 COURSE MAP



note: subject to change

5 WEEKLY PATTERN

The diagram below describes the weekly pattern you can expect during the course. There may be deviations from this basic pattern through the term, but the teaching team will alert you to changes in advance.



6 RESOLVING QUESTIONS AND ISSUES

Instructors and TAs will do their best to reply promptly to your e-mail messages, but please allow 1 - 2 business days for a full response to your question. Try to structure your project activities so that you do not end up requiring special assistance (from the teaching team or the shop technicians) on weekends or outside of regular hours. For example, organize yourself to complete any shop-critical fabrication work during shop-tech hours (8:30 - 4:30 M-F).

This is a large course, so to streamline communication about individual issues, please follow the resolution chart when you have a question (below):

- a. Technical Questions (how do I create a new layer in photoshop?)
 1. help file > 2. google > 3. classmates > 4. stephen or shane > 5. find another way

- b. Course Organization / Evaluation Questions (how will I be evaluated on this assignment?)
 1. course outline & assignment briefs > 2. alison, jodi, or matt

- c. Theory / Concept Questions (what do you mean by field phenomenon?)
 1. classmates > 2. anyone in the teaching team

- d. Production / Shop Questions (how do I make this? why is the laser cutter on fire?)
 1. shop manuals and guides > 2. craig or nathan > 3. don't do it

- e. Questions About Grades (I feel that my grade is incorrect/unfair)
 1. write an e-mail explaining your situation (copy alison, jodi, and matt), and we will arrange an in-person meeting

7 SAFETY

Participation in this course will involve fabrication and use of shop tools. For detailed information and safety requirements for use of the shop, please refer to the EVDS website: <http://evds.ucalgary.ca/content/workshop>. Students are required to have completed EVDS shop training in order to use the shop facilities. Please contact the head shop technician: Craig LeBlanc evdsshop@ucalgary.ca for details about training schedules and other requirements.

The course will also involve intensive use of software, which can sometimes entail long stretches in front of a computer. Please be conscious of ergonomic issues in your workspace and habits. The following website, published by Cornell University, offers some good advice about the ergonomics of notebook computer use: <http://ergo.human.cornell.edu/culaptoptips.html>.

8 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: Competition

In part two, which runs from the end of reading week to the end of March, each student will prepare an entry for a design competition selected by the teaching team. Students will once more have the opportunity to explore all modes of production, but will move toward increased complexity, scale, technical requirements, and performance. Key insights from part 1 will form a foundation for the competition 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.

9 COURSE BREAKDOWN AND MEANS OF EVALUATION

Course Breakdown

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	(10%)
Assign. 1.2	(15%)
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%

Please refer to the University of Calgary calendar (p.46) for information regarding procedure around missed exams or assignments. Please contact either Matt or Alison as soon as you foresee a potential scheduling conflict with a course requirement.

Evaluation

All assignments will be evaluated in terms of focus (clarity), research effort (iteration + exploration), organization (structure) and support (documentation). More specific grading breakdowns will be provided with each assignment. Project updates to student blogs (created in the preceding graphics course) will be expected at the end of each week, and participation in these updates constitutes the participation grade. Detailed expectations for these updates will be provided with each major assignment.

Students who wish to appeal their grade should first talk to Alison, Jodi, and Matt to clarify the particular grade assignment. For reappraisals and appeals process, please see the University of Calgary calendar (p. 49 - 52).

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.

Final grades will be reported as letter grades, with the final grade calculated according to the 4-point range.

Grade	Grade Point Value	4-Point Range	Percent	Description
A+	4.00	4.00	92.5-100	Outstanding - evaluated by instructor
A	4.00	3.85-4.00	85-92.49	Excellent - superior performance showing comprehensive understanding of the subject matter
A-	3.70	3.50-3.84	80-84.99	Very good performance
B+	3.30	3.15-3.49	76-79.99	Good performance
B	3.00	2.85-3.14	73-75.99	Satisfactory performance
B-	2.70	2.50-2.84	70-72.99	Minimum pass for students in the Faculty of Graduate Studies
C+	2.30	2.15-2.49	66-69.99	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	63-65.99	
C-	1.70	1.50-1.84	60-62.99	
D+	1.30	1.15-1.49	56-59.99	
D	1.00	0.50-1.14	50-55.99	
F	0.00	0-0.49	0-49.99	

TEXTBOOKS & REQUIRED MATERIALS/SOFTWARES

TEXTBOOKS & READINGS

There are no textbooks or reading packages for this course, but small individual readings may be assigned throughout the term and students are expected to complete these readings when required.

SOFTWARE

This course will explore a range of softwares and techniques that are transferrable between multiple software packages, but students should have the following software running on their personal laptop before class starts:

Adobe Creative Suite	(CS5 or later, ensure your package contains InDesign, Illustrator, and Photoshop)
Rhinoceros 5 (Windows)	(30-day trial available, 80% off full license price for students)
Grasshopper 3D (Windows)	(free plug-in www.grasshopper3d.com compatible with Rhino 5)
Autodesk Maya	(free student edition available www.autodesk.com)

Many students will already have this software installed from Graphics Workshop 1. All required software has been selected for its value as a learning tool and its relevance in the school and the profession. Software listed above requiring a purchased license will be useful to students throughout their degrees. 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) to ease the learning curve for softwares.

MATERIALS

Students are responsible for all material and printing costs relating to boards and constructed study models. The school's shop facilities are covered by studio fees, so use of the CNC milling machine, vacuum former, and laser cutter is free. Students are responsible for the cost of materials used.

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>).