NATURE CITY / CITY NATURE

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RESEARCH QUESTION

"How to design with nature in Hong Kong?"

In the bustling metropolis of Hong Kong, where verdant hillsides contrast with concrete jungles, a pressing question emerges: How can this city further embrace sustainability and green practices to enhance livability in its densest centers? As one of the world's most vertical cities, Hong Kong offers a unique opportunity to innovate and redefine the relationship between city and nature within its dense urban environment.

Despite its lush greenery, Hong Kong often faces a stark segregation between its urban spaces and natural landscapes. This studio aims to challenge such divide and explore ways to blur the boundaries between city and nature, viewing the natural environment not merely as a backdrop but as an integral building material for sustainable urban development. We will learn from a series of case studies with a study trip to Singapore.

Students will delve into the intricacies of densification along the tram line on Hong Kong Island. Each student will design a case study with its own narrative in responsive to the context, functional requirements, and aspirational vision. Guided by a set of rules crafted to foster sustainability and green initiatives, these case studies will collectively path the way for a greener Hong Kong.

DESCRIPTION

The studio is the continuation of our design studio series that focuses on sustainability in the context of Hong Kong. We aim to formulate and develop a specific and sustainable architecture for Hong Kong. *A Charter for Hong Kong Architecture* has been developed over past studios and will serve as the foundation of this studio.

Today Hong Kong's public realm is scarce, harsh, overheated, polluted and nature is absent. Minuscule flats and outdated workspaces with noisy aircons force people into alienating shopping malls. We believe the agenda for **a sustainable future for Hong Kong** should be to strive for:

- **a specific architecture** that nurtures the uniqueness of its culture;
- **a subtropical architecture** that creates comfort and wellbeing by passive means;
- **a green architecture** that brings nature back into the heart of our city; and
- **an engaged architecture** that gives back to the city and addresses social challenges.

This design studio will consider the above agenda wholistically with focus to create a green architecture in Hong Kong that brings nature back into the heart of our city. We choose to transform and innovate along the tram line on the Hong Kong Island.

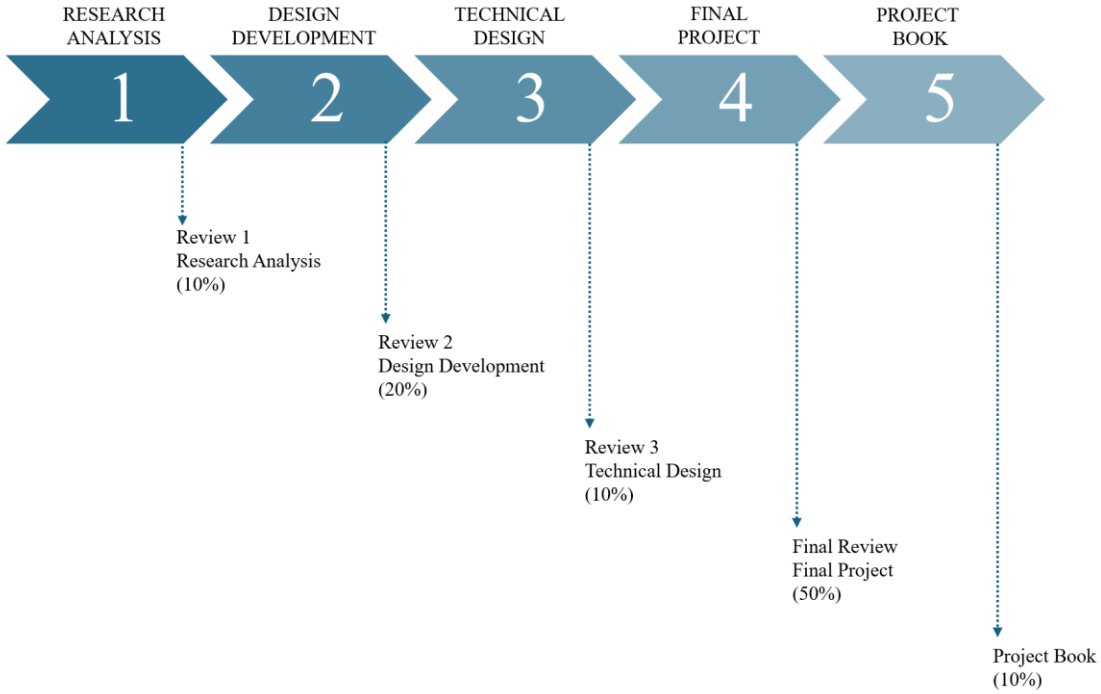
Students will work individually on their chosen programs and site while experimenting with hybridity of programs. The programs should support *a place of working* or *a place of living* for a sustainable future. The working/living component should be integrated with public program(s), for examples a local library, an auditorium, a kindergarten, a church, a small museum/exhibition hall, a community hall, a food court etc. Program hybridity, multiple usage and flexibility should be considered as part of a wholistic sustainable approach.

We will research the many initiatives and regulations in different parts of the world that pushes for the greener cities. A field trip to Singapore in October will be the focus of study. Singapore, renowned for

its innovative approaches to urban sustainability and green living, serves as a living laboratory where students can observe successful case studies and best practices in integrating nature into architecture and urban development. We will visit successful examples of buildings and urban parks, as well as engage into dialogues with public and private stakeholders in the city.

Learning from the research, we will experiment and define a set of *Development Guidelines* for the HK Island Tram line transformation. This array of projects will combine into "**Hong Kong Stories"**; a collection of case studies to showcase a sustainable future for the city.

The following diagram describes the structure and the assessment criteria for the year.



IMPACT AND SUSTAINABILITY

Statistics implicate the building industry's shared responsibility for the environmental crisis with 35% of CO2 emissions, 30% of waste generated and 35% of world resources consumed. The industry is undergoing an extremely fast transformation and changing the way how we work and design. Architecture has never been so important – it cannot simply be, it must become a sustainable change agent.

Bridging teaching and practice has been our goal. We believe students need to be better equipped in schools with understanding of today's challenges and develop a sense of responsibility. It is also important for students to develop the language, literacy and knowledge regarding architecture and sustainability:

- to understand the wholistic approach on sustainability in architecture and how architecture could be a sustainable change agent.
- to learn carbon literacy and decarbonization possibilities.
- to design across architecture and landscape.

- to research through design, and to design with knowledge.
- to infuse program, site, material and tectonic in the development of architectural form.
- to advance at computational techniques through specifically tailored workshops on different digital programs.

METHODS

The methodology of the Studio is both research-based and in perpetual pursuit of the Poetry of Space.

To form a strong group statement, the drawing and representation aesthetics throughout the year will be aligned for all the students. We focus to produce precise plans, sectional drawings, graphical 3D collages and models. Technical Workshops conducted by architects from Henning Larsen will introduce students to some 3D computational tools and representation techniques. Presentation skills (oral and written) will also be emphasized throughout the semester.

The studio will proceed in seven Modules. It is the student's responsibility to maintain a steady process/progress of design. The fundamental mechanism for achieving an integrated design is through the lens of scaled drawings and models: urban and programmatic response, architectural form, tectonic inspiration and construction detail.

01_Phase 1 – (Semester 1) – Research Analysis

Module #1: *"**Portraits for Hong Kong**"*

We will introduce the *Charter for Hong Kong Architecture* developed in previous studios.

Students will work in pairs to study 12 case studies that are relevant to the *Charter*. Each group will analyze and draw the buildings with rigorously aligned graphics.

As a parallel exercise, each group will capture their impression of Hong Kong nature and the tram line by photography. The "ingredients" captured under the lenses will be re-interpreted in hand drawn/digital representations. Each group will produce one 3D collage reimagining the tramline to be green with strategic insertion/alteration.

These exercises will prepare the path for subsequent representations.

Module #2: *"**Learning from Good Practices**"*

Students will work in pairs to research the initiatives and innovations in different parts of the world that pushes for the greener cities, and their relevance to Hong Kong. We will also prepare for the field trip to Singapore in collaboration with the following authorities/institutions/companies (TBC):

- local authorities: URA and BCA;
- institutions: NUS and NTU;
- private consultants: Henning Larsen, WOHA and Ramboll and ARUP.

Workshops and lectures with local and international practitioners will be planned to discuss the world trend and local challenges in regard to designing with green.

The goal is to get a wholistic understanding of how the industry work towards a greener city from legislative and design points of view. We will conclude with a set of *Development Guidelines* for a

greener Hong Kong. The collection of research shall be shared amongst the studio for co-learning and put into one research booklet.

02_Phase 2 – (Semester 1) – Design Development

Module #3: *"**Site, Programs and Narrative**"*

Students will develop their own project in Hong Kong following the Development Guidelines and representation techniques developed in Module #1.

Each student shall identify an appropriate site along the tram line on the Hong Kong Island. Either through adaptive reuse or rebuild, each project should carry a strong design narrative contributing to the overall city transformation. Each student should choose an appropriate site based on their individual programmatic interests or vice versa. It is important to identify constraints and opportunities of a site; and analyze the synergies between program and context.

Students will work collectively to define the overall narrative and vision for the overall tram line transformation.

Module #4: *"**Architectural Concept Design Proposal**"*

Based on the investigation in Module #3, students will propose a Concept Narrative & Program Brief, which is tested through potential programmatic and spatial design with massing options.

Students must end Semester 1 with an Architectural Concept Design Proposal, with an emphasis on the architecture/nature synergy and drawing representations

03_Phase 3 – (Semester 2) – Technical Design

Module #5: ***"Structure, Façade and Aesthetics"***

Green elements and its tectonic language shall be carefully considered in the early stage of the design. The structural system will give real physical bearing to the programmatic and organizational proposal of Module #4. At the same time, how the façade design integrates/interplays with the structural system will command the artistry to mute, express, transform or bring theatricality to the content it encloses. The necessity of structural repetition, the desired qualities of environmental engagement, and the iconic potential of the building should be engaged and scrutinized at various scales. We will invite structural and façade engineers to follow this process.

Module #6: ***"Materiality, Space & Light"***

A building integrated with nature has the potential architecturally to create a more pleasing, relaxed, sociable and creative urban experience. How the materiality of nature interplays with space and light should be studied in the creation of architectural form.

04_Phase 4 – (Semester 2) – Final Project

Module #7: *"**Building Design Integration**"*

The last phase of the studio will require the students to develop an integrated building design critically combining the discrete studies from the early set of research, analysis and synthesis. It is an act or instance of combining fragmented parts into an integral whole.

DELIVERABLES

Ongoing
The studio will focus to produce effective and impactful representations to communicate design ideas. These will be in form of drawings, photographs, renders, collages, and physical models. A shared aesthetic will be developed in the first semester. Design output format will be aligned across the studio.

01_Final
- Oral and graphical presentation of relevant materials from above in all formats.
- The final review is a celebration and exhibition of the overall work produced by students over a 3-day event and will include a diverse cross section of international and regional experts relating to the studio research area.

02_Project Book
- Physical/printed and bound portfolio document with a common format across all students within the studio.
- This will include a written introduction to your overall project position, graphics of your design process, and a comprehensive technology report including design and construction details.

LEARNING OUTCOMES

1. **Ability** to create architectural designs that satisfy both aesthetic and technical requirements.
2. **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.
3. **Ability** to evaluate and apply a comprehensive range of visual, oral and written media to test, analyse, critically appraise and explain design proposals.
4. **Ability** to assemble a comprehensive programme for an architecture project, including:
5. **Ability** to respond to natural and built site characteristics in the development of a programme and design of a project.
6. **Ability** to work cooperatively with others in a team setting.
7. **Ability** to discuss architectural ideas with non-architects, to listen objectively to their opinions and to consider those opinions in designing.
8. **Ability** to speak and write effectively on subject matters contained in the professional curriculum in English.
9. **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.
10. 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 scale.
11. Understanding of the methods of investigation and preparation of the brief for a design project.
12. Awareness of the theories and methods of inquiry that seek to show the relationship between human behaviour and the physical environment.
13. 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.
14. Understanding of the principles of structural behaviour in withstanding gravity and lateral forces, and the range and appropriate applications of contemporary structural systems.
15. Knowledge of the fine arts as an influence on the quality of architectural design.
16. Adequate knowledge of the histories and theories of architecture and the related arts, technologies and human sciences.

ASSESSMENT SCHEME

0_Studio Drawing Assignment, September
The first week will be reserved for a shared drawing assignment within all studio groups. The drawing provocation will be issued by individual section tutors on the first day of the studio after course selection. The submission will be in a flexible format and all works will be part of an exhibition in the SOA Atrium.

1_Reviews (40%)
1. Review 1, October (10%) –Research Analysis
2. Review 2, December (20%) – Design Development
3. Review 3, March (10%) – Technical Design

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

3_Project Book (10%)
1. Project Book has three parts: Position / Technology Report / Process.
2. To be started at the beginning of the year and reviewed throughout.

Each assessment result will be promptly released to students upon completion accompanied by written comments based on student progress and performance.

COURSE FORMAT

1_Group Work
1. Students may work in groups on various assignments and projects throughout the course calendar.
2. Final projects must be based on individual building design proposals. If the preliminary work shown was developed in partnership with other students – this must be explicitly stated and assessed accordingly.

2_Teaching Days
1. The Design Studio will be taught on Monday and Thursday 13:30 to 18:00. Students must be in a studio during these teaching hours.
2. Students must attend School Lectures scheduled 12:30 – 13:30.
3. Field trips, lectures, and other learning activities may be scheduled outside of teaching days.

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.
3. The school has made studio space and use a priority. Students should maximise the use of their space by conducting design work in studio.
4. Working in the studio creates an opportunity for peer learning and collaboration – take advantage of this valuable resource.

5. Studio space should be respected – especially with consideration of food, drinking, material use, personal safety, disruption to others, and building safety regulations. Areas relating to fire escape should be always kept clear.

4_Group Pinups
There are five informal scheduled pinups for sharing across different studio units. These are designed to give students practice in orally presenting the priorities of their research, investigations, and design interests.

TECHNICAL DESIGN

Building and structural systems support will be coordinated by Prof. Shuaizhong WANG beginning in term 2 and ahead of the Technical Design assessment. Consultations with experts will assist in adding a stronger technical focus and key design element to a studio design project. Sessions can be scheduled by studio groups, and with individuals. Students are recommended to prepare appropriately ahead of those consultations with their own research, drawings, and materials to maximise this resource.

FIELD TRIP

A field trip to Singapore is planned for 10 – 13 October (tentative). You must be able to attend the field trip if you're signing up for the studio.

REQUIRED READINGS

Books:
The Singular Objects of Architecture, Jean Baudrillard, Jean Nouvel
Constructing a New Agenda – Architectural Theory 1993-2009, A. Krista Sykes, Editor
Reyner Banham – Historian of the Immediate Future, Nigel Whiteley
Towards a New Architecture, Le Corbusier
Critical Regionalism, Kenneth Frampton
The poetics of space, Gaston Bachelard

Films:
Dogme Films www.Dogme95.dk

IMPORTANT NOTE TO STUDENTS

Expectations for Professional Conduct
The motto of The Chinese University of Hong Kong (CUHK) is "Through learning and temperance to virtue". This motto places equal emphasis on the intellectual and moral education of students. In addition to pursuing academic excellence, students of CUHK are expected to maintain and uphold the highest standard of integrity and honesty in their academic and personal lives, respect the rights of others and abide by the law. More information on Postgraduate studies can be found in the PG Student Handbook. https://www.gs.cuhk.edu.hk/

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
The Chinese University of Hong Kong places very high importance on honesty in academic work submitted by students and adopts a policy of zero tolerance on academic dishonesty.

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.

Third-Party Assistance
All intellectual work essential to the design project must be completed by the student and cannot, under any circumstance, be outsourced to a third party (including, but not limited to a company, consultant, alumni, and/or friend).

In the design studio context, students may utilize external resources, such as printing services for presentation materials, and/or laser cutting and 3D printing services for prototyping purposes. Use of such third-party services constitutes non-intellectual work done by others. It is only permitted with prior written consent from the studio tutor and acknowledgment of such work done by the third party.

Assistance from other students or friends for aspects of project production also constitutes non-intellectual work done by others; this is allowed only if declared and acknowledged in a written statement attached to any such work that has received assistance.

Under all circumstances, students must declare all work done by others by completing the school's designated form before assessment. This form must include a detailed explanation of the third party's identity (name and relationship to the student), when and how they were utilized, and the specific tasks they performed in the project. The completed form, signed by the student, must be endorsed by the tutor and presented during the final review. The school will collect and retain this form for record-keeping purposes.

Failure to follow this code of conduct may be considered a case of academic dishonesty, to be reviewed by a disciplinary board, and possible failure of the course.

Artificial Intelligence
Unless approved by the Programme or School Director, any use of AI tools such as ChatGPT or image generation tools (Midjourney) etc. is strictly prohibited and may result in disciplinary action in accordance with university policy on academic honesty. Students may refer to the CUHK 'Use of Artificial Intelligence tools in Teaching, Learning and Assessments' – A Guide for Students.

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.

SCHEDULE

Important Dates

0_Studio Selection for Students 02 SEP 2024
1_Studio Drawing Assignment 05-12 SEP 2024

2_ Reviews (40%)
Review 1, 28-31 OCT 2024 (10%)
Review 2, 09-12 DEC 2024 (20%)
Review 3, 03-06 MAR 2025 (10%)

3_Final Review (50%)
Final Project Presentation, 06-08 MAY 2025 (50%)

4_Project Book (10%)
Project Book, 17 MAY 2025

5_HKIA EXHIBITION
Tutors are to collect all studio materials for the HKIA Exhibition before 25 MAY 2025.

Term 1: 2 September 2024 (Monday) – 12 December 2024 (Thursday)

WEEK 01		
02.09	**ORIENTATION & STUDIO PRESENTATION**	**Studio Selection for Students**
06.09	**DAY_01 OF STUDIO**	**Phase 0 – Studio Sections Announced** **Drawing Assignment 00**
WEEK 02		
09.09		
12.09		**Drawing Exhibition – and Review (12:30-13:30)**
WEEK 03		
16.09		
19.09		
WEEK 04		
23.09		
26.09		
WEEK 05		
30.09		
03.10		
WEEK 06		
07.10		
10.10		
WEEK 07		
14.10		**PINUP_01**
17.10		
WEEK 08		
21.10		
24.10		
WEEK 09		
28.10		**Review 1/3**
31.10		**Review 1/3**

WEEK 10		
04.11		
07.11		
WEEK 11		
11.11		
14.11		
WEEK 12		
18.11		**PINUP_02**
21.11		
WEEK 13		
25.11		
28.11		**Last Day of Teaching**
WEEK 14		
02.12		
05.12		
WEEK 15		
09.12	**REVIEW**	**REVIEW 2/3**
12.12		**REVIEW 2/3**

Term 2: 6 January 2025 (Monday) – 17 May 2025 (Friday)

WEEK 19	
06.01	
10.01	
WEEK 20	
13.01	
17.01	
WEEK 21	
20.01	**PINUP_03**
23.01	
WEEK 22	
27.01	
30.01	**University Lunar New Year Vacation (28-02 Feb)**
WEEK 23	
03.02	
06.02	
WEEK 24	
10.02	
20.02	
WEEK 25	
17.02	**PINUP_04**
20.02	
WEEK 26	
24.02	
27.02	
WEEK 27	
03.03	**REVIEW 3/3**
06.03	**REVIEW 3/3**

WEEK 28	
10.03	
13.03	
WEEK 29	
17.03	
20.03	
WEEK 30	
24.03	
27.03	
WEEK 31	
31.03	
03.04	
WEEK 32	
07.04	**PINUP_05**
10.04	
WEEK 33	
14.04	
17.04	**Last Day of Teaching**
WEEK 34	
21.04	**Easter Holiday**
24.04	
WEEK 35	
28.04	
01.05	**Labour Day**
WEEK 36	
05.05	**Buddha's Birthday**
08.05	**Final Review (06-08)**
WEEK 37	
12.05	
17.05	**Project Book Submission (17 May)**

MArch Studio Review

Written Feedback to Students

Term: _____ **Grade:**_____

Review: _____

Studio Tutor: _____

Student Name: _____

Student ID: _____

Feedback from Studio Tutor:

Achievements:

Challenges:

Academic Honesty Statement

*Please print out and pin-up next to your works on your allocated panels

Relating to the 2024-25 Term 2 Studio Review pin-up (MArch students)

Please tick one of the following:

☐ All the work and models presented at the Final Review were made by me personally

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with the exception of the following:

Under all circumstances, students must declare all work done by others by completing this form before the review. Provide a detailed explanation of the third party's identity (name and relationship to the student), when and how they were utilized, and the specific tasks they performed in the project.

Student's Name: _____ Date: _____

Signature: _____

Tutor's Name: _____ Date: _____

Signature: _____

Grade	Descriptor	Criteria	Points
A	Excellent	Comprehensively excellent performance on all aspects of the design intention, development, technical resolution and presentation. Achieving all learning outcomes with distinction.	4
A-	Very Good	Generally outstanding performance on the design intention, development, technical resolution and presentation. Achieving all learning outcomes with merit.	3.7
B+	Good	Substantial performance on the design intention, development, technical resolution and presentation. Achieving all learning outcomes satisfactorily.	3.3
B			3
B-			2.7
C+	Fair	Fair performance on the design intention, development, technical resolution and presentation. Achieving all learning outcomes at a passing standard.	2.3
C			2
C-			1.7
D+	Pass	Barely satisfactory performance on the design intention, development, technical resolution and presentation. Achieving all learning outcomes at a barely satisfactory standard.	1.3
D			1
F	Failure	Unsatisfactory performance on the design intention, development, technical resolution and presentation. Not achieving all learning outcomes.	0