

Course Information	
Course title	Environmental Planning and Design Studio (IV)A4
Semester	114-2
Designated for	COLLEGE OF ENGINEERING GRADUATE INSTITUTE OF BUILDING & PLANNING
Instructor	SHENGLIN CHANG
Curriculum Number	BP7251
Curriculum Identity Number	544 M5180
Class	
Credits	4.0
Full/Half Yr.	Half
Required/ Elective	Elective
Time	Monday A,B(18:25~20:10)
Remarks	Restriction: seniors year and beyond The upper limit of the number of students: 10. The upper limit of the number of non-majors: 3.
Course introduction video	
Table of Core Capabilities and Curriculum Planning	Table of Core Capabilities and Curriculum Planning
Course Syllabus	
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Course Description	This studio is a joint design course co-organized by the Graduate Institute of Building and Planning, National Taiwan University, and Prof. Takashi Ariga's team at the Department of Architecture, Waseda University. Core Site: Pinglin District, Feitsui Reservoir Drinking Water Source Protection Area Core Theme: Co-Creating the Value of Feitsui I. Course Vision and Core Dimensions This course focuses on the "Feitsui Value" through the lens of sustainable development, exploring the synergy between environmental protection and local prosperity across three dimensions:

- Sustainable Water Stewardship (SDGs 6): Since 1987, nearly 7 million residents in the Taipei Basin have relied on high-quality water from the Feitsui Reservoir. This dimension explores how urban consumers can connect with and support the tea farmers, local business owners, and younger generations in the Protection Area whose development is restricted. How do we collectively define and uphold the "Feitsui Value" of sustainable water resources?
- Appropriate Urban-Rural Development (SDGs 11): In response to the needs of regional revitalization, this dimension investigates planning and design guidelines for Net-Zero Buildings and Low Impact Development (LID). We will define the standards for industrial and residential bases that harmonize local livelihoods with environmental constraints.
- Eco-Study Industry Incubation (SDGs 8): Stretching across Pinglin, Wulai, Shiding, and Shuangxi, how can we incubate a service chain for immersive eco-friendly study tours and deep-learning experiences? This goal aims to create sustainable green economy employment opportunities through the development of professional eco-tourism services.

II. Methodology

The course utilizes transdisciplinary planning and design methods, including:

- Field Investigations: In-depth site surveys within the protection area.
- Stakeholder Interviews: Engaging with farmers, residents, and government officials.
- Data Synthesis: Literature reviews and spatial data analysis.
- Co-Design Workshops: Collaborative sessions to ideate and refine solutions.

III. Expected Deliverables (Beta Version / V1.0)

Adopting an iterative design concept, all deliverables for this semester are considered "Beta" or "Version 1.0," serving as the foundation for future refinement. Deliverables include, but are not limited to:

1. Feitsui Value Systems Map: A visual framework of the ecosystem and social values.
2. Development & Design Guidelines: Standards for the Water Source Protection Area.
3. Eco-Study Service Design Package:

o Target Personas: Detailed profiles of potential participants.

o Travel Scenarios: Three sets of journey maps/scenarios for immersive study tours.

This course will integrate:

1. Professor Shenglin Chang's 14 years of deep engagement in Pinglin,
2. Transdisciplinary research data from the LTSER (Long-Term Social-Ecological Research) Feitsui Site
3. the Japanese case studies and methodologies featured in the publication Japanese Environmental Design and Management for Sustainable Urbanism: Learning from Satoyama, edited by Professor Takashi Ariga of Waseda University.

Course Objective

1. Transdisciplinary Knowledge Integration: Bridging Local Practice with Scientific Research
By synthesizing Professor Shenglin Chang's 14 years of deep-rooted engagement in Pinglin with the Long-Term Social-Ecological Research (LTSER) data from the Feitsui site, the course guides students to build an integrated understanding of complex socio-ecological systems, bridging the gap between field practice and scientific evidence.
2. International Knowledge Translation: Adapting Satoyama Principles to Taiwan's Watersheds
Students will analyze Japanese case studies and methodologies from Professor Takashi Ariga's (Waseda University) publication, Japanese Environmental Design and Management for Sustainable Urbanism: Learning from Satoyama. The goal is to translate these international environmental design and management principles into localized planning strategies for the Feitsui Protection Area.

	3. Co-Creation of Social Value: Establishing Sustainable Urban-Rural Symbiosis Through field investigations and stakeholder engagement, the course aims to redefine the symbiotic "Feitsui Value" for both urban residents in the Taipei Basin and local communities. Students will learn to develop spatial design guidelines and regional revitalization strategies that foster humanistic value and ecological resilience under strict environmental constraints. 4. Iterative Prototyping: Developing Solutions for Future Societal Needs Rooted in the concept of "iterative design," the course directs students to produce Beta-version prototypes—including the Feitsui Value Systems Map, Net-Zero development guidelines, and immersive eco-study service chains. These deliverables are designed to address evolving societal needs and serve as a foundation for a sustainable green economy. Urban-Rural Symbiosis, Sustainable Value, Sustainable Urbanism, Healthy Cities, Satoyama Design Principles, Socio-Ecological Production Landscapes and Seascapes (SEPLS), Low Impact Development (LID), Near-Zero Buildings, Eco-Study Industry, SDG 6: Clean Water and Sanitation, SDG 11: Sustainable Cities and Communities. SDG 8: Decent Work and Economic Growth
Course Requirement	Facilitating participatory workshops is the default ability. In addition, Students are expected to have at least some of the following skills: • Basic competence in site investigation and analysis (including fieldwork and map interpretation) • Basic training in urban or regional design (ability to produce simple plans, sections and urban design diagrams) • Prior experience with community engagement or field research is desirable. Students with backgrounds in GIS, environmental simulation, public health, and social sciences are also welcome to foster interdisciplinary collaboration.
Student Workload (Expected weekly study hours before and/or after class)	8 hours in average This course is practice- and internship-oriented, with substantial work required outside of class. The average expected workload is about 8 hours per week. As this is an international collaboration, parts of the program will be conducted in an intensive format, and students must remain flexible to accommodate the schedule, including intensive sessions with the Waseda University team. Official class time: Mondays: COIL hybrid sessions (online + in-person). Time slots for Classes A and B are fixed, but Class C may also be used. Students are therefore advised to keep 18:25–21:05 available. Intensive sessions: April 18, 19, 25: Full day April 20–24: Evenings
Office Hours	Appointment required.
Designated reading	References related to Pinglin TBD Ariga, T. (Ed.). Japanese Environmental Design and Management for Sustainable Urbanism: Learning from Satoyama. Routledge.
References	More to come... • International Partnership for the Satoyama Initiative (IPSI). Socio-ecological Production

	Landscapes and Seascapes (SEPLS).• Official documents and case studies from the Satoyama Initiative website. • World Health Organization. Implementation framework for Phase VII (2019–2024) of the WHO European Healthy Cities Network and related Healthy Cities reports. • Other relevant academic articles, theses and dissertations on healthy cities, ageing-in-place, community sports and local revitalization.
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Grading	1. NTU has not set an upper limit on the percentage of A+ grades. 2. NTU uses a letter grade system for assessment. The grade percentage ranges and the single-subject grade conversion table in the NATIONAL TAIWAN UNIVERSITY Regulations Governing Academic Grading are for reference only. Instructors may adjust the percentage ranges according to the grade definitions. For more information, see the Assessment for Learning Section.
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Adjustment methods for students	Teaching methods	Provide students with flexible ways of attending courses
	Assignment submission methods	Mutual agreement to present in other ways between students and instructors
	Exam methods	Exams replace written (oral) reports
	Others	Negotiated by both teachers and students

Progress

Week	Date	Topic
Week 0	module 01	Introduction: course overview and site briefingThe Evolution of Pinglin and the Feitsui Reservoir Protection Area
Week 0	module 02	Satoyama and SEPLS concepts; Japanese case studies; regional context of Pinglin tea cultural landscape and industry
Week 0	module 03	Site survey methods (1): topography, vegetation, hydrology, microclimate and built form
Week 0	module 04	Site survey methods (2): land use, mobility and healthy city indicators
Week 0	module 05	Community visits and participatory observation; key-informant interview workshop
Week 0	module 06	Synthesis and multi-scalar analysis; initial presentation (Reading Atlas)
Week 0	module 07	Regional scenarios and structural diagrams for Feisui Reservoir and the Pinglin Distric
Week 0	module 08	COIL workshop I with Waseda; mid-term design review with invited stakeholders

Week 0	module 09	In-depth site investigations in response to design concepts
Week 0	module 10	Advanced design: regional/community-scale sports & healthy corridors and public spaces
Week 0	module 11	Participatory workshop: Co-creating the Feisui Value
Week 0	module 12	Eco-tourism-based study service design
Week 0	module 13	COIL workshop II with Waseda: group pin-up and joint critique
Week 0	module 14	Production of drawings/models; self-evaluation using health and ecological indicators
Week 0	module 15	Writing of bilingual design reports; preparation for final presentation
Week 0	module 16	Final jury and exhibition with external reviewers and local stakeholders