

Permaculture Fundamentals Syllabus

Ethics, Principles and Design (1 day)

Evidence of systemic ecological and cultural crisis; derivation and evolution of ethics; spirals of degradation and the etiology of health; energy and entropy; the Permaculture innovation and synthesis; roots of Permaculture knowledge; principles of energy efficient design, language and terms; exercise in observation of landscape; the nature of pattern in form, orders in natural phenomena; application of pattern to design; design process, purpose and methods.

Natural Systems (2 days)

Principles of ecology; energy flux and materials cycling; conservation and diversity; guilds; cooperation; niches; forests as organisms; climate, global weather patterns, biogeography; forest impact on climate and hydrologic cycle; landscape analysis; nature, sources, value of fresh water; water in the landscape; water movement, storage, purification; water in the domestic system. The soil community; oxygen/ethylene cycling and nutrient availability; soil biota regimes, mycorrhizal associations; carbon/nitrogen /nutrient relationships; building soil; physical properties of soils; factors in microclimate design; windbreaks; moisture and humidity effects; modifying sunlight and capturing solar gain; thermal zones; limiting factors in living systems; exercise building swales, ponds, trellises, brush fences; use of leveling devices.

The Domestic System (1/2 day)

Design of the home system; zone and sector analysis; placement of elements for beneficial function; the domestic economy; staging of development in small permaculture systems; building design, materials, methods, examples; conservation of energy; building as organism; nutrient cycling in the domestic system; biological treatment systems for human and animal waste: compost, constructed wetlands, biogas, urine as fertilizer.

Elements of Cultivated Ecologies (2 days)

Energy advantages of aquaculture; designing aquatic systems; water quality and species composition; animals as energy translators; self-forage systems; intensive grazing; silvopasture; agroforestry systems; forest gardening and farming; alley cropping; coppice with standards; orchards; principles of pruning and tree health; useful plants, planting strategies and plant identification; guild assemblies; plant families, nomenclature; wildcrafting; establishment of nurseries and intensive small systems; self reliance and food security; the year-round harvest; methods of food storage and adaptation to climate; garden design, establishment and methods; exercise in sheet mulch bed preparation; short design exercise in creativity; tools and their energy implications; choosing appropriate technologies; favorite tools.

Community Design, Common Resources, and Larger Systems (1 ½ days)

Patterns of human settlement; city and regional design; orders of magnitude; the village as building block of human community; building cooperative networks, organizations, and communities; resource inventories; business incubators; principles of economic design; how money works; the problems with present financial systems: interest, corporations, taxes, planning; community-based financial systems; the use of maps; simple methods of mapping; the integral urban house; resources in cities; appropriate scale for conviviality, economy, and security; components of village life; new village development; designing for human cooperation and interaction. Resources for further work; the Permaculture movement; continuing education; how to organize locally; making a living; future visions and participant evaluations.