ARCH 6503.03: Photography in Architecture

Dalhousie University
School of Architecture
Fall 2023

Water Tower 1, Freelab 2009

Class Time: Thursday, 9:30am to 12:30
Room: HA -18
Course Instructor: Ken Kam
Office: HA-15 (Ralph M. Medjuck Building)
Contact: ken.kam@dal.ca
Credit hours: 3

For this three-credit-hour course, each student is expected to spend approximately nine hours per week on course-related activities, including classes, readings, and assignments.

Calendar Description
This class examines architectural photography from the late nineteenth century to the present. By analyzing different artists and apply-ing various photographic styles and techniques, students learn about photographic representation in architecture.

Additional Description
The course examines:
- the use of visual material in architecture field research, focusing particularly on using still images to describe an ideal, a site, a process and/or create a digital 3D model. We will examine the works of different photographers, 3D artists, film directors, and cinematographers. e.g. Frances B. Johnston, Martin Scorsese, Hayao Miyazaki, etc...
- photogrammetry - the practice of determining the geometric properties of objects from photographic images. This technique is very useful in generating 3D models by using photographs. We will examine the technical methods in creating a digital model using a 3D software (Blender).
- the techniques in making effective architectural photographs based on technical and aesthetic considerations.
- advanced techniques in Adobe Photoshop.
- general techniques in Blender
- history, methods, and medium of photoethnography. Photoethnography is the art and science of representing other cultures/places visually.

Equipment for the course:
- digital SLR / mirror-less camera with interchangeable lens or equivalent, tripod (some equipment are available for borrowing from the school, check with Ken)
- Computer (Mac or PC)
- Software - Blender (free), Adobe Photoshop, online portfolio site (free)

Learning Objectives
Students will learn:
- practical techniques in digital photographic reproduction and representation.
- different techniques in photographic compositions.
- what is involved in the process of photoethnography and photogrammetry from fieldwork to the written account.
- issues of visual representation/communication and how to test them through practical application.
- an overview of the history of architectural photography
- in the use of software - Adobe Photoshop, Blender, and online portfolio.

Lectures
All lectures are presented in class.

Assignment Objectives
The projects in this course are intended to enable you to improve your 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). A major goal of the assignments is to become aware of photographic decisions. Taking pictures is so easy (anybody can do it) but the most important goal of the assignments is to make it challenging and meaningful. This happens as we recognize more options in photographic representation and how they influence the outcome.

General References:
1. Nilsen, Micheline. *Nineteenth-Century Photographs and Architecture: Documenting History, Charting Progress, and Exploring the World*. London ; New York: Routledge, 2018.
2. Elwall, Robert. *Building with Light: an International History of Architectural Photography*. London: Merrell, 2004.
3. Saunders, William S., and Ezra Stoller. *Modern Architecture.* New York: Harry N. Abrams, 1999.
4. Schaefer, John Paul, and Ansel Adams. *The Ansel Adams Guide, Book 1: Basic Techniques of Photography.* Boston: Little, Brown and Co., 1999.
5. Zimmerman, Claire, and Eve Zimmerman. "*Ethnographic Architectural Photography: Futagawa Yukio and Nihon No Minka.*" The Journal of Architecture 20, no. 4 (2015): 718–50.
6. Robbins, A & Becher, M (1992) *The Transportation of Place,* Aperture Foundation Press.
7. Rauschenberg, C. (2007) *Paris Changing, Revisiting Eugene Atget's Paris*. New York. Princeton Architecture Press.
8. Franke, S (2010) *Positions: Photography of Architecture, City and Landscape in the Netherlands,* nai010 publisher

Attendance/Class Participation:
Class time consists of a mix between short lectures, local field trips during class time (e.g. Public Garden etc..), individual critique/discussions (by appointment with Ken), and digital presentations. Students must come to class prepared to discuss the readings and/or presentation for that week. If you are going to be absent, it is still your responsibility to make sure your assignment is on time. All course related material (lecture images (NOT lecture notes, references material etc...) will be posted on Brightspace. **CLASS lectures will NOT be recorded**. **Students are expected to check course Brightspace at least once a week for updates and communication.**

Sequence of Projects

1. **Photographic Survey and Exploration in Composition (images + process):** Students will learn pre-visualization techniques and camera vision through a series of prescribed methods & exercises.
2. **From Photographs to digital 3D models (Blender/Photogrammetry):** Explore/research the techniques of photogrammetry. Students will create a 3D digital model of an imaginary site using photographs.
3. **Photogrammetry Techniques in story telling:** photography can convey a sense of place - place felt, place remembered, placed imagined. It does not matter whether the series of visual portrayals are subjective, objective, abstract, or symbolic. Rather, the portrayal must be evocative of the feel or emotional presence of the place, not merely its literal existence.

Project 1: Composition

* class time @ 9:30 am to 12:30. Weekly individual and/or small group meetings by appointment.

Week	Date*	Tutorials	Lectures/Discussions	Due Dates
1	Sept. 14	Composition/Blender Tutorial	Composition / Intro. to Project 1.	
2	Sept. 21	Composition/Blender/ Tutorial	Composition lecture - 2, Intro. to Photogrammetry	
3	Sept. 28	Composition/Blender/ Tutorial	field trip (within Halifax) (TBA)	short report online presentations

Project 2: From photos to digital 3D model and Photogrammetry

Week	Date*	Tutorials	Lectures/Discussions	Due Dates
4	Oct. 5	Composition/Blender/ Photogrammetry Tutorial	Story telling/Lighting Lecture - 1	Project 1
5	Oct. 12	Lighting/Blender/ Photogrammetry Tutorial	Story telling Lecture - 2 / Intro. Project 2	
6	Oct. 19	Lighting/Blender Tutorial	review work in progress	short report online presentations
7	Oct. 26	Mid term review	Project 2 presentation	

Project 3: From photos to digital 3D model and Photogrammetry Techniques in story telling

Week	Date*	Tutorials	Lectures/Discussions	Due Dates
8	Nov. 2	Building a scene	Intro. Project 3	
9	Nov. 9	Final details and rendering	review work in progress	Project 2
10			study break	
11	Nov. 23		review work in progress + (SLEQs)	
12	Nov.30		review work in progress + (SLEQs)	
13	Dec.7		Class presentation	Project 3

15 minutes of class time during the last two weeks of classes will be reserved for students to complete SLEQs

Project 1: Photographic Survey and Exploration in Composition (images + process)

Visual communication, like photography, is best learned when students are engaged and involved with what they are learning. In this project, you will learn several composition techniques that will help you to deliver key architectural photographic elements; this is a skill you will improve through practice and persistence. In general, good photographs result from creative and effective use of basic elements like composition, appropriate lighting, and an interesting way to capture the subject. There is no "right" way to make a photograph.

Assignment:
Step 1: Composition, creating an establish shot (field work):
Students will visit a site in Halifax and use photographs as a medium to explore the idea of visual communication. The number of photographs (+process) it takes to describe the area or an idea adequately will be determined by Ken and students.

© Coughlan, Gabriel

Step 2: Watch the following 2 movies: 1. TBA
                                          2. TBA

After watching the film, students will pick five scenes in the movie and write a 500 word report, with companion images and/or sketches, about the use of "cinematic compositions" in how to visually convey a sequence of ideas. More details during class.

Step 3: Presentation
Presentation of the photographic survey should be **clear, well crafted, and precise.** How do you present your findings? Where is the site? Multiple images and/or layout will be presented.

Reference (sections of the following books, in PDF, will be posted on Brightspace**):**
* Robbins, A & Becher, M. *The Transportation of Place,* Aperture Foundation Press. 1992
* Rauschenberg, C. *Paris Changing, Revisiting Eugene Atget's Paris*. New York. Princeton Architecture Press. 2007
* Franke, S. *Positions: Photography of Architecture, City and Landscape in the Netherlands, nai010 publisher.* 2010

Objective:
   The goal of this assignment is to observe and study cinematic film composition to expand students' knowledge of photographic composition. Photography is a visual language that takes a lifetime to learn and perfect. Each photographer develops her/his own language to communicate thoughts or emotions through abstract symbols. To progress in photography, you must cultivate the habit of looking at the scene and seeing it in photographic characteristics of lines, tones, textures, shapes, and color. This mental ability is called pre-visualization. During this assignment, students will learn a set of guidelines to follow and/or apply when they first begin to photograph.

Project 2: From Photographs to digital 3D models

Photogrammetry is the science of making measurements from photographs, especially for recovering the exact positions of surface points. In project 2, students will learn:

- Key principles and concepts of photogrammetry
- Photogrammetric imaging capture workflow
- Practical information about imaging equipment, image capture setups, and software
- Basic theories and techniques of 3D scanning to create models from real objects
- Software processing skills to build finished 3D content using Blender and compose a basic scene.

Step 1:
- select an area or object of interest.
- use photogrammetry or "modeling from photograph" to create a 3D model.

www.creativeshrimp.com

Step 2:
- import all 3D models into Blender.
- add the necessary atmosphere and elements.
- add lighting to the scene.
- create and position camera with the 3D environment.
- render out selected images.
- import to Photoshop and perform post-production work on images.

www.creativeshrimp.com

Step 3:
Online presentation of the work should be **clear, well crafted, and precise**.

Reference:
- http://www.gabbitt.co.uk
- https://alicevision.org
- https://www.blendernation.com

Objective:
- Create a 3D model from real subject
- Add digital environment
- Use virtual camera to capture a scene or create a short film

Project 3: Photogrammetry Techniques in story telling.

Project 3 is an extension/continuation of Project 2. By now you are familiar with some photographic composition, Blender techniques, and photogrammetry. In project 3, you will explore different techniques in combining real photographs and digital 3D model in a virtual world to tell a story. There are many different variations of lighting, camera angles and focal length, each with their own language and purpose. A photographer who understands this language can create dynamic and compelling work.

"I like to look at pictures, all kinds. And all those things you absorb come out subconsciously one way or another [...] this kind of subconscious influence is good, and it certainly can work for one. In fact, the more pictures you see, the better you are as a photographer."
-Robert Mapplethorpe

Step 1: Research
Students will research artists from the list below and present their work in class. You will use different photographic techniques to explore different way of story telling (further information will be provided in class).

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Step 2: Field work
This project is designed to ask questions about how photographers' ideas/compositions are an influence to each other. Students will draw inspirations from the photographers they've researched and photograph their ethnographic ideas at designated location.

Step 3: Presentation   © Bourne, Charlie
The objective and idea is to tell a story and represent the landscape using photographs. Students may use a limited amount of text, sketches, or videos to accompany their work. The online presentation of the work should be **clear, well crafted, and precise**.

Reference (sections of the following books, in PDF, will be posted on Brightspace**):**
• Boeckl, Matthias. Paul Ott: *Photography about Architecture.* Springer Verlag., n.d.
• Becher, Bernd, Hilla Becher, and Susanne Lange. *Basic Forms of Industrial Buildings.* London: Thames & Hudson, 2005.
• Rose, Gillian. *Visual Methodologies: an Introduction to the Interpretation of Visual Materials.* London: Sage, 2006.
Reading: Woods, Mary N. *Beyond the Architect's Eye*: *Photographs and the American Built Environment.* Philadelphia: University of Pennsylvania Press, 2009. - Chapter 1, The "New" New York: Alfred Stieglitz and the City from Above and Below.

Objective:
The goal of this project is to help students become more aware of how lighting and composition affect the overall appearance of a scene or object. Much of the work of professional photographers is done on location. Students will learn how to use available lighting effectively on location, how to find the best angles, and lighting for a site. We will explore the use of different camera techniques and natural light in photographing exteriors, large and small spaces, and street scenes. The emphasis is on how to "write" and "create" with lighting to shape the mood of a photograph. Light is the language of photography. It is how we speak as photographers, and it informs our pictures.

ASSESSMENT

Evaluation

Project 1 (Exploration in Composition) - 30%
Project 2 (sequence of images/photogrammetry) - 30%
Project 3 (story telling)- 30%
Attendance & Participation - 10%

University Standards for Individual Assignments

- Excellent: A+ (90–100%), A (85–89%), A– (80–84%): Considerable evidence of original thinking; outstanding capacity to analyze and synthesize; outstanding grasp of subject matter; evidence of extensive knowledge base.
- Good: B+ (77–79%), B (73–76%), B– (70–72%): 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.
- Satisfactory (C–, C, C+): Evidence of some understanding of the subject matter; ability to develop solutions to simple problems; benefiting from his/her university experience.
- Marginal pass (D): Evidence of minimally acceptable familiarity with subject matter, critical and analytical skills.
- Inadequate: F (0–69%): Insufficient evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

As this is a graduate course, a final grade below B– will be recorded as an F. The instructor will grade the assignments. Written comments will be provided.

A detailed evaluation / grading rubric will be provided at the start of each project.

Common evaluation criteria for each project and its process are based on (but not limited to):
- preparation for class presentations, contribution to class discussions based on your work and own experience.
- proper citation and usage of reference material. (Guidelines for citing sources - tinyurl.com/dal-arch-writing)
- use of reference material from the course outline and other sources

Submissions

All projects will be submitted digitally on Brightspace and/or uploaded to Instructor's dropbox.

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	Oct. 5	yes	3%	Oct. 12	
Assignment 2	Nov. 9	yes	3%	Nov. 20	receives 0% and no comments
Assignment 3	Dec. 7	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.

Faculty Policy

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 (tinyurl.com/dal-arch-regulations) for links to university policies and resources:

- Academic integrity
- Accessibility
- Code of student conduct
- Culture of respect
- Equity, diversity, and inclusion
- 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