Regenerating rural villages through phygital means

RURAL REVITALISATION

INSTRUCTOR
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ISSUE

"Our focus on the city makes us resemble the diagram of the relative sensitivity of body parts: some areas are swollen and over-represented, others withered and neglected… the countryside is the most contested and emotive field, not least in the new forms of immigration required by new systems in the countryside" (Rem Koolhaas, 2020).

In this trend, how should we contribute to the research and design of the urban-rural-countryside-nature continuum?

DESCRIPTION

Countryside revitalization has been increasingly emphasized in academia in the discourses of architectural conservation. Architecture can operate as a place-making tool between the complementary urban and rural sides and the countryside becomes the site for a hybrid identification when one is situated in the ambiguous boundary between the urban and rural areas (Semprebon, 2022). In China, revitalization strategies were set in 2017 to achieve basic modernization of rural and agricultural areas through cultivating affluent farmers, establishing strong agricultural industries and shaping beautiful countryside. In Hong Kong, a rural cultural landscape in Lai Chi Wo village has also been revived using a nature-based solution highlighting the Hakka settlement's agricultural identity and was recently recognized by the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation.

According to the numbers, 75% of the land remains undeveloped and regarded as the countryside (LegCo of HKSAR, 2016), which houses some of the 642 recognized villages in Hong Kong. Increasing attention to local village revitalization has been reflected in the recent "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" plan and the "Northern Metropolis Development Strategy" plan. In 2018, the Countryside Conservation Office (CCO) under the Environmental Protection Department and the Lantau Conservation Fund (LCF) of the HKSAR Government was established to provide incentives for initiatives that conserve remote sites in the countryside.

This course takes a rural village on Lantau Island as an example for in-depth investigation regarding historical and cultural, socio-spatial and environmental aspects. Issues related to architectural elements, landscape characters, community engagement, permaculture and eco-farming, and social impact will be explored ***using digital tools.***

Students are expected to demonstrate a basic understanding of the rural landscape in Hong Kong. Skill sets of measured drawings, photography, verbal communication with stakeholders using graphical apparatus, and ***digital competency, including artificial intelligence tools,*** are essential. This course will contribute to an ongoing research project on countryside conservation and rural revitalisation, which has yet to be realised through external grants. It supplements the studio curriculum with real-world contexts and hands-on experiences.

COURSE SYLLABUS

TOPIC 1: Countryside: What, Why and How?
TOPIC 2: Countryside Villages in Hong Kong
TOPIC 3: Methodologies in Architecture and Anthropology
TOPIC 4: Digital Humanities and Tools

METHODS

This course investigates the existing frameworks of village conservation and revitalization. Using a coastal Hakka village as an interface, we will participate in the field and conduct in-depth investigations using architectural and anthropological methodologies with the ***use of the latest digital platforms and AI tools*** with respect to the latest research trends in digital humanities in architecture. Based on real-life interactions, a comprehensive village profile focused on socio-spatial and environmental aspects will be created for future uses.

Workshops / In-class tutorials in a desk-crit format will be arranged.
Guest Lectures / Guest lecture(s) by anthropologist researchers and digital experts will be given.
Field Trips / Several field trips to Lantau Island will be arranged to produce the deliverables.
AI Tools / LiDAR 3D scanning, 3D printing and prototyping, VR and AR, algorithmic processing, iterative image generation, BIM operation, GIS narrative mapping and etc.
Exhibition / Selected student works might be exhibited at the Hong Kong Shenzhen Bi-city Biennale of Architecture and Urbanism (UABB) 2024-25 in late November.

DELIVERABLES

ASSIGNMENT 1. READING (PRESENTATION 1; GROUP; 15%)

1. Choose ONE piece of reading related to socio-spatial or environmental studies of villages.
2. Analyze the objectives, theoretical framework, methodology and significance of each study.
3. Summarize in bullet points on A1/A3 panels.

ASSIGNMENT 2. CASE STUDY (PRESENTATION 2; GROUP; 15%)

1. Choose **ONE local case AND ONE foreign case** related to rural revitalization.
2. Analyze and criticize using the framework and methodology derived from the readings.
3. Summarize in bullet points on A1/A3 panels.

ASSIGNMENT 3. DIGITAL HUMANITIES (PRESENTATION 3; GROUP; 50%)

For each group, choose **ONE aspect** from below for conducting a ***design-research*** investigation ***using the latest digital tools/platforms*** including but not limited to LiDAR 3D scanning, 3D printing and prototyping, VR and AR, algorithmic processing, iterative image generation, BIM operation, GIS narrative mapping and etc.

1. History, Tradition and Culture
2. Village Fabrics, Morphology and Demographics
3. Architecture and Typology
4. Community, Infrastructure and Policy
5. Landscape, Environment and Ecology

ASSIGNMENT 4. FINAL REPORT (INDIVIDUAL; 20%)

LEARNING OUTCOMES

1. Through completing *Assignment 1 (Reading)*, students will understand, demonstrate, analyse, interpret and critique how scholars and researchers conduct socio-spatial and environmental studies of villages in similar contexts.
2. Through completing *Assignment 2 (Case Study)*, students will understand, demonstrate, analyse, interpret and critique how practitioners implement real-world projects related to rural revitalisation in both the local and the foreign contexts. Students will also acquire adequate knowledge of the historical precedents of countryside conservation and be informed by the related arts, technologies and human sciences, including the philosophical and anthropological concerns.
3. *Through completing Assignment 3 (Digital Humanities)*, students will understand, demonstrate, apply, innovate and challenge the limits of the application of the latest digital and AI tools/platforms for conducting a design-research investigation in the local context. Students will experience the profession of architecture in documenting the rural environment with processes of community engagement, and practice the role of the architect in producing professional architectural drawings for the community.
4. *Through completing Assignment 4 (Final Report)*, students will document, consolidate, reflect, improve and challenge their own investigation from Assignments 1 to 3.

ASSESSMENT SCHEME

	Assessment Rubrics				
Assignment 1 (Reading; 15%)	Basic understanding of the ideas.	Demonstration of the ideas with clear illustration.	Concise analysis and representation of the ideas.	Interpretation of the ideas using own's methods.	Critique of the ideas with arguments and evidence.
	0-3%	3-6%	6-9%	9-12%	12-15%
Assignment 2 (Case Study; 15%)	Basic understanding of the ideas.	Demonstration of the ideas with clear illustration.	Concise analysis and representation of the ideas.	Interpretation of the ideas using own's methods.	Critique of the ideas with arguments and evidence.
	0-3%	3-6%	6-9%	9-12%	12-15%
Assignment 3 (Digital Humanities; 50%)	Basic understanding of the AI tools and the village site.	Demonstration of the AI tools in terms of usage, context, strength and limitation.	Application of the AI tools in producing new knowledge in the investigation.	Innovation of ideas through the use of AI tools in the investigation.	Challenge the limits of the AI tools and architectural discourses in the investigation.
	0-10%	10-20%	20-30%	30-40%	40-50%
Assignment 4 (Final Report; 20%)	Basic documentation of the assignments.	Thoughtful and logical consolidation of findings.	Reflection on the assignments regarding own's strength and weakness.	Improvement of works generated in the previous assignments.	Challenge the effectiveness and inform future development of the investigation.
	0-4%	4-8%	8-12%	12-16%	16-20%
Total (100%)	0-20%	20-40%	40-60%	60-80%	80-100%

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

COURSE FORMAT

Teaching Days
1. Students must attend for F2F teaching during these teaching hours.
   Teaching Day: Wednesday, 10:30 – 13:15
2. Teaching Venue: YIA 508
3. Field trips, lectures, and other learning activities may be scheduled outside of teaching days.

Student Study Effort_3 credit course (Total: 140 hrs)
1. Class Contact: 39 hrs (Lecture 10hrs, Tutorial 19hrs, Critique 5hrs, Field Trip 5hrs)
2. Other Student Study Effort: 100 hrs (Studio / Self Study)

Important Dates
Assignment 1: 10 September 2025
Assignment 2: 24 September 2025
Assignment 3: 19 November 2025
Final Report: 10 December 2025

REFERENCES

Chang, K. K. (2022). *Community Practices in Lai Chi Wo: Limitations and Futures of Rural-urban Symbiosis*. Hong Kong Baptist University.
Chang, W. P. H. (2023). *Rediscovery of Cultural Landscapes in Southern China: Sustainable Heritage and Planning in Rural Settlements*. Routledge.
Hase, P. (2022). The Alliance of Ten: Settlement and Politics in the Sha Tau Kok Area. In *The Alliance of Ten: Settlement and Politics in the Sha Tau Kok Area* (pp. 123–160). Stanford University Press.
Hoffmann, E. M., Schareika, N., Dittrich, C., Schlecht, E., Sauer, D., & Buerkert, A. (2023). Rurbanity: A concept for the interdisciplinary study of rural–urban transformation. *Sustainability Science*.
Koolhaas, R. (2020). *Countryside: A Report*. Taschen America Llc.
Policy for Sustainability Lab. (2018). *Vivifying Lai Chi Wo: Sustainable Lai Chi Wo Programme Four Year Review and Outlook*. Policy for Sustainability Lab, Faculty of Social Sciences, The University of Hong Kong.
Poon, P. (2007). *Hakka Wai: Understanding Hong Kong's traditional Hakka architecture and its relationship to the Hakka people* (pp. 991025267789703400, b42183091) [Master of Science in Conservation, The University of Hong Kong].
Semprebon, G. (2022). Design Driven Research for Countryside Revitalization of a Rural Settlement of the Fujian Province, China. *Architecture*, *2*(2), Article 2.
Williams, J. M., Chu, V., Lam, W.-F., & Law, W. W. Y. (2021). *Revitalising Rural Communities*. Springer.
劉智鵬、劉蜀永合著：《香港史一從遠古到九七》（香港：香港城市大學，1993 年）
吴慶洲：《中国客家建筑文化 (第 1 版) 》（中國：湖北教育出版社，2008 年）
肖文评：《客家村落》（中國：暨南大学出版社，2015 年）
蕭國健：《香港新界北部鄉村之歷史與風貌》（2010 年）
蕭國健：《居有其所: 香港傳統建築與風俗》（香港：三聯書店香港有限公司，2014 年）
韓伯泉：《客家風情志》（中國：中華書局，1991 年）
黃火興、羅碧雲、李烈合者：《客家風情誌》（香港：中華書局，2022 年），第二版
香港史學會：《香港歷史探究》（2011 年）

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 undergraduate studies can be found in the UG Student Handbook. https://rgsntl.rgs.cuhk.edu.hk/aqs_prd_applx/Public/Handbook/

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
Students are allowed and encouraged to identify and use suitable AI tools for conducting site investigation, derive design solutions and engage with the stakeholders in a real-world setting, including but not limited to LiDAR 3D scanning, 3D printing and prototyping, VR and AR, algorithmic processing, iterative image generation, BIM operation, GIS narrative mapping and etc. Students must explicitly acknowledge and explain how AI tools are used to achieve what purposes in the final report.

Students may refer to Approach 3 of the CUHK 'Use of Artificial Intelligence tools in Teaching, Learning and Assessments' – A Guide for Students.

Student Work
Submission of course work 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.

External Examination
Of paramount importance to the academic rigour and professional relevance of the architecture programme, the external examination process serves as a critical and impartial review mechanism. An invited panel of distinguished practitioners, academics, and industry experts convenes to rigorously evaluate the school's pedagogical ecosystem. This comprehensive audit scrutinises the fairness and consistency of the internal assessment process, benchmarks the standard and ambition of student work against national and international norms, and provides invaluable feedback on the intellectual and pedagogical direction of the curriculum itself.

As a cornerstone of this process and a mandatory graduating requirement, final-year students from both the Bachelor of Social Sciences (Architecture) and Master of Architecture programmes must present their final project and portfolio work in person. This formal defence before the external panel not only validates the authenticity and depth of their learning but also simulates a professional practice environment, demanding they articulate their design rationale, critical thinking, and technical resolution to an authoritative audience, thereby preparing them for the collaborative and discursive nature of the architectural profession.

Term 1: 3 September 2025 (Wednesday) – 10 December 2025 (Wednesday)

WEEK 01		
03.09	**Course Introduction**	*Countryside: What, Why and How? / Issue assignment 1,2,3*
WEEK 02		
10.09	**Presentations** **Tutorial**	***Assignment 1 Presentations*** *Tutorial (Assignment 3)*
WEEK 03		
17.09	**Guest Lecture** **Lecture** **Tutorial**	***Digital Humanities and Tools*** ***Techformance – Technology, Platform, Performance (UABB 2025)*** *Tutorial (Assignment 3)*
WEEK 04		
24.09	**Presentation** **Tutorial**	***Assignment 2 Presentations*** *Tutorial (Assignment 3)*
WEEK 05		
01.10	**No Class** **(National Day)**	
WEEK 06		
08.10	**Lecture**	*Countryside Villages in Hong Kong: Examples*
WEEK 07		
15.10	**Tutorial**	*Tutorial (Assignment 3)*
WEEK 08		
22.10	**Lecture**	*Frameworks and methodologies (Rural Studies)*
WEEK 09		
29.10	**No Class** **(Chung Yeung Festival)**	
WEEK 10		
05.11	**Tutorial**	*Tutorial (Assignment 3)*
WEEK 11		
12.11	**Tutorial**	*Tutorial (Assignment 3)*
WEEK 12		
19.11	**Presentation**	***Presentation (Assignment 3)***
WEEK 13		
23.11 (Sat) 26.11	**Exhibition**	**On-site Installation (UABB)** *Studio Final Review*
WEEK 14		
10.12	**Submission**	***Final report due***

Grade	Descriptor	Criteria *(refer to Assessment Rubrics)*	Points
A	Excellent	Outstanding performance on all learning outcomes. ***(Total marks: 95-100%)***	4
A-	Very Good	Generally outstanding performance on all (or almost all) learning outcomes. ***(Total marks: 90-95%)***	3.7
B+	Good	Substantial performance on all learning outcomes, OR high performance on some learning outcomes which compensates for less satisfactory performance on others, resulting in overall substantial performance. ***(Total marks: 75-90%)***	3.3
B			3
B-			2.7
C+	Fair	Satisfactory performance on the majority of learning outcomes, possibly with a few weaknesses. ***(Total marks: 60-75%)***	2.3
C			2
C-			1.7
D+	Pass	Barely satisfactory performance on a number of learning outcomes. ***(Total marks: 50-60%)***	1.3
D			1
F	Failure	Unsatisfactory performance on a number of learning outcomes, OR failure to meet specified assessment requirements. ***(Total marks: 50% or less)***	0

Written Feedback to Students

Term: _____ **Grade:** _____

Course Code: _____

Review: _____

Tutor: _____

Student Name: _____

Student ID: _____

Feedback from Course Instructor:

Achievements:
Challenges: