



International Development: Sustainable Architecture & Design

Course Details

Course Designator & Number: THAI 4004

Number of Credits: 4

Language of Instruction: English

Contact Hours: 60

Instructor: Mark Ritchie

Course Description

This course will examine sustainable design, including vernacular architecture, sustainable product design, urban planning, alternative (green) power (wind/solar/hydro), sustainable engineering, and sustainable and alternative architecture. It will focus on how design can be used in development to support sustainability, especially in the built and manufactured environment, drawing on culturally and ecologically appropriate design principles.

This course encourages students to think critically about development theories and practices. A majority of examples and reading will be drawn on case studies from Thailand and their links to global development issues. “Development” as a contested value and process will be explored in multiple scales— local, national, and global. Special emphasis will be on the practice of development: What does it mean to actually “do” development in a cross-cultural international setting? We will examine the roles of outsiders and facilitators and how local communities and organizations can be empowered through the development process.

Course Objectives

The objectives of this course are to:

- Provide an overview of the major environmental and economic issues in sustainable architecture and design
- Examine how the natural environment influenced Thai vernacular architecture and the benefits of utilizing these practices within design

- Identify major areas of design and architecture, including natural materials, recycling, upcycling and related approaches
- Examine how culture, history, and the natural environment influence the built environment, urban planning, and design in Thailand and southeast Asia
- Provide an overview of development theories and its practices as well as current trends
- Utilize theoretical and conceptual tools to critically analyze specific development problems, policy programs, and projects as students experience them in their host communities and internship agencies
- Give students hands-on opportunities with sustainable architecture and design principles and practices in the Thai context

Methodology

The course will integrate course lectures and readings with group discussions and interactive excursions outside the classroom in order to thoroughly interrogate course topics and prepare students for rich follow-up independent studies and internships. Course requirements include class participation, two focus papers, and a final presentation, each of which will be discussed further in class. Class participation will include leading discussions on course readings and doing small group projects and presentations for the eight weeks of class. Guest lecturers will also be invited to share their experiences with students. Prior reading and short homework assignments will be important to the success of the course.

Required Reading / Materials

- “Sustainable Urbanism: Urban Design With Nature,” Douglas Farr, 2008, Wiley and Sons.
- “Sustainable Design: Ecology, Architecture, and Planning,” Daniel E. Williams, David W. Orr, et al. | May 1, 2007, Wiley and Sons.
- “Invitation to Vernacular Architecture: A Guide to the Study of Ordinary Buildings and Landscapes (Perspect Vernacular Architectu), 1st Edition,” Thomas Carter and Elizabeth Collins Cromley, 2005, Wiley and Sons.
- “What is global development?,” Rory Horner, Global Development Institute Working Paper Series 2017-020 December 2017.
- “Global South: what does it mean and why use the term?” Aug 8, 2018, Marlea Clarke, Global South: what does it mean and why use the term? | Global South Political Commentaries.
- “Chapter 2 Contesting development in theory and practice,” International Development in a Changing World, Rebecca Hanlin and William Brown, pages 31–48.
- “From International to Global Development: New Geographies of 21st Century. Development,” Rory Horner and David Hulme, Development and Change 0(0): 1–32. DOI: 10.1111/dech.12379.
- “Preface and Introduction” to The Development Dictionary: A Guide to Knowledge as Power, Wolfgang Sachs, Zed Books, 2010.
- “What is sustainable development? ”Jennifer Elliott, An Introduction to Sustainable Development 3rd Ed. Routledge 2006.
- Bhalla, G.S. (1995). Food Security in South and South East Asian Countries, A Paper prepared for the South South Commission. Institute for Studies in Industrial Development, New Delhi.

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- Chow T. *An Introduction to Ostrom's Eight Principles for Sustainable Governance of CommonPool Resources*. Secure World Foundation.
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- Department of Economic and Social Affairs, United Nation (2009) "Rethinking Poverty: Report on the World Social Situation," 2010, New York.
- Economist Intelligence Unit. (2017). *Water Security: Lessons from the Mekong River Basin*. The Economist Intelligence Unit Limited 2017.
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- Epstein, G., et., Al. (2013). Missing ecology: integrating ecological perspectives with the social ecological system framework, *International Journal of the Commons* Vol. 7, no 2, August 2013, pp. 432–453; Igitur publishing.
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- Forsyth, T., & A. Walker, (2008). Upland People, In *Forest guardians, forest destroyers: The politics of environmental knowledge in northern Thailand*. Seattle, University of Washington Press, pp. 59- 86.
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- Mongsawad, P. (2010). The philosophy of sufficiency economy: a contribution to the theory of development, *Asia-Pacific Development Journal* Vol. 17, No. 1, June 2010. National Institute of Development Administration (NIDA), Bangkok.
- Morton, Micah F. (2016) *Indigenous Peoples of Thailand Network of Indigenous Peoples in Thailand*. Paper The Indigenous Peoples' Movement in Thailand Expands. ISSUE: 2016 No. 68 ISEAS—Yus of Ishak Institute. Singapore. Pages 1-11.
- Poffenberger, M. (2006). People in the forest: Community forestry experiences from Southeast Asia, *Int. J. Environment and Sustainable Development*, Vol. 5, No. 1, pp.57–69.
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- West, J. (2014) “Thailand’s failed experiment in inclusive growth,” Asian Century Institute, <http://asiancenturyinstitute.com/politics/655-thailand-s-failed-experiment-in-inclusive-growth>.
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Grading

Grading Rubric

Letter Grade	Score or Percentage	Description
A	93–100	Achievement that is outstanding relative to the level necessary to meet course requirements.
A-	90–92	Achievement that is significantly above the level necessary to meet course requirements.
B+	87–89	
B	83–86	
B-	80–82	Achievement that meets the course requirements in every respect.
C+	77–79	
C	73–76	
C-	70–72	Achievement that is worthy of credit even though it fails to fully meet the course requirements.
D+	67–69	
D	60–66	
F	0–59	Represents failure (or no credit) and signifies that the work was either (1) completed but at a level of achievement that is not worthy of credit or (2) was not completed and there was no agreement between the instructor and the student that the student would be awarded an I.

Summary of How Grades Are Weighted

Assignments	Percentage of Grade
Attendance and class participation	10%
Unit essay (5% each)	40%
Field studies	25%
Final presentation	25%
Overall grade	100%

Assessment Details

Attendance & Class Participation

Students are expected to be active and engaged during the classes, which means asking questions, completing the readings beforehand, and participating in class activities. Due to the intensive nature of the MSID classroom phase, attendance is required, and skipping class is discouraged. Missing a significant number of classes will result in a grade reduction. This is worth 10% of the grade.

Weekly Essays

Each weekly essay focuses on a group of related issues, seminars, readings, and field studies. At the end of each week, students will write a short essay (2–3 pages) about the content from that week. The essays should follow the following rubric:

- Which particular issue/seminar/reading did you find particularly interesting during this unit and why?
- How does this issue relate to the larger topic of this theme?
- How does this issue relate to the broader issues of international development?
- What questions does this raise for you related to this theme that would like to explore further?

Each essay is worth 5%, for a total of 40% of the grade. Essays are due on the Monday following the week, with the final Unit 8 essay due on the final Friday.

Field Studies

Each course will have a number of short field studies as well as a larger, weeklong extended field study. In addition to the weekly essay, students will be expected to be engaged and active learners during the field studies. This means asking questions, being an active and engaged member of the group, completing assignments specific to the field study, and following all cultural, safety, and related guidelines for the field study. This is worth 25% of the grade.

Final Presentation

The final presentation is a 10-minute presentation of a topic of students' choice related to the theme of the course. Students should be working to collect information and material for the presentation during the entire course, using field studies, independent research, and course readings and seminars. The final presentation should include and will be assessed on the following rubric:

- What is the issue that you are interested in?
- How is this related to the theme of your course?
- How is this related to the broader issues in international development?
- What did you learn during your research on this topic?
- What further questions did this project raise for you?

This is worth 25% of the grade.

This is due on the last day for the course, the final Friday of Unit 8.

Course Content

Unit 1

Cross-Cultural Learning Workshop

- The purpose of this workshop is to provide students with a practical and experiential understanding of what it means to be culturally competent and able to be “culture learners” during the semester. Each session will be based on handouts, short videos, interactive discussions, and exercises to help students better understand their own culture as well as Thai culture.
- Readings for this week will be handed out in class.
 - Seminar 1: What is culture and fundamentals of culture: We tend to assume that our culture is just “the way things are” when, in fact, many cultural ideas and practices can be quite different. This session will give us some tools and understanding of what constitutes culture, and how we might use cultural analysis to understand and compare our own cultures with our new host culture in Thailand.
 - Seminar 2: Comparing Thai and American cultures; acting cross-culturally: This session will use a compare/contrast framework to look at some of the key differences between how American culture broadly defined, and how Thai culture think about how the world works, including hierarchy, patron-client relationships, and the presentation of self. We will also examine how this plays out in day-today interactions, and how students can learn to respect Thai culture and when and how to act appropriately.
 - Seminar 3: Cultural adjustment and culture shock: Adjusting to a new culture is not always easy and usually involves quite a bit of adjustment. This session will look at ways to help navigate some of the challenges of learning about and living in a culture that may look superficially similar to our home culture, but which is very different in some fundamental and challenging ways.
 - Seminar 4: Building resilience; stress and coping: Our goal is that students are able to thrive in the challenges of cross-cultural learning and living. This session will discuss how to navigate the inherent stress of cross-cultural living, as well as what positive and health coping strategies students can use to become more resilient.
 - Seminar 5: Living in Thailand: Host families, food, and transportation: This session highlights some practical aspects about living in Thailand that can help students adapt to daily life. We will focus specifically on host families, living in community, the role of food in Thai culture, and how to get around in Chiang Mai and elsewhere.

Unit 2

Introduction to International Development

- Seminar 1: Introduction to international development: What is the field of “international development”? What are some of the key issues and concerns?

- Seminar 2: Sustainable development: What do we mean by “sustainability” or “sustainable development”? How can we live within the Earth’s biocapacity?
- Seminar 3: Approaches to development: This seminar examines four approaches to development, with particular attention given to how different approaches can each be used on the same problem.
- Seminar 4: Facilitating development: How does one “do” international development? We will examine two case studies of outsiders facilitating development and discuss what lessons we can learn about facilitating development in general, and for the internship phase of the MSID program in particular.
- Readings
 - “What is global development?” Rory Horner, Global Development Institute Working Paper Series 2017-020 December 2017
 - “Global South: what does it mean and why use the term?” Aug 8, 2018, Marlea Clarke, Global South: what does it mean and why use the term? | Global South Political Commentaries.
 - “Chapter 2 Contesting development in theory and practice,” International Development in a Changing World, Rebecca Hanlin and William Brown, pages 31–48.
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 - “Preface and Introduction” to The Development Dictionary: A Guide to Knowledge as Power, Wolfgang Sachs, Zed Books, 2010.
 - “What is sustainable development?” Jennifer Elliott, An Introduction to Sustainable Development 3rd Ed. Routledge 2006.
- Assignment
 - Essay for Unit 1 is due this week.

Unit 3

Architecture in Thailand

- History of architecture and design in Thailand and southeast Asia
- Ancient cities and monuments
- Temple architecture
- Colonial-era architecture
- Contemporary architecture
- Readings
 - “Invitation to Vernacular Architecture: A Guide to the Study of Ordinary Buildings and Landscapes (Perspect Vernacular Architectu), 1st Edition,” Thomas Carter and Elizabeth Collins Cromley, 2005, Wiley and Sons.
 - Architectural Conservation in Asia: National Experiences and Practice, By John H. Stubbs, Robert G. Thomson, Taylor and Francis, 2016
 - Architecture of Thailand: A Guide to Tradition and Contemporary Forms, Nithi Sthapitanond, Brian Mertens, Editions Didier Millet, 2012.
- Assignment
 - Essay for Unit 2 is due this week.

Unit 4

Extended Village Field Study

- Students will embark on a five-day village field study in a rural community outside Chiang Mai City, staying with a host family.
- They will engage in hands-on learning and teaching directly with local community members and leaders.
- The goal of the village study is to understand rural development, the challenges, the best practices, the local culture, the differences between rural and urban development, and how government policies support development in this village.
- For this course, students must pay particular attention to two specific questions during this field study:
 - What is the built environment like? What aspects of vernacular architecture do you see? What problems are being solved by how houses are built? What other aspects of the built environment do you find interesting?
 - What “practical design” solutions do you see in use in the village? How are agricultural implements, tools, weaving equipment, and other “practical” design elements adapted to their use and what are they for? What design problems are solved through this sort of folk design?
- Activities may change, depending on the availability and needs of local community members, but will likely include the following:
 - Village mapping: Learn about how the village is organized and how this affects their community management and housing, as well as how they adapt to the environment, observing the environments and resources of the community such as schools, local hospital or clinic, meeting hall, temple or church, and farms.
 - Local food in Northern Thailand: Become familiar with various edible plants and how the surrounding environment provides the nutritional needs of the local community.
 - Community-based tourism (CBT): Learn about culture and community resource management, how they developed CBT, and how they proposed a blueprint for CBT management that is appropriate for their culture.
 - Learn about traditional cultural practices such as weaving, natural dye, bamboo weaving and cultural preservation practices, and sustainable development.
 - Participate in a service activity with the community school as a hands-on project building relationships with the community.
 - Take a half-day hike to learn about the natural resource management of the community.
 - Village meetings: Learn how to collect data through asking questions related to the course and their areas of interest.
- Assignment
 - Essay for Unit 3 is due this week.

Unit 5

Sustainable Architecture Principles I

- Plastics and mass production
- Creative reuse and street design
- Handicrafts and bespoke design
- Designing for access and cultural needs
- Readings
 - Very Thai: Everyday Popular Culture, Philip Cornwel-Smith, River Books, 2013.
 - Routledge Handbook of Sustainable Product Design, Jonathan Chapman, Taylor and Francis, 2017.
- Assignment
 - Essay for Unit 4 is due this week.

Unit 6

Urban Planning & Sustainable Design

- Urban design and sustainability
- Traffic and cars versus pedestrians
- Markets as design spaces and multi-use locations
- Neighborhoods and mixed-use urban spaces
- Urban planning, water management, and designs against nature
- Readings
 - Sustainable Urbanism: Urban Design With Nature, Douglas Farr, 2008, Wiley and Sons.
 - Critical Reflections on Cities in Southeast Asia, edited by Tim Bunnell, Lisa Barbara Welch, Brill, 2002.
 - Sustainable Design for the Built Environment , Rob Fleming, Saglinda H Roberts, Routledge, 2019.
- Assignment
 - Essay for Unit 5 is due this week.

Unit 7

Sustainable Architecture Principles II

- Reuse, upcycle, reclaim
- Vernacular architecture
- Village versus city design and needs
- Contemporary reimagining of tradition
- Reading
 - Sustainable Design: Ecology, Architecture, and Planning, Daniel E. Williams, David W. Orr, et al. May 1, 2007, Wiley and Sons.

- Green Architecture (Bibliotheca Universalis), Philip Jodidio, 2020.
- Assignment
 - Essay for Unit 6 is due this week.

Unit 8

Final Class Seminars

- Materials and sustainable design
- Bamboo ● Challenges in the tropics
- The future of design
- Final presentations
- Reading
 - The Circular Economy and the Global South: Sustainable Lifestyles and Green Industrial Development, Patrick Schröder, Manisha Anantharaman, Kartika Anggraeni, Timothy J. Foxon, Routledge, 2019.
- Assignment
 - Essay for Unit 7 is due on Monday and essay for Unit 8 is due on Friday.
 - Final presentations

Policies

Attendance Policy

Students are expected to be on time and attend all classes while abroad. Many instructors assess both attendance and participation when assigning a final course grade. Attendance alone does not guarantee a positive participation grade; the student should be prepared for class and engage in class discussion. See the on-site syllabus for specific class requirements.

University of Minnesota Policies & Procedures

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in University courses are expected to complete coursework responsibilities with fairness and honesty. Failure to do so by seeking unfair advantage over others or misrepresenting someone else's work as your own can result in disciplinary action. The University Student Conduct Code defines scholastic dishonesty as follows:

Scholastic Dishonesty

Scholastic dishonesty means plagiarizing; cheating on assignments or examinations; engaging in unauthorized collaboration on academic work; taking, acquiring, or using test materials without faculty permission; submitting false or incomplete records of academic achievement; acting alone or in cooperation with another to falsify records or to obtain dishonestly grades, honors, awards, or professional endorsement; altering forging, or misusing a University academic record; or fabricating or falsifying data, research procedures, or data analysis.

Within this course, a student responsible for scholastic dishonesty can be assigned a penalty up to and including an "F" or "N" for the course. If you have any questions regarding the expectations for a specific assignment or exam, ask.

Student Conduct

The University of Minnesota has specific policies concerning student conduct. This information can be found [on the Learning Abroad Center website](#).