

Geoff and Nadia Lawton

Permaculture Design Certificate – Daily Course Schedule

Course Outline

Day 1

Designer's Manual Ch.1 - Introduction

Introductions by participants - brief background and course expectations.

Course administration, timetable and scheduling.

Using the Design Manual as a text-book for the course & other available references.

Definition of permaculture, why do we need such a design system?

History and philosophy of permaculture as a taught and applied design system.

The Ethics and The Principles.

Permaculture in landscape, society and community context.

The evidence of why we need to act, key global challenges.

The Bill of Human Rights.

Principle summary.

References.

Activity - Collecting materials for a compost pile (minimum of 1m³).

Day2

Designer's Manual Chapter 2&3 - Concepts, Themes and Methods of Design

Tradition, culture and belief systems.

Life principles and natural laws stated.

The methods of design, resources, yields, cycles, food webs, growth.

Vegetarianism and dietary 'isms.

Complexity, connections, order and chaos, permitted and forced functions.

Inter-active diversity, stability, fertility, sustainable productivity and profitability, time and yield.

Functional Design Development - Analysis, Observation and Deductions from nature

Sector Planning

Slope, Key Points, orientation, aspect, data overlay

Zones and their placement.

Designing in zones 1, 2, 3, 4 and 5

Random assembly of element lists and subsets cross referenced.

Flow diagrams, options and decisions,
incremental design and guilds.

Succession, evolution, establishment and maintenance.

Principle summary and summary of design methods.

The Cultivated ecology, practical procedures of property design.

References.

Activity - Building the compost pile

Day3

Designer's Manual Ch.4 - Pattern understanding

Patterns in nature listed as form, the core model pattern, properties of media.

Universal patterns micro to macro, matrices and the strategies of compacting and complexing components.

Pattern in design, edge effect, boundary conditions, harmonics and geometries of boundaries.

Compatible and incompatible borders and components, timing and shaping events.

Flow patterns, open and over landscape and objects, spirals, mnemonics, dimensions and potentials.

Accretion and expulsion, branching pattern effects, conduits.

Orders of magnitude in branches, scale of size.

Orders, dimensions and classification of events, time and relativity model.

Tessellation of events in the world we live, pattern application.

Events, toroidal phenomena and the five senses.

Memory and pattern recognition, companion planting and guilds.

Traditional use of cultural patterns in society and in the present world society.

Designers checklist.

Review Keypoints & questions

Video: Fractals - The Colours of Infinity

Activity: Identification of current/potential local use of patterning in relation to key survival information

Day 4

Designer's Manual Ch.5 - Climatic factors

The humid, temperate, cold, arid, continental climates plus variations.

Global weather patterns, the engines of atmosphere.

Humid, arid and minor landscape profiles and orthographic affects.

Latitude and altitude.

Precipitation, radiation and wind.

References.

Designers checklist.

Activity: Defining pattern of local climate - seasonal effects & planting seasons (frost dates etc)

Day 5 Thursday

Designer's Manual Ch.6 - Trees and their energy transactions

Definition of forest and the biomass of a tree.

Temperature, wind, total precipitation, snow and melt water effect.

Root, mineral and rain interactions.

Implications for design.

The many types of forest.

Establishing forest.

Maintaining extending and enhancing forest.

Establishing a nursery seed collection and in ground plant stock.

References.

Summary

Activity: Observation of trees in local setting

Day 6

Designer's Manual Ch.7 - Water

Chemical & structural properties of water

Regional interventions and the water cycle.

Water harvesting earthworks for conservation and storage.

Rain water harvesting, biological water cleaning systems, irrigation and gravity designs.

Water reduction in sewage systems.

Water in design.

Designers check list.

References.

Activity: Sand play - designing water storage features and managing flow

Day 7

Designer's Manual Ch.8 - Soils

Soils direct link to health.

Traditional methods of investigating soils.

The pH, organic matter content and primary nutrients.

Soil pores and crumb structure importance.

Soil structure and its relationship to life elements, water and base rocks.

Legumes as nitrogen fixers and the phosphate accumulating plants.

Plants and biological elements as deficiency indicators and mineral accumulators.

Difficult soils.

Composting as an easily understood art form of humus creation.

Seed pelleting, soil erosion and rehabilitation.

Establishing a worm farm.

Soils in house foundations.

Designing for catastrophe, fire, flood, drought, earthquake, landslip and tsunami.

Designers check list, References.

Activity: testing pH of selected soils

Day 8

Designer's Manual Ch.9 - Earthworks and earth resources.

Earthwork design concept planning.

Planting after earthworks.

Types of earthworks, earth constructions and earth resources.

Understanding the surveying of basic levels and slope measurement.

Using a farmers level, dumpy level, A-frame and water levels.

Technique of building a dam, swales, earth banks, terraces, roads and drains.

Using the right machine for the job.

References.

Activity: Jar method to investigate soil makeup

Design exercise presented to students on a real piece of land with realistic design brief for the local area.

Teacher takes on the role as the land owner (if land owner not available)

Students are split up into working groups, each with different design briefs.

Last session of the day is student group design and after hours in the evening if desired.

Day 9

Designer's Manual Ch.10 - The humid tropics

Climate types, tropical soils and earthshaping.

House design and home garden.

Integrated land management, Elements of a village complex in the tropics.

Evolving a polyculture, themes on a palm dominant polyculture.

Pioneering, animal tractor systems and grassland and rangeland management.

Humid tropical coast stabilisation and shelterbelts.

Low islands and coral cay strategies.

Designers check list.

References.

Designer's Manual Ch.12 - Humid cool to cold climates

Characteristics of a humid cool climate, soils, landform and water conservation.

Settlement and house design, the home garden, berry fruits, glasshouse growing.

Orchards, farm forestry, free range forage systems, the lawn.

Grasslands, rangelands, cold climates, wildfire.

Designers check list.

References.

Activity: Group design work.

Day 10

Designer's Manual Ch.11 - Dryland strategies

Precipitation, temperature, soils.

Landscape features in deserts, harvesting water in arid lands.

The desert house, the desert garden, garden irrigation systems.

Desert settlement and broad strategies.

Plant themes for drylands, desertification and the salting of soils.

Cold montane deserts.

Designers checklist.

Activity: House design exercise for various climates.

References.

Activity: Group design work.

Day 11

Designer's Manual Ch.13 - Aquaculture.

The case for aquaculture.

History and cultural variations.

Implementing an aquaculture design, species selection and yield.

Aquaculture as part of design and food supply.

Aquaculture plant and animal species.

Farming invertebrates for fish food.

Appropriate techniques, channel, canal and chinampa.

Polyculture traditional and new.

Designers check list.

References.

Activity: Group design work.

Day 12

Designer's Manual Ch.14 - The strategies of an alternative global nation

The invisibles structures.

Alternative global nation. Right livelihood.

Setting up a local permaculture group and working network.

Community gardens, establishing city farms, urban strategies and land access.

Lets, alternative money, bioregional organization, village development, ethical investment.

Working in different cultures with sensitivity, effective aid.

References and resources.

Activity: Design presentations.

Evening: Student participation fiesta, sustainable fun.

Day 13

The permaculture global nation

Diploma information.

Permaculture academy.

Certification and student intention affirmations.

Feedback opportunity on course materials/teaching/activities

Photographs and goodbyes.