Yamaguchi Akira, Department Store: Nihonbashi Mitsukoshi (2004)

PEOPLE | WEATHER | MATERIAL | PLACE

INSTRUCTOR(s)
COMER, Fergus
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RESEARCH QUESTION

"How can we creatively respond to the environmental and functional requirements of a dense urban site?"

In this course we will seek a sustainable and innovative response to the complex challenges of designing bespoke and beautiful architecture within Hong Kong's built-up urban context, particularly hyper-density, climate control, and the minimisation of non-renewable material usage and waste.

On density, the urban area of Hong Kong has the highest population and employment density in the world. Measured at block level, some areas may have population densities of more than 400,000 people per square kilometre. High density does not necessarily lead to a perception of crowding or stress, with Jane Jacobs just one advocate for the importance of higher densities for a city's vitality, and surveys of Hong Kong residents not finding overcrowding as a particular area of concern. Robert Mitchell found that stress in Hong Kong may be more likely due to inadequate income or forced social interaction between non-relatives in shared flats than density itself. What role can we as architects have in identifying and alleviating the stresses that occur in Hong Kong's households?

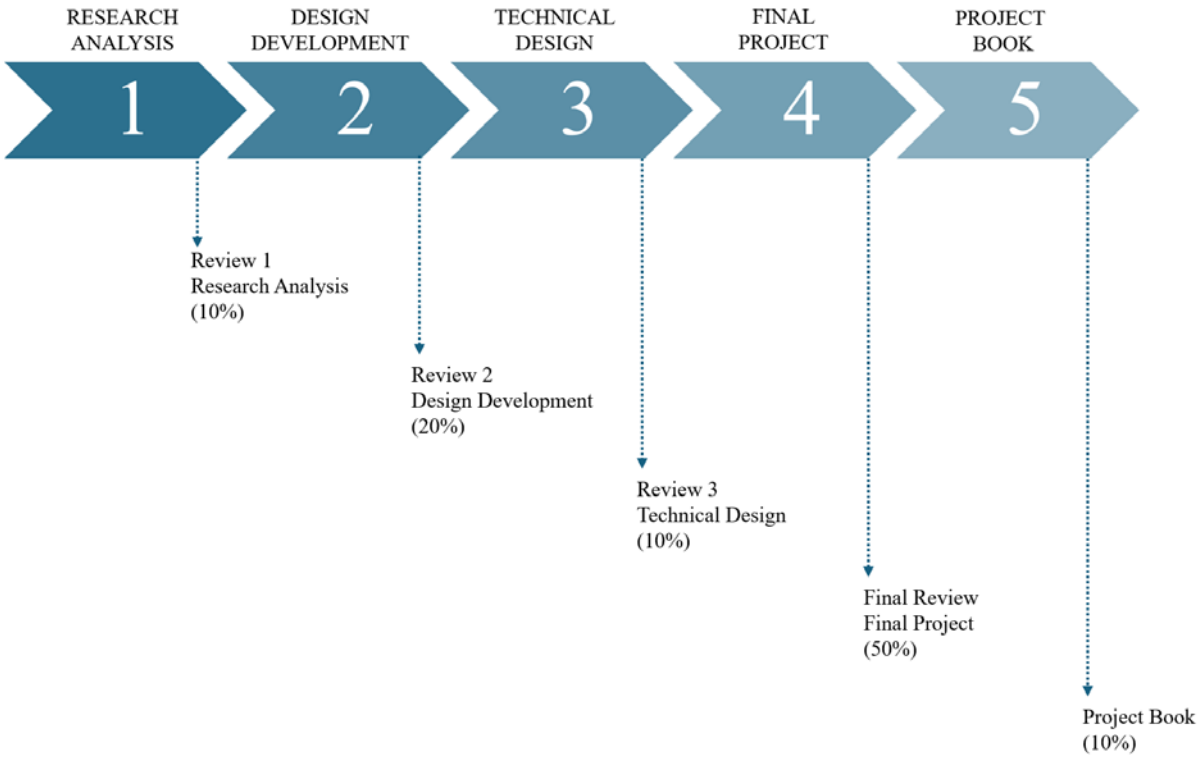
On climate, an architectural design can be considered as a series of interconnected systems that welcome, resist and repel. In 1955 Walter Gropius said 'True regional character cannot be found through a sentimental or imitative approach….But if you take…the basic difference imposed on architectural design by the climatic conditions....you will realize what diversity of expression can result from this fact alone.' The particular and intensifying climatic conditions in Hong Kong, including the hottest temperatures on record in July 2022 and the strongest recorded winds on record during Super Typhoon Saola in September 2023, require a very firm structure and usually involve an unsustainable climate control system. How can we as architects create sustainable, comfortable and uplifting buildings in these conditions?

On material and waste, Hong Kong continues to be highly wasteful in its construction and consumption patterns. Over the last 100 years a series of architects have strived for lightweight and efficient hybrids of structure and finish that could help to address this, from Mies's 'Less is More' to Corbusier's Domino to Candela and Dieste's concrete and brick shells to Fuller's tensegrity to Otto's tents to Archigram's floats to Tai O's stilts to Kurokawa's capsules to Future Systems monocoque to Selgascano's pavilions to Lacaton&Vassal's additions. Can a lightweight hybrid offer a sustainable alternative and material efficiency within a densely built-up urban area in Hong Kong? Can the approach be additive rather than destructive, as a form or adaptive re-use? Can the building materials be compostable?

DESCRIPTION

The site for the year will be Mong Kok, Hong Kong; the densest part of the densest urban area. Bisected north south by Nathan Road, the district comprises a mixed use of residential and commercial blocks that are of a proportion and scale that is typical to a number of urban districts in Hong Kong. The year's work will be divided into 4 tasks in which you will Research, Prototype, Technically Develop, Resolve and Complete a Final Project that offers a grounded, sustainable and future-orientated piece of architecture for this site and place that considers and questions the ground condition, the field condition, the material condition and the social condition.

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



IMPACT AND SUSTAINABILITY

IMPACT
The studio seeks innovative architectural solutions to the challenge of building within dense urban conditions in a way that supports place-making and responds to climatic conditions.

SUSTAINABILITY
The sustainable approach of the studio is two-fold. Firstly to treat the existing built condition and community of the site as an urban ecology that should be retained, grown and strengthened, rather than uprooted, wasted and replaced. Secondly, for new-build interventions / adaptations, innovations and efficiencies in material and structure will be sought that consider the life cycle of both the material and the building

METHODS

01_Task 1 Research (Weeks 1-9)
The purpose of this research analysis will be to develop and represent your particular position on the architectural, social, historical, economic and morphological context of the site and place conditions.

For Weeks 1-9, and onwards from this point, there is required in-studio attendance on Mondays and Thursdays, which for Weeks 1-9 will include a series of lectures with invited experts on the following topics, followed by group and individual discussions and tutorials:

- The architectural and social history of the site, including the site history, the tong lau typology both local and as part of a taxonomy of shophouses that is pan-asian, the planning and

development process that consolidates these tong lau blocks into larger podium and tower typologies, and URA's efforts in resistance of this development pressure to preserve and develop the area including along Shanghai Street.
- Alternative ways of seeing, from Michel de Certeau to John Berger to George Perec to Malcolm Gladwell.
- Alternative ways of defining the site, its occupation and usage. Including Unwin's ground-based approach and Allen's field conditions. These observations will be underpinned by an introduction to related theories including Crowd theory from Canetti and others, precedent architectural projects from Cedric Price and others, and urban morphology.
- Society and community in life and work, including studies by Robert Mitchell and William H Whyte
- Alternative tools for analysis and representation, including space syntax, LiDAR scanning and more traditional building survey techniques, different drawing and animation techniques for recording and representing the complexity of ground, place and activity.

It is hoped and intended that the above topics will be an inspiring starting point that you will add to and build on. The course will commence with a group site visit and easy site access will allow repeated visits as you refine your area of interest.

For this **Task 1 Research**, working individually, you will select an existing building and usage within the given Mong Kok site area and research, model and represent this as both a ground and field condition in theory, words, images and animation. An assessment amounting to 10% of your final mark will be made based on a wall and screen based presentation to a group of invited critics during Week 9.

02_Task 2 Prototype (Week 10-15)
The purpose of this prototype is to test the existing building and position you have selected and developed in Task 1 with an architectural proposal for adaptive re-use. The aim is to reach a balance between minimising waste and destruction of an existing building and site condition and exploiting the sustainable and spatial potential of a new architectural intervention.

Weeks 10-13 will include a series of lectures, workshops, group and individual discussions and tutorials, including invited experts on the following topics relating to this aim:
- The existing building systems, including structure, heating, cooling and lighting.
- The materiality and detail of the existing building(s) and site condition
- Historical and contemporary precedents for adaptive re-use, including consideration of the points of evolution in residential, workplace and commercial development and usage.
- Contemporary and sustainable material selection based on an environmental life-cycle assessment.
- Historical and contemporary precedents for architecture that achieves material efficiency through lightweight and materially-efficient hybrids of structure and skin.

Alongside continued site visits, additional visits to fabrication facilities within Guangdong province will be arranged, in order to give a more hands-on understanding of the construction and material selection process. A visit to Hong Kong's only wind-tunnel testing facility, in which physical models of architectural projects are tested to ensure they comply with Hong Kong's demanding wind-load requirements, is also planned. Further details to be confirmed.

For this **Task 2 Prototype**, working in pairs, you will develop through testing and modelling an architectural proposal for adaptive re-use of the existing building (the ground condition) you have

researched in Task 1. It is expected the outcome will be a separate project for each student that includes a combination of existing and new-build structure and finish (the material condition). In terms of function the brief is open and should evolve or address the area of interest and field condition you have researched in Task 1. An assessment amounting to 20% of your final mark will be made to a group of invited critics during Week 15, including a wall and screen based presentation and a physical model. The architectural drawings and physical model should be at scale 1:75 and resolved to a schematic level.

03_Task 3 Technical Development (Week 19-27)
The purpose of the technical development stage is to enlarge your investigation from a small individual building plot up to an urban block / larger building scale and further apply the research position and the finding from your prototype study for adaptive re-use developed in Tasks 1and 2. It is expected that this technical development stage will include the conceptual and schematic development of a proposal that you will carry on to resolve and complete in detail during the Task 4 work that follows.

Weeks 19-27 will include a series of group and individual discussions and tutorials, including invited experts as you work through the following work stages:

- Conceptual and massing studies
- Presentation and feedback sessions with structural and E+M consultants in relation to the integration of building systems into your schematic proposals.
- Continued material research including physical testing and mock-ups
- Visits of a group of architectural practices including student-led presentations of in-progress work
- Computer simulation of wind-tunnel testing under typhoon conditions

For this **Task 3 Technical Development**, working individually, you will develop an architectural proposal for adaptive re-use of the existing building (the ground condition) you have researched in Task 1. In terms of function and usage, the brief is again open and should evolve from the areas of interest and field condition you have established in Tasks 2 and 3. An assessment amounting to 10% of your final mark will be made to a group of invited critics during Week 27, including a wall and screen based presentation and a physical model. The presentation should include a brief summary of your work from Tasks 1-3, together with any option studies for Task 3, and conclude with a commitment and development of the student's preferred option including evidence of the selection process. The architectural drawings and physical model should be at scale 1:100 and resolved to a schematic level, including a design vocabulary, technical confidence, an outline programming and building envelope that you can proceed to detail and develop in Task 4: Final Project Stage.

04_Task 4 Final Project (Week 28-36)
The purpose of this stage is to take the proposal you have technically developed during Task 3 and resolve and complete it, meaning:

Drawings

- GA site plan at 1:500
- Entry level plan at 1:200
- Floor plans at 1:100, with zoom in areas at 1:50
- Elevations and Sections at 1:100 / 1:50
  (All plans / sections / elevations should include a representation of the occupation / usage and field condition)
- Facade detail drawings at 1:20
- Drawings to describe structural and E+M systems

Models
- A physical model of your architectural proposal at 1:75 scale
- A facade study at 1:1 scale using real materials

Visualisation
- A series of visuals and an animation sequence including the spatial and material qualities of your physical proposition and a representation of the usage and field condition they will support.

Background
- A brief summary and narrative of your work from Tasks 1-3

Weeks 28-33 will include a series of group and individual discussions, tutorials and drawing development / mark-up sessions to help you work through this series of deliverables. An assessment amounting to 50% of your final mark will be made to a group of invited critics during Week 36. 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. including a wall and screen based presentation and the physical model(s) of your Task 4 deliverables listed above.

05_Final Task Project Book (17 May 2025)
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.

DELIVERABLES

ONGOING
Summary of Task 1-3 Deliverables (see also task descriptions above)
Task 1: Working individually, select an existing building and usage within the given Mong Kok site area and research, model and represent this as both a ground and field condition in theory, words, images and animation.
Task 2: Working in pairs, develop through testing and modelling an architectural proposal for adaptive re-use of the existing building researched in Task 1. It is expected the outcome will be a separate project for each student. The architectural drawings and physical model should be at scale 1:75 and resolved to a schematic level.
Task 3: Working Individually, develop an architectural proposal for adaptive re-use of an urban block. The architectural drawings and physical model should be at scale 1:100, with enlarged portions of important areas, and resolved to a schematic level. It is important that you show the option studies and process for how you reached your proposal.

FINAL
Summary of Task 4 Final Project Deliverables (see also task descriptions above)
Drawings
- GA site plan at 1:500
- Entry level plan at 1:200
- Floor plans at 1:100, with zoom in areas at 1:50
- Elevations and Sections at 1:100 / 1:50
  (All plans / sections / elevations should include a representation of the occupation / usage and field condition)

- Facade detail drawings at 1:20
- Drawings to describe structural and E+M systems

Models
- A physical model of your architectural proposal at 1:75 scale
- A facade study at 1:1 scale using real materials

Visualisation
- A series of visuals and an animation sequence including the spatial and material qualities of your physical proposition and a representation of the usage and field condition they will support.

Background
- A brief summary and narrative of your work from Tasks 1-3

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

Field trips requirement for this course is currently under review and will be announced at the commencement of the course.

REQUIRED READINGS

About thinking and seeing:
- Ways of Seeing by John Berger
- The practice of Everyday Life by Michel de Certeau
- Life a User's Manual by Georges Perec
- The Poetics of Space by Gaston Bachelard
- Lightness by Italo Calvino
- David and Goliath by Malcolm Gladwell
- Crowds and Power by Elias Canetti
- Family Life in Urban Hong Kong by Robert Edward Mitchell

About urban design:
- The City of Tomorrow and Its Planning by Le Corbusier
- The Image of the City by Kevin Lynch
- The Death and Life of Great American Cities by Jane Jacobs
- The Social Life of Small Urban Spaces by William H Whyte
- Responsive Environments by Ian Bentley et al
- Cities for People by Jan Gehl
- Urban Design Reader by Matthew Carmona and Steve Tiesdell
- Walkable City by Jeff Speck
- Spacematrix: Space, Density and Urban Form by Meta Berghauser Post and Per Haupt

About a building within its environment:
- How buildings work by Edward Allen et al
- Heating, Cooling, Lighting by Norbert M. Lechner
- Wind Effects on Buildings and Design of Wind-Sensitive Structures by Baniotopoulos and

Stathopoulos
- Designing with the Wind: Climate Derived Architecture by Lenka Kabosova et al

About material and making:
- Making by Thomas Heatherwick
- The Craftsman by Richard Sennett
- Cradle to Cradle: Re-making the way we make things by Michael Braggart and William McDonough
- Lightness: The inevitable Lightness of minimum energy structures
- 3D Printing and Material Extrusion in Architecture: Construction and Design Manual by Grigoriadis and Lee

About architecture:
- Interpreting Site by Genevieve S. Baudoin
- Toward an Architecture by Le Corbusier
- Critical Path by Buckminster Fuller
- Architecture without Architects by Bernard Rudofsky
- Portraits from Above: Hong Kong's Informal Rooftop Communities by Rufina Wu
- Cedric Price | Hans Ulrich Obrist: The Conversation Series
- The Evolution of 20th Century Architecture: A Synoptic Account by Kenneth Frampton
- The Function of Ornament by Farshid Moussaka and Michael Kubo
- Architectural Regeneration, edited by Aylin Orbasli and Marcel Vellinga
- Architects’ Data by Ernst and Peter Neufert
- The Future City: Experiment and Utopia in Architecture 1956-2006, edited by Jane Alison et al

About drawing and architectural representation:
- Cities Without Ground by Adam Frampton, Jonathan D Solomon and Clara Wong
- Sins + Other Spatial Relatives by CJ Lim and Studio 8
- The Art of Yamaguchi Akira by University of Tokyo Press
- Drawing Architecture by Helen Thomas

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**	**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	

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 (17/5)**

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

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