

Dalhousie University
School of Architecture

ARCH 6504: Montage in Architecture

3 credit hours

Winter 2024

Ken Kam (ken.kam@dal.ca)

Location: B102, Medjuck Building

Time: Wednesday, 9:30 to 12:30pm

Course Description

This course examines the history, concepts, and uses of montage in architectural representation. It also considers how digital photography and digital 3D technology can generate various forms of montage and physical models for analyzing, representing, and developing architectural designs.

Additional Course Description

This course is a critical examination of montage/photomontage/physical model of architectural representation in the modern world. It develops the use of digital images in architectural design work. It also provides a detailed examination of current digital photographic equipment, software and practices, including capturing, editing, and manipulating images. Furthermore, students will research and examine how to use photographic elements to create a digital 3D environment and physical model.

Photomontage, montage, and model have long been practiced in architectural representation. Now, with computer technology, digital media can combine hand drawing, photography, 3D modeling, etc. in an almost seamless way to express architectural ideas, similar to a “cinematic matte painting.” This crosses disciplinary boundaries of various arts, including painting, digital 3D modeling, photography, sculpture and drawing.

Learning Objectives

- 1) Students will complete the course with a good understanding of the culture and history of photomontage.
- 2) Students will learn to use fragments of different landscapes, buildings, places, people,

and environments to assemble a graphic illustration and/or digital 3D model. Students will also use their photographs, design, and 3D modeling skills to create illustrations and physical models. Furthermore, by the end of the course, students will have a greater ability to express design ideas through digital media. They will also have a deeper understanding of the relevant hardware and software for digital input and output.

- 3) Students will develop research, creative, and post-production skills through the use of different 2/3D software and 3D printing in their projects.

Sequence of Projects

1. Multiple images montage (based on cinematic matte painting)
2. Digital montage: part 1 and 2
3. Digital to Model: experimentation in Blender’s physical simulation properties, e.g. geometry node, fluid/wind simulation, cloth, collision, rigid body simulation.

Assignment Objectives

The projects in this course are intended to enable you to improve your digital 3D modeling and photographic skills and in return to enhance your architectural representation skill through the use of images. Generally each project includes at least three kinds of objectives: (1) subject matter communication (meaning), (2) aesthetics (composition), and (3) technical mastery (skill).

Weekly in-person attendance is expected for this course. No video recording of lecture is permitted.

Project 1

Multiple images montage. This assignment is to get you thinking about the theory and practice of layers and perspectives.

What:

The choice of medium for visualizing an idea is something that faces all students of architecture and urban design. Each medium and style option that you select will influence how your idea is seen and understood. For this project, create three digital photographic compositions of an environment, a space and/or an idea.

How:

You are to create (using Photoshop and Blender) :

1. A color extended street scape (a practice in perspectives and layers)
2. Switch objects and backgrounds (color).
3. Three digital montages using different elements. (based on cinematic matte painting layers theory)



Digital illustration by: Ken Kam

Material:

- You can download free and high resolution images from the Library of Congress website (<http://www.loc.gov/index.html>)
- You can scan new photographs
- Digital 3D models
- Photographs of your site

Format:

digital format

Project 2

Digital Montage part 1 and 2 - Research and examine the theory/practice of image texturing, digital 3D modeling using Blender's geometry node, and rendering in a digital 3D environment.

What:

- Construct a digital three-dimensional model or scene that depicts or describes an idea, a landscape, an architectural structure/element or a fictitious scene.
- create model using geometry node
- apply image texture
- render the image
- using virtual camera to capture/render multiple images.
- print 3D models

How:

Using Blender along with other 3D software to create a model with image mapping technique and geometry node.

Rules:

To be announced.

Objectives:

1. Learn how to use image mapping and geometry node in Blender to enhance image quality.
2. Develop a further understanding of image fragmentation, assemblage, and composition
3. Express architectural ideas through digital media.



Digital illustration by: Ken Kam

Project 3

This assignment is to get you thinking about the process of transforming a two dimensional images into a physical three dimensional form.

What:

Construct a three-dimensional model or scene that depicts or describes an idea, a landscape, an architectural structure/element or a fictitious scene. It can be a static model or it can be interactive with moving parts. The primary aim is to create a physical model using Blender's Physical simulation (e.g. fluid/wind simulation, cloth simulation, force field etc...).

How:

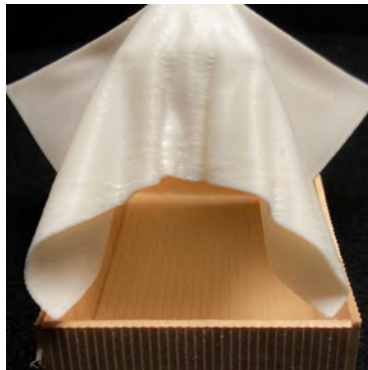
You are to use 3D printers (PLA, ABS, Resin), laser cutter/engraver, and 2D printers to build your model (please refer to images shown in class).

Rules:

Maximum volume size cannot exceed 125 inch³ (5 x 5 x 5 inches)

Objectives:

1. Develop a further understanding of digital translation from two-dimensional drawing to a three-dimensional model/diorama.
2. Develop a further understanding of image fragmentation, assemblage, and composition.
3. Express architectural ideas through digital media.



Montage in Architecture
2023/24 Winter



Digital illustration by: Matthew Griffin-Allwood

Montage in Architecture
2023/24 Winter



Digital Montage by: Alastair Bird

Montage in Architecture
2023/24 Winter



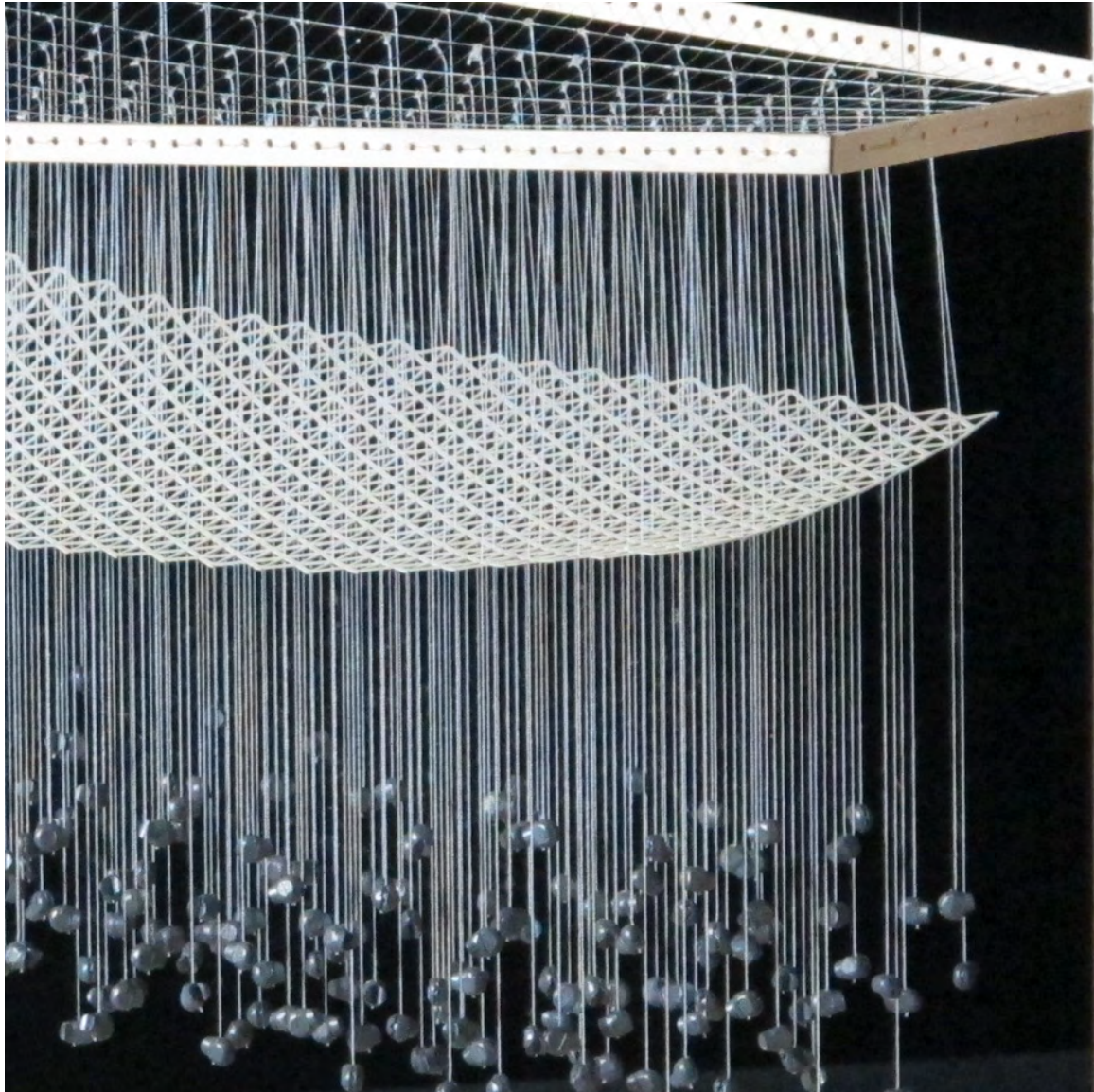
Digital Montage by: Sara Deter

Montage in Architecture
2023/24 Winter



Montage by: Elijah Lukac

Montage in Architecture
2023/24 Winter

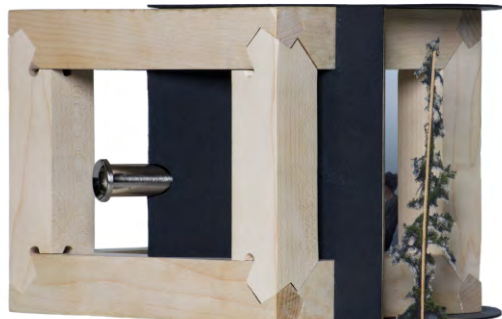
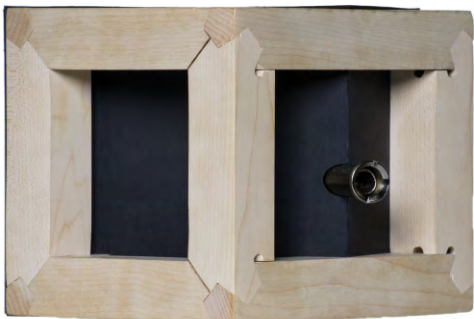


3D model by: Beth MacLeod



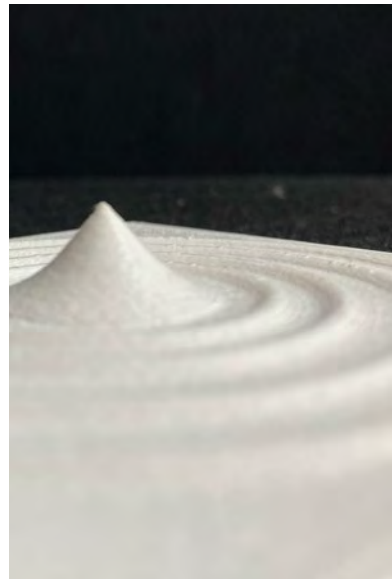
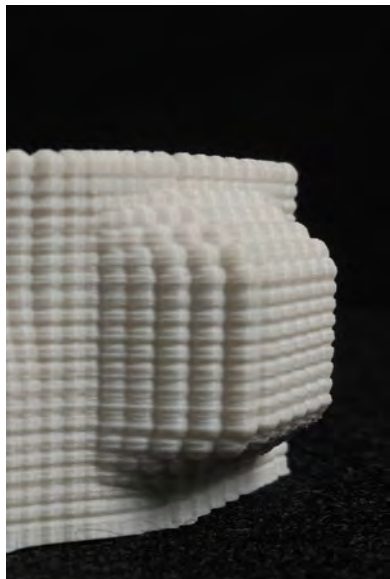
3D model by: Matthew Kijewski

Montage in Architecture
2023/24 Winter



3D model by: Matthew Kijewski

Montage in Architecture
2023/24 Winter



Timeline

Week

- 1 - Jan. 10 - First day of class - introduction to project 1
- 2 - No class (Professional Practice week)
- 3 - Jan. 24 - short assignment due / progress report due
- 4 - Jan. 31 - introduction to project 2
- 5 - Feb. 7 - **assignment 1 due** - / progress report due
- 6 - Feb. 14 Introduction to project 3
- 7 - Feb. 21- Study Break
- 8 - Feb. 28 - **assignment 2 due** - introduction to project 3 (part 2)
- 9 - Mar. 6 - progress report/presentation
- 10 - Mar. 13 - progress report
- 11 - NO CLASS Thesis exam week.
- 12 - Mar. 27 - **assignment 3 presentation.**
- 13 - Apr. 3 - SLEQ, **assignment 3 revision due**

Evaluation Criteria

Students' grades will be based on class attendance, class participation, the quality and punctuality of assignments, and your overall improvement. Ken Kam will be grading the assignments and projects. This 3-credit-hour course expects an average of 9 hours of course-related activities per week.

Components *(each project is broken into research method (10%), presentation(10%) , and results(10%))*

Project 1 - 30%

Project 2- 30%

Project 3 - 30%

Attendance - 10%

Dalhousie uses the following grade scale, grade points, and numerical equivalents: [2]

Excellent	A+	4.3	90–100%	Considerable evidence of original thinking; demonstrated outstanding capacity to analyze and synthesize; outstanding grasp of subject matter; evidence of extensive knowledge base.
	A	4.0	85–89%	
	A–	3.7	80–84%	
Good	B+	3.3	77–79%	Evidence of grasp of subject matter, some evidence of critical capacity and analytical ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.
	B	3.0	73–76%	
	B–	2.7	70–72%	
Satisfactory	C+	2.3	65–69%	Evidence of some understanding of the subject matter; ability to develop solutions to simple problems; benefitting from his/her university experience.
	C	2.0	60–64%	
	C–	1.7	55–59%	
Marginal	D	1.0	50–54%	Evidence of minimally acceptable familiarity with subject matter, critical and analytical skills.
Inadequate	F	0.0	0–49%	Insufficient evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

In this graduate course, a grade below B- will be record as "F".

Equipment/software for the course:

- Digital SLR or mirrorless camera with interchangeable lens
- tripod (optional)
- Computer (Mac or PC with Photoshop CC)
- Adobe Photoshop, Blender (3D software - Free)

There is no required text book.

Class Formats: Lectures, seminars, tutorials, and reviews. Lecture images, NOT notes, will be uploaded on Brightspace.

Some Guidelines for Project Critiques and Evaluation

- Creativity
- Originality
- Simplicity
- Understanding of design elements: balance, focal point, etc.
- Content
- What are we looking at?
- What are you telling us?
- Is it worth looking at?
- Is it important?
- Technique
- Evidence of technical control
- Concept
- Does it fulfill the assignment? How well?
- Presentation
- Clean print
- Does the presentation work with the concept?

Submissions

All projects consist of multiple image printouts and will be displayed in class or the Exhibition Room (if available). You can use the Faculty's print shop to produce your images but it is not mandatory. After the presentation please hand in all your prints/digital work and make sure your name is on every piece of work you submit.

Equity, Diversity and Inclusion

The Faculty of Architecture and Planning is committed to recognizing and addressing racism, sexism, xenophobia and other forms of oppression within academia and the professions of architecture and planning. We, the faculty, are working to address issues of historic normalization of oppressive politics, segregation, and community disempowerment, which continues within our disciplines today.

UNIVERSITY POLICIES AND RESOURCES

This course is governed by the academic rules and regulations set forth in the University Calendar and the Senate. See the School's "Academic Regulations" page (<http://tinyurl.com/dal-arch-regulations>) for links to university policies and resources:

- Academic integrity
- Accessibility
- Code of student conduct
- Diversity and inclusion; culture of respect
- Student declaration of absence
- Recognition of Mi'kmaq territory
- Work safety
- Services available to students, including writing support
- Fair dealing guidelines (copyright)
- Dalhousie University Library

Due Dates and Late Submissions

Deductions for late submissions encourage time management and maintain fairness among students.

	Due date	Is a late assignment accepted?	If so, what is the deduction per weekday?*	Is there a final deadline for a late submission?	What happens after that?
Assignment 1	Feb.7	yes	3%	Yes, Feb. 14	
Assignment 2	Feb.28	yes	3%	Yes, Mar. 6	receives 0% and no comments
Assignment 3	Apr. 3	no			receives 0%

* For example, if an assignment is evaluated at 75% before applying a 3%-per-weekday deduction, it would receive 72% for being 1–24 hours late; 69% for 25–48 hours late; etc.

Note:

The following University or School policies take precedence over course-specific policies:

- No late assignments are accepted after the last day of weekly classes (the Friday before review week).
- With a Student Declaration of Absence (maximum two per course), an assignment may be submitted up to three weekdays late without penalty. An SDA cannot be used for the final assignment.
- With a medical note submitted to the [School](#) office, a course assignment (including a final assignment) may be submitted more than three weekdays late without penalty. The number of weekdays depends on how long you were unable to work, as indicated in the medical note. If more than one course is affected, you should consult with the Undergraduate/Graduate Coordinator to set a new schedule of due dates.
- A student with an accessibility plan that allows for deadline extensions does not need to submit an SDA.