ARCH 5110_ADVANCED ARCHITECTURAL DESIGN STUDIO I

HOW WILL WE ASSEMBLE?

INSTRUCTOR
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DESCRIPTION

This studio explores the role of technology as a conduit for architectural design and construction methods. A rigorous series of design exercises along with exposure to 'making' methods will guide students toward developing their own architectural vocabulary for deployment at different scales and resolutions. At the heart of this studio is an interest in the crafting of beautiful drawings, objects, spaces, and buildings – each with their own unique story nested inside a broader design narrative.

The studio will coordinate with invited guests from industry such as architects, engineers, specialist consultants, clients, contractors and tenants – who will present materials, provide tours, and work directly with students as part of their development strategies.

The programme will be focused around three main clusters of design activities entitled *The Body, The Gathering, and the Collective*. First, students will spend time observing, emulating, and synthesizing ergonomics and movement, through a series of drawings, diagrams, models etc. In parallel, they will be exposed to new tools for scanning, designing, building, and communicating as part of an evidence-based approach to material exploration, and to help build confidence in technical skills, design decisions, presentations etc. Special emphasis will be placed on 'found objects' and digitization processes.

Around this time the studio will begin a series of field trips to explore F&B Tower design. We will meet with our studio consultants, who will expand on the specific needs of F&B, Entertainment and Lifestyle architecture, the history of the LKF district and their approach toward tower design. We will schedule insider tours of California Tower and the surrounding area in order to traverse, see, hear and taste our future site conditions. Our future design projects will also be framed in a post-Covid-19 context as the district is working to re-define the meaning of Hong Kong Food, Beverage and Lifestyle Experiences in the new normal.

It is important for students to consider different F&B typologies in Hong Kong and beyond. We will look at architecture from a material culture and seek phenomena that students can explore further in their own projects. We will place a special interest in the curation of intangible qualities (colour, smell, temperature, lighting, air-flow, sound), and textures, tactility, softness, transparency, porosity as part of project definition.

This will be followed by a series of design provocations pertaining to 'a dining experience'. In groups, and based on knowledge gained from previous exercises, students will design and develop full scale prototypes. The term will end with a design/build extension of this provocation that brings together objects, surfaces, structure, envelope, and enclosure (there can be a more indepth exploration into these terms with students through researching and describing the conditions of example projects) as part of an exclusive dining event constructed by students for invited guests.

Term 2 will then shift gears back into individual building design proposals. Students will work throughout the term alongside our invited guests and consultants for a final complex site and tower design proposal. Students will balance technical advice pertaining to structures, cores, envelpes, client needs, building systems, and safety standards to carve out original design opportunities. Design should draw heavily on student experiences throughout the first term, their confidence in exploring a specific architectural vocabulary using material, graphic, models, technical knowledge, and assembly systems. The term will heavily emphasize architectural model making, and drawing. After final reviews, the studio will wrap up with an exhibition event in LKF.

The experimental nature of this design studio encourages proposals that look at a metabolic setup for architecture, where material choice, construction and making methods have a direct influence on lifestyle of the people that build, and inhabit.

This studio concerns the vastness of knowledge gained by students and assimilated into a individual architecture proposals encompassing program, material, site, economic, and health conditions we face together. As part of the work, we will develop a standard documentation and presentation format so students can collect their research and materials, and easily refer back to them during tutorials, reviews, project book, and portfolio.

PROCESS

Studio calendar is broken into three focus areas:

The Body – In this phase students will primarily warm up their drawing and making skills. They will conduct a **rigorous study of ergonomics and the body**. Assignments entitled: Pose, Move, Skin, Sit, Climb and Sleep will iteratively adopt the **SCAN/DESIGN/BUILD** ethos. Students will develop drawings and models at 1:1 in a variety of materials that adhere to their design sensibilities and interests. These will assist in the buildup of student confidence in craftsmanship and help **cultivate their design sensibilities, drawing style and material interests**.

The Gathering – *with knowledge and experiences gained from previous exercises*, students will join in groups to develop a full-scale dining pavilion. This longer-term assignment will require students in groups to create an **immersive dining experience for 4** critics – including all aspects (food, menu, lighting, surfaces, utensils, enclosure etc.). The studio will coordinate for an ideal site, and consult with experts for safe construction etc. Students will also produce a comprehensive **technical report** based on their proposal.

The Collective – *with knowledge and experiences gained from previous exercises* students will develop their previous work into an urban F&B tower, with complex programming and site conditions. They will develop their designs and architectural vocabulary in based on experiences and exposure to consultants and field work throughout the previous terms. Students will be able to demonstrate an ambidextrous virtuosity with analog and digital tools and techniques they had developed through a series of successes and failures throughout ther earlier design explorations.

DELIVERABLES

The Body – Life Drawings. Diagrams. Physical Prototypes (Mixed Media/Scales). Models. Drafted Plans/Sections (Mixed Media/Scale). PowerPoint Presentations. Social Media Posts. Stop Motion Animations. Active participation in group discussions. Portfolio Submission. Active participation in group discussions.

The Gathering - Diagrams. Physical Prototypes (Mixed Media/Scales). Models. Drafted Plans/Sections/Details (Mixed Media/Scale). PowerPoint Presentations. Social Media Posts. Stop Motion Animations / Documentation. Technical Report. Active participation in group discussions. Portfolio Submission.

The Collection – Comprehensive Case Study, Diagrams. Models (1:50/1:100). Drafted Plans/Sections/Details (Mixed Media/Scale). PowerPoint Presentations. Social Media Posts. Stop Motion Animations / Documentation. Technical Report. Active participation in group discussions. Portfolio Submission.

Final - Oral presentation of relevant materials from above in all formats.

Project Book - Physical/printed and bound portfolio document with a common format across all students within the studio. This will include written introduction to your overall project position, graphics of your design process, and a comprehensive technology report including design and construction details.

**Throughout each phase there will be multiple informal reviews, field trips (daytime and evening), pinups, and discussions. Additionally, at least one formal review at the end of each phase with an invited/external critic.

LEARNING OUTCOME

1. Ability to create architectural designs that satisfy both aesthetic and technical requirements.
2. Adequate knowledge of the histories and theories of architecture and the related arts, technologies and human sciences.
3. Knowledge of the fine arts as an influence on the quality of architectural design.
4. Understanding of the relationship between people and buildings, and between buildings and their environment, and the need to relate buildings and the spaces between them to human needs and scal
5. Understanding of the methods of investigation and preparation of the brief for a design project.
6. Ability to generate complex design proposals showing understanding of current architectural issues, originality in the application of subject knowledge and, where appropriate, to test new hypotheses and speculations.
7. Ability to evaluate and apply a comprehensive range of visual, oral and written media to test, analyse, critically appraise and explain design proposals.
8. Awareness of the theories and methods of inquiry that seek to show the relationship between human behaviour and the physical environment.
9. Understanding of the basic principles of sustainable development and architects' responsibilities with

      respect to the social, economic and environmental sustainability in architecture and urban design.

10. Understanding of the principles of structural behaviour in withstanding gravity and lateral forces, and the range and appropriate applications of contemporary structural system.
11. Ability to assemble a comprehensive programme for an architecture project, including:
12. Ability to respond to natural and built site characteristics in the development of a programme and design of a project.
13. Ability to work cooperatively with others in a team setting. Ability to discuss architectural ideas with non-architects, to listen objectively to their opinions and to consider those opinions in designing.
14. Ability to speak and write effectively on subject matters contained in the professional curriculum in English.
15. Ability to use appropriate representational media, such as drawings, models, diagrams, charts, including computer technology, to convey essential design information at each stage of the programming and design process.

ASSESSMENT SCHEME

1_Midterm Reviews (30%)
1. Midterm Review 1, October (10%)
2. Midterm Review 2, December (10%)
3. Midterm Review 3, March (10%)

2_Final Review (50%)
1. Final Project Presentation, May (50%)

3_Project Book (20%)
1. Project Book to have three parts: Position/ Technology / Process
2. To be started at the beginning of the year and reviewed throughout.

COURSE FORMAT

1_Group Work
1. Students are allowed to work in groups only the first semester.
2. The second semester will be all individual projects.

2_Teaching Days
1. The Design Studio will be taught two days a week Monday and Thursday 13:30 to 18:00

3_Studio Spaces
1. Each Studio will have their own space, accommodating a desk for each student
2. Layouts will be issued at the start of the academic year

FIELD TRIP

At present all foreign trips are suspended until further notice. If the COVID-19 situation improves, the school will inform the Design Studio tutors.

REQUIRED READINGS

Calvino, Italo., and William Weaver. Mr Palomar. London: Vintage, 1999. Print. Vintage Classics (London, England).
Serafini, Luigi. Codex Seraphinianus. Milan: Franco Maria Ricci, 1993.
Colonna, Francesco. Hypnerotomachia Poliphili: The Strife of Love in a Dream. New York: Thames & Hudson, 1999. Print.
Carroll, Lewis. Alice's Adventures in Wonderland. New York: Macmillan, 1920
Gregory, R. L. Eye and Brain: The Psychology of Seeing. 5th ed. Oxford; New York: Oxford UP, 1998. Print.
Neufert, Ernst, Peter Neufert, Bousmaha Baiche, and Nicholas Walliman. 2000. Architects' data. Oxford: Blackwell

Science.
Burry, Mark. Scripting Cultures: architectural design and programming, Wiley, West Sussex, UK, 2011
Bandur, Markus. Aesthetics of Total Serialism: Contemporary Research from Music to Architecture. Basel; Boston: Birkhäuser, 2001. Print. IT Revolution in Architecture.
Lynn, Greg. Animate Form. New York: Princeton Architectural, 1999. Print.
Reiser, Jesse., and Nanako. Umemoto. Atlas of Novel Tectonics. 1st ed. New York: Princeton Architectural, 2006. Print.
Ottolenghi Simple: A Cookbook Hardcover – October 16, 2018 by Yotam Ottolenghi.
Frascari, Marco. "The Importance of Dreaming in Architecture." Marco Frascari's Dream House. 1st ed. Routledge, 2017. 52-72. Web.
Frascari, Marco. "Tools for Architectural Thinking." Eleven Exercises in the Art of Architectural Drawing. Routledge, 2011. 127-38. Web.

REQUIRED FILM

Ede, François. Playtime: [Un Film De Jacques Tati]. [Paris]: Ed. Cahiers du cinéma, 2002.
Tarkovskiǐ, A. A., & Mikhalkov-Konchalovskiǐ, A. S. (1964). Andrei Rublev. Moscow: Mosfilm.
The Mirror (Ayneh, 1997). Tehran.
Metropolis. Directed by Fritz Lang, performances by Brigitte Helm, Alfred Abel. UFA, 1927
Edward Burtynsky: Manufactured Landscapes. Toronto: Mongrel Media, 2006.
MGM Home Entertainment Inc. (2002). Koyaanisqatsi. Santa Monica, CA: MGM Home Entertainment.
Babette's Feast (1987)
Willy Wonka & the Chocolate Factory (1971)
Ratatouille (2007)
Eat Drink Woman (1994)
God of Cookery (H*ong Kong, 1996)*
Like Water for Chocolate *(1992)*

ONLINE LEARNING

All CUHK students are provided with ARCHISTAR accounts free of charge and are highly encouraged to explore the available beginner to advanced level modules.

IMPORTANT NOTE TO STUDENTS

Attendance
Class attendance is required in all courses. For an excused absence, the instructor must be notified and presented with documentation of illness or personal matter. Please note: **Three (3)** or more unexcused absences may result in a failing grade for the course.

Academic Honesty
Attention is drawn to University policy and regulations on honesty in academic work, and to the disciplinary guidelines and procedures applicable to breaches of such policy and regulations. Details may be found at: http://www.cuhk.edu.hk/policy/academichonesty/. With each assignment, students may be required to submit a statement that they are aware of these policies, regulations, guidelines and procedures.

Student Work
Submission of studio documentation must be complete and correctly formatted. Missing or incomplete submission of the documentation folder will result in the grade for the course being withheld. This will prevent registration for the following term or delay graduation. In addition, a grade deduction of *one letter grade* will be made.

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SCHEDULE (Subject to changes)

Important Dates

SEMESTER 1
1_Midterm Reviews (30%)
Midterm Review 1, 25-29 October 2021 (10%)
Midterm Review 2, 06-10 December 2021(10%)

SEMESTER 2
Midterm Review 3, 01-04 March 2022 (10%)

2_Final Review (50%)
Final Project Presentation, 03-06 May 2022 (50%)

3_Project Book (20%)
Project Book to have three parts: Position/ Technology / Process, 13 May 2022 (20%)

Term 1: 6 September 2021 (Mon) – 4 December 2021 (Sat)

	WEEK 01	
06.09	**INTRODUCTION**	**STUDIO SELECTION**
09.09		Results Announced

	WEEK 02	
13.09		
16.09		

	WEEK 03	
20.09		
23.09		

	WEEK 04	
27.09		
30.09		

	WEEK 05	
04.10		
07.10		

	WEEK 06	
11.10		
14.10		Chung Yeung Festival

	WEEK 07	
18.10		
21.10		

	WEEK 08	
25.10 – 29. 10		**MIDTERM REVIEW 1 (10%)**

	WEEK 09	
01.11		
04.11		

	WEEK 10	
08.11		
11.11		

	WEEK 11	
15.11		
18.11		

	WEEK 12	
22.11		
25.11		

	WEEK 13	
29.11		
02.12		

	WEEK 14	
06.12 – 10.12		**MIDTERM REVIEW 2 (10%)**

Term 2: 10 January 2022 (Mon) – 23 April 2022 (Sat)

	WEEK 15 (2022)	
10.01		
13.01		

	WEEK 16	
17.01		
20.01		

	WEEK 17	
24.01		
27.01		

	WEEK 18	
31.01 – 05.02		**Lunar New Year Vacation**

	WEEK 19	
07.02		
10.02		

	WEEK 20	
14.02		
17.02		

	WEEK 21	
21.02		
24.02		

	WEEK 22	
01.03 – 04.03		**MIDTERM REVIEW 3 (10%)**

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	WEEK 23	
07.03		
10.03		

	WEEK 24	
14.03		
17.03		

	WEEK 25	
21.03		
24.03		

	WEEK 26	
28.03		
31.03		

	WEEK 27	
04.04		
07.04		

	WEEK 28	
11.04		
14.04		

	WEEK 29	
18.04		**Easter Monday**

	WEEK 30	
25.04		
28.04		

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	WEEK 31	
02.05		**The day following Labour Day**
03.05-06.05		**FINAL REVIEW (50%)**

	WEEK 32	
09.05		
13.05		**PROJECT BOOK (20%)**
		Project Book to have three parts: Position/ Technology / Process