Permaculture Design Course: Core Curriculum V2.3

Introduction

The curriculum presented here describes the content that must be included in a Permaculture Design Certificate (PDC) course, if a certificate from the Permaculture Association (Britain) is to be awarded.[1]

Please note that there is a 72 hours minimum contact time between teacher and student to be awarded this certificate. In this period it is impossible that all of the topics outlined herein will be covered in detail, however some detail may be entered into and students may be signposted to researching further in their own time.

It is internationally recognised that 'Permaculture: a Designers' Manual' by Bill Mollison is the basis for the PDC curriculum. This curriculum builds on the Designers' Manual and extends the scope to address challenges of the British context, and to reflect the development of the permaculture field since the Designers' Manual was published. It has been updated from a previous version (issued in early 2013, updated in August 2014) updated in February 2018 by the Education Working Group (EWG) of the Permaculture Association Britain.

This document states the absolutely essential topics that must be included in a Permaculture Association PDC and optional, but recommended topics *in italics*. It does not include a comprehensive list of subjects that the PDC could include; courses will almost certainly include other subjects (especially skills and practice based learning) and may be targeted towards a specific area or group of people, or draw on the expertise of the teacher and students.

This document does not tell you **how** to teach permaculture. If you are planning a PDC, you can find inspiration in, e.g. 'Permaculture Teachers' Guide' and 'Teaching Permaculture Creatively'. EWG is also working on quality guidance for '*How* to teach effectively'.

Online PDC's

For CTR applications you will need to record on your core curriculum document how and when the following points are addressed in your course:

4.2 Skills, Tools & methods (How are you assessing each students understanding and ability prior to moving on to the next topic?)
4.3 Design Practice (How are you assessing each students understanding?)
4.4 Design Presentation (Do they have the opportunity to develop their design skills with a group? / How is their final design presentation peer reviewed?).
5.8 Visit site(s) which exemplify permaculture principles. (Do you identify local sites and promote or arrange visits for students?)

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[1] Externally accredited learning outcomes for the PDC are also available from the Permaculture Association for those who are interested in delivering accredited training. Please contact the office for more information.

Background to this document

This curriculum was produced by the Education Working Group, a voluntary group of members of the Permaculture Association. It includes input from all the home countries. The project originally consulted widely among British permaculture teachers at key stages, and took place between March 2010 and January 2013. It also absorbs a similar process from diplomat teachers in Scotland. The document will continue to be reviewed regularly. Please contact the office to submit contributions to future versions.

The Curriculum

By the end of this course, students will know about:

1. Context
✦ The Prime Directive of Permaculture:
"The only ethical decision is to take responsibility for our own existence and that of our children." - Bill Mollison.
✦ What is permaculture?
✦ Permaculture as an approach to designing systems which meet human needs.

Many teachers also include:
   ✦ *A Brief History of permaculture*

2. Ethics
✦ Earth Care
✦ People Care
✦ Fair Shares *("setting limits to population and consumption")*

Refer to *Permaculture: A Designers' Manual* for full definitions. *Essentially permaculture teachers agree to teach the discipline respecting ethical values.*

Many teachers:
- explore different interpretations of the ethics and how they are applied in practice.
-ask at the outset why students are on the course

3. Principles
The principles below are as they appear in the Mollison's Designers' Manual. Other wordings are acceptable.

3.1 Attitudinal Principles:
- ✦ Work with nature, not against
- ✦ The problem is the solution (Liabilities into assets)
- ✦ Make the least change for the greatest possible effect

Many teachers also include:
- ✦ *The yield of a system is theoretically unlimited*
- ✦ *Start from your back door and work outwards*
- ✦ *Everything Gardens (or has an effect on its environment)*

3.2 Ecological Principles:
- ✦ Cycling of energy, nutrients & resources
- ✦ Succession
- ✦ Edge effects
- ✦ Microclimate
- ✦ Every element performs multiple functions
- ✦ Every function is supported by multiple elements

Many teachers also include:
- ✦ **Co-operation** *rather than* **competition**. *How does this square with the fact that nature is competitive as well as collaborative?*
- ✦ **Niches** *– how to profit from them*
- ✦ *Use* **stacking** *in space and time to increase yields.*
- ✦ *Value* **Diversity**: *including guilds.*
- ✦ **Efficient energy** *planning (e.g. zone, sector, slope).*
- ✦ *Place elements to* **maximise the beneficial relationships** *between them (relative location).*
- ✦ *Value* **biological resources**
- ✦ **everything works both ways, and permaculture is information and imagination-intensive**.

3.3 Principles sessions should mention that there are contributions from many other sources. *You may choose to explore them in depth as well.*
- ◦ *Holmgren Principles*

3.4 Permaculture design can be seen from many different perspectives e.g.:

- ● *Energy Management*
- ● *People Care*
- ● *Landscape Design*
- ● *Pattern understanding*
  - ○ *Physical*
  - ○ *Mental*
  - ○ *Behavioural*
  - ○ *Natural*
  - ○ *Designing from pattern to detail*

4. Design
4.1 Process Frameworks:
1. e.g. SADIM / OBREDIMET / other.

4.2 Skills, Tools & methods:

- ✦ Observation
- ✦ Patterns
- ✦ Research
- ✦ Client Interview
- ✦ Surveying
- ✦ Maps & Mapping
- ✦ Key Planning Tools:
    - ✦ Zones, sectors, energies in the landscape
    - ✦ Reading the landscape
    - ✦ Relative location
    - ✦ Input/output analysis
    - ✦ Climate & microclimate
    - ✦ Further analysis tools (e.g. identifying functions and elements, *SMART goals, SWOC, placement, design by limiting factors, process flows*)

Many teachers also include:
- ✦ *Levelling tools: A-frame*
    Bunyip
- ✦ *Plants, animals, structures, tools/technologies, events (PASTE).*
- ✦ *Mapping tools:*
    Elevation
    Pacing
    Slope/aspect
- ✦ *Plus, Minus, Interesting (PMI) evaluation tool*
- ✦ *Conservation & hierarchy of intervention*
- ✦ *Yeoman's scale of permanence*
- ✦ *McHarg's exclusion method*
- ✦ *Limiting factors and hierarchy of resource use*
- ✦ *Random assembly*
- ✦ *Data overlay*
- ✦ *Collaborative decision making*
- ✦ *Phenological/biotime diaries*
- ✦ *Wild design*
- ✦ *sit spot*
- ✦ *Shade mapping*
- ✦ *spirals of erosion & entropy*
- ✦ *cascade of intervention*
- ✦ *6 coloured thinking hats*

4.3 Design Practice
- ✦ A series of opportunities to develop and practice design skills throughout the course, leading to...
- ✦ Final design exercise *(This may be individual and/or group exercise)* that is both sustainable and productive

- ✦ *Group working/process skills, for example:*
    - ✦ *Planning and allocating tasks and time*
    - ✦ *Decision making in groups (Sociocracy for example)*
    - ✦ *Communication & conflict resolution*
    - ✦ *Using permaculture principles & ethics in groups*

4.4 Design Presentation
- ✦ Students should have seen at least one implemented design of diploma standard
- ✦ Sharing & evaluating design work. The design may be an individual and/or group presentation; creative presentations are encouraged. For distance learning, a design portfolio should be submitted.

- ✦ *How to present - presentation skills, hints & tips*
- ✦ *How to give & receive feedback (if students are giving each other feedback).*

4.5 Celebration

5. Themes
5.1 Soil
The following topics should be covered:
- ✦ Soil food web: macro- and micro-organisms and their relationships
- ✦ Tilling: pros & cons
- ✦ Composting
- ✦ Mulching – why and how
- ✦ Soil sampling & analysis: types, textures, pH. Simple solutions.
- ✦ Mycorrhizal and bacterial associations
- ✦ Fertility factors
- ✦ Erosion – a natural process: plus and minus
- ✦ Indicator species and dynamic accumulators

5.2 Water
A minimum of 4 of the following topics should be covered in detail and all of them mentioned:
- ❖ Water availability
- ❖ The hydrological cycle
- ❖ Rainwater harvesting
- ❖ Retention in the landscape (e.g. soils, swales, key line planning etc). Dryland vs temperate.
- ❖ Drainage
- ❖ Water use in the home and at work and domestic water saving
- ❖ Aquaculture
- ❖ Water as an energy store

5.3 Plants/trees
- A minimum of 5 of the following topics should be covered in detail and all of them mentioned:
- ✦ Tree species, native & exotic, and uses
- ✦ Energy transactions of trees
- ✦ Forest gardening
- ✦ Agroforestry
- ✦ Windbreaks & shelterbelts
- ✦ Riparian buffers
- ✦ Grassland management; holistic management
- ✦ Plant communities / Indicator plants
- ✦ Orchards
- ✦ Sustainable woodland management

✦ Guilds and other ways of looking at plant co-operation

5.4 Growing your own food
- A minimum of 4 of the following topics should be covered in detail and all of them mentioned:polycultures – why & how
✦ permaculture and organic gardening
✦ bed creation
✦ seasonal planning
✦ food preservation
✦ field scale strategies
✦ designing broadscale agriculture
✦ hugelkultur and Sepp Holzer's work
✦ livestock / animals in the system

5.5 Built environment
- A minimum of 3 of the following topics should be covered in detail and all of them mentioned:

Recommended topics:
✦ Ecological buildings and structure (e.g. local materials, U value, thermal mass)
✦ Retrofitting
✦ Buildings & the home
✦ A Pattern Language & the Timeless Way of Building
✦ Energy Management & the Spiral of intervention
✦ Urban permaculture
✦ Transport priorities
✦ Renewable energy sources and management
✦ Energy efficient planning in the urban context (zones, sectors, elevation etc).
✦ The planning process

5.6 Resource use:
  ◦ *ecological footprints,*
  ◦ *resource choices*
  ◦ *Personal asset assessment – knowing your own value*
  ◦ *Setting future learning – recognise where you can strengthen your design capability*

5.7 Social systems/contexts:
A minimum of 5 of the following topics should be covered in detail and all of them mentioned:
✦ Zone 00: personal resilience e.g. *(e.g. Non-violent communication, Work that Reconnects, healthy diet, Herbal Medicine, Conflict Resolution)*
✦ The importance of vibrant, well-connected community *(4 generations model, transition towns etc.)*
✦ Health & wellbeing*
✦ Finance & Economics (e.g. real wealth, money and alternatives,)
✦ Land Tenure & Community Governance*
✦ Culture & Education* (including learning from nature)
✦ Communication skills
✦ Decision making (e.g. consensus) & Sociocracy

5.8 Visit site(s) which exemplify permaculture principles.

6. Next Steps & Further Information
- ✦ Introduction to the Permaculture Association (Britain) and why/how to become a member.
- ✦ Diploma in Applied Permaculture Design
- ✦ *Establishing/linking with local groups*
- ✦ *Further learning goals*
- ✦ *Identifying allies*
- ✦ *Setting up action learning guilds/peer support groups- next steps in the permaculture pathway*

- ✦ *See Holmgren: Permaculture Principles & Pathways Beyond Sustainability, (in the preface) for topic breakdown.*

7. Feedback
Course participants should be given opportunity to give feedback about the course to the tutors.