Research + Design Thesis

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1. INTRODUCTION

This course covers the general procedures of theoretical inquiry as it relates to urban design. For the thesis, students will develop their own research project and produce an intellectually rigorous piece of work. The topic will be defined in discussion with the instructors, and can be developed based on previous design studio I or II research.

2. LEARNING OUTCOMES

The primary objective of the thesis work is to provide an opportunity for the student to conduct independent research and design work related to a specific interest in the field of Urban Design. The process involves formulating a relevant urban issue, defining researchable questions and developing solutions for the defined problems. Students will implement their knowledge and demonstrate an in-depth capacity to address challenges stemming from the complex ways in which cities function, grow and develop. The students will gain the professional and theoretical tools to conduct research as well as to strengthen their capabilities to support and inform design processes through research.

3. ASSIGNMENTS

Abstract
Text (500 words) outlining a concise summary of the research thesis. It should contain the problem statement, article aim, original contribution, research question, methodology, and (potential) findings, and include key literature references relating to the topic.

Thesis Proposal
Text (1000 words) and images stating your thesis proposal, with a more developed methodology including objectives, research design, and hypothesis based on literature review.

Thesis Report
An edited thesis report including text (no less than 5000 words), reference images (credited) and original drawings and images (2 hard copies and softcopy). The text of the thesis report should be written as an academic dissertation, using a literature review, case study research method and findings, conclusions and reflections on the contribution of the work to the field of urban

design. The report should include an appendix with a bibliography and image credits. The report should be presented in a professional quality layout with high quality, self-produced figures where needed.

4. Thesis Presentations and Publications

The final thesis presentations will require the timely submission of the final thesis report, and the preparation of a screen and oral presentation. Each project will be presented individually to a panel of academic and external experts, accompanied by a Question-and-Answer session. Final grading will be based on the quality of the research work, report and presentation, as well as the oral presentation and defence.

As part of the programme's overall ambitions and quality standards, we expect each student to strive for high quality academic work similar to papers published in international conference proceedings. Students will be encouraged and supported to submit a condensed version of their thesis report to an international conference, to gather experience and feedback from the peer-reviewing processes and engage with other students and scholars working at the forefront of contemporary urban research.

5. ASSESSMENT

Participation: 10%
Thesis Abstract: 10%
Thesis Proposal: 15%
Thesis Report and Presentation: 65%

6. SCHEDULE

Date	Studio Activities
Tue Sept 4	School of Architecture Introductions and Welcome to the MSUD Programme
	14:30 MSUD Course Introductions
Fri Sept 8	Thesis Introduction: Defining the thesis topic
Tue Sept 12	Abstract Draft e-submission [no class]
Fri Sept 15	**Pin-up and Group Discussion:** Thesis Topics
Tue Sept 19	Abstract Draft e-submission [no class]
Fri Sept 22	Discussion with thesis instructor
Tue Sept 26	Research e-submission [no class]
Fri Sept 29	**Final Abstract submission and Presentation (500 words + references)**
Tue Oct 3	Research e-submission [no class]
Fri Oct 6	Discussion with thesis instructor
Tue Oct 10	Research e-submission [no class]
Fri Oct 13	**Thesis Proposal Submission and Presentation *(1000 words+references)***
Tue Oct 17	Research e-submission [no class]
Fri Oct 20	Discussion with thesis instructor
Tue Oct 24	Research e-submission [no class]
Fri Oct 27	Discussion with thesis instructor
Tue Oct 31	Research e-submission [no class]
Fri Nov 3	Discussion with thesis instructor
Tue Nov 7	Research e-submission [no class]
Fri Nov 10	**Research Project Review**
Tue Nov 14	Discussion with thesis instructor
Fri Nov 17	Final Report Writing
Tue Nov 21	Research e-submission [no class]
Fri Nov 24	Discussion with thesis instructor
Tue Nov 28	**Thesis Report e-submission**
Fri Dec 1	Final Corrections + hardcopy printing + reports to External Examiners
Tue Dec 5	Submission of 2 Hardcopy reports + Declaration to School Office
	Presentation Rehearsals
Thu Dec 7	**Final Thesis Reviews**

RECOMMENDATIONS FOR THE THESIS SUBMISSION

The thesis should be structured around the narrative of a critical argument. It is advisable to set out the general chapter headings in a meaningful way so that reading through them will clearly articulate this narrative.

The thesis should broadly cover the following items:

1. Abstract
2. **INTRODUCTION:** Problem Statement, Significance, Research Context, Leading to Identification of Research Gap
3. **LITERATURE REVIEW**: Historical/Theoretical Context and Framework, Relevant In-Depth Knowledge
4. **Research Questions & Objectives**
5. **METHODOLOGY:** Precedents Research, Site Research, Field Research, Methodology Development, Research by Design Experiments
6. **CASE STUDY TESTING:** Methodology Implementation, Evaluating Outcomes.
7. **DISCUSSION:** Evaluating the Project Process, Addressing Research Questions and Limitations
8. **CONCLUSIONS:** Reflecting on the Study Findings, Relevance and Potential Impact on Society. Future Studies.
9. References (Bibliography)

Abstract
An abstract is a concise summary of the research thesis. It should contain the problem statement, article aim, original contribution, research question, methodology, and (potential) findings.

Introduction
Describes an overview of the context of your research, defining the key concepts, relevant history, previous work by others, and the purpose of the research by identifying a gap in current knowledge.

Literature Review
Contains an overview of the most relevant previous academic work done internationally around the specific topic and methodology of your thesis. The literature review informs your detailed research questions, project objectives, methodology, hypothesis and pathways to impact.

Research Questions & Objectives
Set out the aims of the research, in short numbered bullet-point style sentences. Objectives should be written as action-based research activities that are outcome oriented, and defined in a chronological logic that can inform the research methodology and work plan.

Methodology
This is the main section of the research project, organised to generate new knowledge. It can be broken down into different tasks, which need to be planned carefully in terms of time, resources and expertise needed (the 'research design'). The methodology stages should match the research objectives.

Case Study Testing
A case study, in the context of a well-defined research methodology, helps to test and evaluate how the new methods, principle or knowledge generated in the project could be applied to a real-world scenario or site. The application should be evaluated using explicit and precise parameters identified in the literature review, objectives and methodology development.

Discussion
This section should contain your evaluation of the research process and its outcomes, objectives and significance. It should closely follow the detailed research outcomes, rather than produce generalised statements that are not backed up by evidence. The discussion can contain quantitative results, diagrams, graphs, tables that are evaluative. A limitations section should comment on the scope, accuracy and applicability of the findings to other cases.

Conclusions
A critical reflection on the achievements of the project, as set out in the objectives and in relation to its broad and narrow contexts. Conclusions can comment on the wider significance of the project outcomes in relation to broader academic or societal challenges, and identify potential follow-up studies.

References
It is essential that the entire research project is informed by the relevant historic and recent literature. All sources need to be listed in a bibliography, using the APA style for bibliography items. Proper formatting of in-text references should be used following the APA style guide. For examples, visit:
https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_a nd_style_guide/in_text_citations_the_basics.html
All and only those references referred to in the text should be included in the bibliography.

APPENDIX

Grade Descriptor of the Assessment Criteria (Thesis Book Text)

	A	B	C	D	F (Fail)
Content					
Overall structure of essay	A carefully articulated answer to the key questions. A clear introduction outlining the structure of the essay with explicit central statement addressing the key questions.	An effective answer to the key questions. However, some key issues may be overlooked or left out of the analysis. There is an introduction, but it does not have a central statement to position the work with reference to the key issues.	Provides fragmented points to the key questions. Introduction does not provide an overview of the structure of the essay.	A poor answer to the key questions. There is no introduction to the structure of the essay and position with reference to the key issues is not stated upfront.	Not answering the question or a very poor answer not directly addressing the stated question.
Ability to construct coherent arguments	Arguments are carefully & logically constructed, with strong evidence and data.	Arguments are presented with some solid evidence and information.	Arguments are presented with some evidence and information.	Arguments are made but are weakly supported by evidence.	Arguments are not supported by evidence or by irrelevant evidence.
Use of wider literature	Extensive use of literature that goes well beyond the provided references.	Does not go beyond the provided references.	Use some of the provided literature.	Shows little use of literature.	Shows no use of literature.
Understanding of concepts/ issues	Shows a clear and thorough understanding of concepts and issues through development of synthesised frameworks and deliberations of clear insights.	A sound understanding of concepts/issues with little evidence of efforts to synthesise beyond lectures and cited literature in class.	Shows understanding of concepts/issues but efforts seem to confine to making reference to lecture notes.	Insufficient, inadequate or superficial understanding of concepts and issues.	Wrong understanding of concepts.

ACADEMIC HONESTY AND PLAGIARISM

Plagiarism is the use of another person's words, images or ideas in any academic work without proper acknowledgment. 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 https://www.cuhk.edu.hk/policy/academichonesty/.

With each assignment, students will be required to submit a signed declaration that they are aware of these policies, regulations, guidelines and procedures. For group projects, all students of the same group should be asked to sign on the declaration.

Students are required to submit a softcopy of the assignment to the VeriGuide system at: https://academic2.veriguide.org/portalcuhk/. After submission, student should receive a receipt and an academic honesty declaration statement via an e-mail from VeriGuide. Please print the receipt and the declaration statement (below) and submit them to the lecturer together with a hardcopy of the assignment.

The use of Artificial Intelligence (AI) tools

The use of AI tools, such as ChatGPT or image generation tools (MidJourney etc.) without explicit acknowledgement and submitting this as one's own work is considered academic misconduct. Students may refer to the CUHK 'Use of Artificial Intelligence tools in Teaching, Learning and Assessments' – A Guide for Students. The use of AI tools for specific assignment within the course work process may be permitted as part of the course framework, and could be implemented after discussion with, and approval from the course tutor. 'Acknowledgement' shall be defined as 'acknowledgement of the specific AI tool used and how it has been used in producing the work.

For more information:
https://libguides.lib.cuhk.edu.hk/c.php?g=917899&p=6975970

ACADEMIC HONESTY AND PLAGIARISM

I declare that the assignment here submitted is original except for source material explicitly acknowledged. I also acknowledge that I am aware of University policy and regulations on honesty in academic work, and of the disciplinary guidelines and procedures applicable to breaches of such policy and regulations, as con-
tained in the website http://www.cuhk.edu.hk/policy/academichonesty/

_____   _____
Signature   Date

_____   _____
Name   Student ID

_____ _____
Course code   Course Title

Research + Design Thesis

Instructors: Sylvia Chan
                     Jeroen van Ameijde

Topic and Methodology Selections

THE 'NEW' NEW TOWN:
Creating sustainable, liveable and supportive communities as part of Hong Kong's long-term development

For the Urban Design Thesis topic selection, we will work within the wider research agenda of the MSUD programme into the role of self-contained neighbourhoods in response to global challenges relating to social and environmental sustainability.

The research projects can refer to aspects of urban planning and urban design that impact the formation of supportive communities, analysing the tension between top-down approaches of planned urban developments, and the organic social and economic processes that lead to vibrant neighbourhoods and social resilience.

Projects can refer to international case studies, in-depth Hong Kong field research and speculative urban design model testing, to offer research-based guidelines for the planning of new urban areas fit for a healthy and sustainable future.

The topic selection can be in relation to:
- urban planning frameworks
- mobility solutions
- urban organisational structures
- environmental performance
- urban morphology
- function mixing
- activity and behavioural patterns
- placemaking processes
- public space
- community vibrancy
- liveable urban environments
- supportive social processes
- specific resident groups (older adults, young people, gender equality, ethnic minorities, etc.)
- urban facilities / social infrastructure
- equitability and Quality of Life
- resilience and climate change

The methodologies used can include:
- urban theory literature analysis
- urban history literature and archive material analysis
- international case study analysis
- Hong Kong case study analysis
- field studies and site analysis
- activity and behaviour observation mapping
- interviews and questionnaires
- photography and video recording
- digital modelling or generative design testing
- urban simulation models
- morphology analysis
- environmental analysis
- GIS modelling
- Big Data analysis
- social media data analysis
- Google Street View Imagery analysis
- economic data gathering and analysis
- correlation analysis, statistical analysis

The ambition is to, as a collective, produce research reports which can contribute to the public discourse and ongoing planning processes for Hong Kong's urban development including the Kau Yi Chau Artificial Islands and the Northern Metropolis. We will aim to provide insights and inspiration for others to create more vibrant, equitable and resilient communities, capable to evolve with future societal and environmental changes.

POTENTIAL RESEARCH OUTCOMES:

- To understand how Hong Kong's existing New Towns have evolved historically and are currently transforming;
- To understand the interplay between land use functions, infrastructure systems and neighbourhood qualities;
- To offer strategies to create or improve neighbourhoods with economic vitality, social and environmental sustainability;
- To present research-based urban design solutions that can contribute to increased living quality, social interaction, and community forming;
- To describe urban planning or design guidelines for the implementation of effective and resilient urban and social infrastructure solutions over time;
- To discuss proposals for the urban development of Hong Kong in relation to their potential synergies and integration within their context;
- To offer a comprehensive understanding of quantitative urban design measures and their relationship to spatial and environmental qualities that support urban communities;
- To propose research-based design strategies that promote health and psychological well-being.