

Course outline

INTRODUCTION:

- Course administration
- Introductions by participants and instructors
- Brief background and course expectations
- Course time table and guidelines
- Introduction to Sahainan Farm
- History of Sahainan Farm
- Books and other references for the course
- Defining Permaculture
- History of Permaculture
- Importance of Permaculture
- Examples of good permaculturists and videos
- Practical activity: how to use machete, bamboo cups, spoon, and chopsticks making
- Practical activity: toothpaste powder making

ETHICS AND PRINCIPLES:

- Ethics of permaculture
- 12 principles of permaculture
- Examples of principles application in Sahainan
- Multifunctional design
- How to apply permaculture principles in daily live
- Practical activity: Sahainan Farm Land Tour

METHODS OF DESIGN

- Importance of design
- The methods of design
- Map reading, examples of good map
- Element analysis
- Zoning
- Sector analysis
- Observations and data collection
- Limiting factors

PATTERNS UNDERSTANDING:

- Patterns in nature
- Global weather patterns
- The humid, temperate, cold, arid, continental climates plus variations
- Applying patterns in design
- Ecological garden design

SOILS:

- Soils and health

- Types of soil and composition
- Traditional methods of soil testing
- Healthy soil, soil life, organic matters, humus, air pockets, pH, nutrients content
- Legumes as Nitrogen fixer
- Common problem of soil
- Organic Soil improvement strategies, compost, EM, worm farm, mulching, etc.
- Practical Activity: compost making

GARDENING AND FARMING:

- Organic food production
- Kitchen garden
- Strategies for different climate
- Practical activity: start a garden
- Seed saving
- Seed nursery
- Tips of planting
- Practical activity: seed sowing

WATER:

- Importance of water
- Water management, conservation, and recycling, drinking water, grey water, black water
- Strategies for different climates
- Water harvesting earthworks for conservation and storage
- Rain water harvesting
- Biological water cleaning system
- Establishing a water filter and effective water system
- Irrigation by gravity
- Waste management
- Dry composting toilet and wet composting toilet
- Practical activity: visit our spring water and the harvesting

TREES, FOOD FOREST, AND FOOD:

- Importance of trees and diversity
- Energy transaction of trees and forest
- Establishing food forest
- Some useful permaculture plants
- Practical activity: jungle trekking, food forest foraging
- Food as medicine
- Medicinal plants in Sahainan
- Food preservation
- Practical activity: making coconut milk and coconut oil from scratch, cooking coconut bamboo sticky rice, rice flour banana cake, jams, Thai Green Curry from scratch

CLIMATE AND MICROCLIMATE:

- Classic world climate

- Climatic factors
- Catastrophe and hazard prevention
- Strategies for different climates

EARTHWORKS:

- Types of earthworks
- Techniques of building dams, ponds, swales, terraces, road, drainage system
- Examples of earthworks in Sahainan
- How Sahainan paddy field terraces are made
- Practical activity: A-frame and swales

GREEN ENERGY AND TECHNOLOGY

- Types of renewable energy
- Importance of catching and storing energy
- Examples of green energy system in Sahainan
- Strategies for different climates
- Practical activity: Biochar making

NATURAL BUILDING:

- Types of natural building
- Strategies for different climates
- Factors to be considered for designing
- Techniques of building and maintenance
- Examples of natural building in Sahainan
- Building with mud, Adobe, bamboo, woods
- How to use simple tools in construction
- Practical activity: bamboo structures

AQUACULTURE AND ANIMAL MANAGEMENT:

- Aquaculture as part of design and food supply
- Examples of aquaculture
- Use and value animal as resources
- Factors to be considered for animal management

THE STRATEGIES OF AN ALTERNATIVE GLOBAL NATION:

- Strategies for urban and rural settings
- Community garden, rooftop garden, community market, farmer market, edible park, city farm
- Permaculture community group and working network
- Money and financial, ethical investment
- Strategies for future
- Site Visit: Ban Huay Phan - tourism of traditional permaculture life by the village community and the local practical mud-building homeschool. Nan River - the main water supply to river basin in Bangkok.

PERMACULTURE GLOBAL NATION:

- Steps on designing
- Working as a designer
- Designing good map and system
- Practical activity: design project preparation and presentation
- Certifications
- Creating networks
- Feedback
- Photograph
- Farewell