

Agroecology and Entrepreneurship: Coffee, Chocolate, and Cannabis

Summer, 2024

Course Description

Chiang Mai, Thailand, is emerging as a global center for specialty coffee, artisanal chocolate, and medicinal cannabis. This program is a hands-on study of these three important crops, learning directly from farmers and local producers as well as completing an internship on independent research project. In addition to seminars, we will be visiting farms and learning about shade grown coffee, cacao production, medicinal cannabis production, as well as time exploring the ancient city of Chiang Mai.

Weeks 1 – 2 :

- Intensive classroom study and seminars on the theory and practice of agroecology and entrepreneurship as applied to coffee, cacao, and cannabis production. This will include field studies, workshops, guest speakers, and more.
- Students will also be taking basic Thai classes to enable them to communicate in everyday life.

Week 3 - 6:

- Students will then be placed in a 4 week internship or an independent research project focused on their preferred area of study related to coffee, cacao, or cannabis production.
- The final project will be a presentation and report on the internship/research and application of the seminar weeks.

Coffee focus: We will be looking at all the stages of coffee production, visiting coffee farms and cafes, as well as learning about roasting coffee, specialty coffee production, and what makes the perfect cup of coffee.

Chocolate focus: We will study cacao growing, processing, and fermentation. Hands on practice through field studies of cacao farms, as well as learning about and producing artisanal small-batch chocolate.

Medicinal cannabis focus: We will look at the use of cannabis in traditional medicine as well as modern applications, carry out a field study with Maejo University's cannabis program, and learn from small scale farmers and entrepreneurs. We'll also be looking at the legal challenges and cultural history of cannabis in Thailand.

Course Objectives

The objectives for this course are to:

- Have specific knowledge of agriculture and cash crops and its ecological and social context in both upland and lowland Thailand and Southeast Asia.
- Understand the role cash crops play in small landholding farmers in Northern Thailand including a deeper understanding of the ecology and economics of coffee, cacao, and cannabis.
- Learn about the value chain in cash crop production, with an emphasis on understanding farm to consumer links, including the economics of production, processing, and consumer sales.
- Direct experience and/or research in the area of cash crop production, entrepreneurship, and business processes related to coffee, cacao/chocolate, and medicinal cannabis.

Methodology

The course will integrate course lectures and readings with group discussions and seminars. Experiential field studies will be an important component of the course, both formal and informal. A large portion of the course is based on field research and on-site research and study. Guest lecturers will be a part of the course to share their experiences and perspective with students. Keeping up with readings, materials presented in class, and assignments is critical for success during this course.

Grading and Assessment

Course Component Details	Total
Engagement	
This means participation in and out of the classroom, being an active member of the course, and being fully present and engaged in the field. This includes discussions during seminars, participating in discussions inside and outside the classroom, etc.	15
Total Engagement	15
Writing	
Seminar and Observation Notes: An important component of learning to observe and analyze the issues during this course is taking notes in class as well as keeping an on-going journal of observations outside the classroom. This means writing daily in your journal, even if only for brief or significant observations.	15
Essays: For this course essays are longer reflections and analysis. There are two (4) essays during the course, due at the end of week 1, week 2, week 4 and week 6. Essays should be 4-5 pages long in your journal or 2 pages typed, and cover the following points: <ul style="list-style-type: none">• How this issue or topic links to the overall topic of the course. (1)• Why you are interested in this specific issue or topic. (1)• An analysis of a specific issue observed or learned about during the two weeks — describe this and why it is important. (5)• Reference to a interviews or observations during the course. (2)• Other questions that this issue raises for you to explore further. (1)	20
Total writing	35
Independent Field Research Project	
Each student will choose an issue related to the course to study independently during their internship or independent research. This should be a combination of research, observations, and analysis. The emphasis is primarily on field observations as well as literature review.	
Proposal: The IFRP proposal will be a one page typed description and a short presentation to the class explaining a statement of intent, how data will be gathered, the feasibility of studying this during the course, and any potential challenges you may anticipate. Due at the end of week 2.	10
Progress update: This part of the IFRP is a short update during the course (both a 1 page summary and a presentation) on what the student has discovered about their topic so far, what further questions this raises, any challenges they have faced and how they have overcome them, as well as further information they will be looking for during the second half of the field study. Due at the end of week 4.	15
Final Presentation: On the last day of the course each student will give a five minute presentation on their research. Focus on clarity, field observations, interviews/discussions with community members, and analytical depth. 5-10 slides in PDF format.	25
Organization for final presentation <ol style="list-style-type: none">1. What did you study/research focus? Why? (2)2. How did you study this, including observations and interviews? (5)3. What did you learn? Findings and analysis. (10)4. Further questions this raises for you. (2)5. Final slide of references / interviews. (1)	
Total Independent Field Research Project	50

Seminar Topics and Schedule

Please note: Because this is a community based program, the schedule may change based on the availability of guest speakers, community access, and more. Additional readings may be assigned during the course. There is a LOT of reading during the first two weeks of the course, so do your best to keep on top of the readings. Specific chapters will be assigned out of the text throughout the seminars, and will be useful during your internship / research as well.

Schedule Overview

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
June 2 Orientation	3 Introduction & overview of agriculture in SE Asia	4 Coffee History, ecology and production	5 Coffee Farm study	6 Coffee Roasting and preparation techniques	7 Cacao History and agroecology	8 Cacao Farm study
9 Cacao Chocolate making	10 Cannabis Introduction & key issues	11 Cannabis Farm / University	12 Cannabis Clinics / Dispensaries	13 Cafe Ethnography	14 Wrap up / Proposals Due	15
16	17 Internship / Research Start	18	19	20	21	22
23	24	25	26	27	28 Progress Update	29
30	July 1	2	3	4	5	6
7	8	9	10	11 Internship / Research End	12 Presentations Program End	13

Seminar weeks

Thai Language 9 AM - 11:30 AM

Seminar 1 PM - 4 PM

Saturday - June 1

Student arrival in Chiang Mai

Sunday - June 2

Orientation to the program

Introduction

Monday - June 3

Introduction to Agroecology and Agriculture in Southeast Asia

Agroecology is an approach to food production based on the idea of a farm as an ecosystem. We will primarily focus on the approach of small holder agroecological farming, as well as the communities in the Global South using agroecology as a way to re-establish control over their food systems.

- Oehen, Bernadette, and Angelika Hilbeck, eds., *Feeding the People: Agroecology for Nourishing the World and Transforming the Agri-Food System*. IFOAM EU Group, Brussels, Belgium, 2015
 - Transform? Or Conform and Adjust; Introduction; Chapter 1 & 2
- Gliessman, S. 2007. *Agroecology: The Ecology of Sustainable Food Systems*, 2nd ed. CRC Press
 - Chapter 1 & 2

This seminar will also provide an overview of agricultural systems in mainland Southeast Asia, with an emphasis on the distinct agroecological practices in the lowlands and the uplands of Thailand.

- Halwart, Matthias and Modadugu V. Gupta, eds., “The Rice Field Ecosystem,” in *Culture of fish in rice fields*, FAO, 2004
- Marten, Gerald G., “Small-Scale Agriculture in Southeast Asia,” In M.A. Altieri and S. Hecht (eds.), *Agroecology and Small Farm Development* (CRC Press. 1990), p. 177-194.
- Plews-Ogan, Erin, et al. “Polyculture, Autonomy, and Community: the Pursuit of Sustainability in a Northern Thai Farming Village.” *International Journal of Agricultural Sustainability*, vol. 15, no. 4, Nov. 2017, pp. 418–431., doi:10.1080/14735903.2017.1335044.
- Srimongkol, Katin, and Gerald Marten, “Traditional Agriculture in Northern Thailand,” *Traditional Agriculture in Southeast Asia: A Human Ecology Perspective*, Westview Press, 1986.

Coffee Unit

Primary Text — *Coffee Agroecology: A new approach to understanding agricultural biodiversity, ecosystem services and sustainable development* by Ivette Perfecto and John Vandermeer, Routledge, 2015

The purpose of this unit is gain a fuller understanding of coffee as a cash crop in Thailand including the biology and ecology of the coffee plant, farming and post-harvest processing, and the economic role for small and medium-scale farmers. This unit also provides you with the basis to examine existing and potential sustainable and regenerative farming practices and principles used in coffee production. You will learn about coffee through farm visits, processing facility visits, and discussions with farmers and experts.

Tuesday - June 4

Overview of the origins of coffee, key issues with coffee agroecosystem/agroforest systems, processing, roasting and extraction, as well as the economics of coffee production, trade, and sales.

Wednesday - Jun 5

Farm study: We will spend the day in an upland coffee farm, learning about the specifics of coffee agroecosystems, including the importance of soil quality, forest cover, water, altitude, and other issues with growing coffee.

Thursday - June 6

Processing and consumption: We will learn about fermentation, roasting, and coffee preparation, including practicing a variety of brewing methods. We will also do a coffee tasting, learning about key concerns in how coffee is processed, roasted and prepared and how that impacts the final consumption of coffee.

Chocolate/Cacao Unit

Primary Text — *The True History of Chocolate*, Sophie Coe and Michael Coe, Thames and Hudson, 2019.

The purpose of this unit is gain a fuller understanding of cacao and chocolate as a cash crop in Thailand including the biology and ecology of the cacao plant, farming and post-harvest processing, and the economic role of small and medium- scale farmers. This unit also provides you with the basis to examine existing and potential sustainable and regenerative farming practices and principles used in cacao production. You will learn about cacao through farm visits, processing facility visits, and discussions with farmers and experts.

Friday - June 7

Overview of the history of cacao and chocolate, its use throughout history, principles of cacao production and agriculture, as well as the history and context of chocolate production. Special emphasis will be on contrasting mass market chocolate with artisanal small scale chocolate production.

ESSAY #1 DUE

Saturday - June 8

Farm study: We will visit a cacao farm and learn about and participate in the growing, harvest, and production of cacao and cacao pods.

Sunday - June 9

The focus will be on chocolate production — roasting and preparing chocolate taking it from cacao beans to a finished bar. We will do a case study of Siamaya Chocolate, an award winning artisanal chocolate

company, and participate in making chocolate bars, including tasting varieties of chocolate and learning about different flavor profiles and how production influences the final product.

Medicinal Cannabis Unit

Primary Text — *Cannabis: Evolution and Ethnobotany*, Robert C. Clarke and Mark D. Merlin, University of California Press, 2013

The purpose of this unit is gain a fuller understanding of medicinal cannabis as a cash crop in Thailand including the biology and ecology of the cannabis plant, farming and post-harvest processing, and the economic role for small and medium-scale farmers. This unit also provides you with the basis to examine existing and potential sustainable and regenerative farming practices and principles used in cannabis production. You will learn about cannabis through farm visits, processing facility visits, and discussions with farmers and experts.

Monday - June 10

Medicinal cannabis has a very long history in Thailand and Asia more generally, stretching back hundreds of years. This seminar will focus on the history of cannabis as a part of Thai traditional medicine, examine the key issues in growing and producing cannabis, as well as prohibition, legal issues, and current issue around medicinal cannabis in Thailand.

Tuesday - June 11

Farm study: We will spend the morning at Maejo University, with the largest legal medicinal cannabis production facility in Asia, learning about their work to develop strains for medicinal use, as well as challenges to production. The second part of the day will be at a private cannabis farm, learning about the growing, production and sales of medicinal cannabis in Thailand.

Wednesday - June 12

Dispensaries and clinic study: We will visit a traditional medicine clinic that is using cannabis as one approach to medical issues, as well as a visit to dispensaries in Chiang Mai to learn about the legal issues, consumer profiles, and the key issues that entrepreneurs in this emerging industry are facing.

Integration and Synthesis

Thursday - June 13

Cafe ethnographies — Students will have the day free to visit cafes throughout the city on their own. The focus of this activity is to understand the end users of the three key commodity crops we study (coffee, cacao, and cannabis), how it is sold, how cafes/shops/dispensaries work as a business, as well as how single commodities (coffee beans, cacao, or cannabis) can be processed and used in a variety of end products (e.g. espresso, pour over coffee, chocolate bars, chocolate drinks, CBD, etc.).

Friday - June 14

This seminar will focus on integrating the broad themes and lessons learned during the preceding two weeks, looking at commonalities and differences with these three cash crops (coffee, cacao, and medicinal cannabis). Special emphasis will be on understanding how agricultural production and be sustainable (or not) and how this impacts the value chain from growers to final consumers.

The second part of the seminar will be student presentations of their proposed area of study, and what they hope to learn from their internships or independent research projects.

PROPOSALS DUE

ESSAY #2 DUE

Internship / Independent Research (June 17 - July 11)

Monday - June 17

First day of internships / independent research for students.

Both internships and independent research are expected to be full time, Monday through Friday, with weekends free. Given that these are agricultural commodities, as well as sold through retail channels, some flexibility may be required with regards to days at the internship (e.g. if it is time to harvest on a Saturday, take off another day later on).

During the internship and independent research, students will be expected to keep a **daily log** of their activities. In addition, each Friday students will need to email a summary of the weeks activities and planned activities for the week coming up.

Friday - June 28

Progress update — Students will meet together and report on their progress, challenges faced, and any changes in their proposed independent field research.

PROGRESS REPORT DUE
ESSAY #3 DUE

Thursday - July 11

Final day of internships / independent research

Friday - July 12

Wrap up and discussion, student presentations of their independent field research / internship study topic

PRESENTATIONS DUE
ESSAY #4 DUE

Farewell dinner and program end

Saturday - July 13

Students may leave Thailand

Course Policies

Attendance Policy

Students are expected to be on time and attend all classes. If you are ill or otherwise need to miss a class, please inform your instructor or teaching assistant.

Academic Integrity

Academic integrity is essential to a positive teaching and learning environment. All students enrolled in ISDSI 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.

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 an 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.

Grading Standards

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	Achievement that is significantly above the level necessary to meet course requirements.
B	83–86	Achievement that is significantly above the level necessary to meet course requirements.
B-	80–82	Achievement that meets the course requirements in every respect.
C+	77–79	Achievement that meets the course requirements in every respect.
C	73–76	Achievement that meets the course requirements in every respect.
C-	70–72	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
D+	67–69	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
D	60–66	Achievement that is worthy of credit even though it fails to meet fully the course requirements.
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 Incomplete.