

Permaculture in Higher Education

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Colleges and universities nationwide are meeting demands of students, faculty, industry and the public by creating programs in sustainable agriculture. Some of these programs specifically use permaculture as a curricular model. This poster is a review of these programs and the educational roots from which they have come. Research methods used for this poster involved 4 years of literature reviews, interpersonal networking, internet searches, and attendance at two permaculture courses. The resulting universe of permaculture education options has been organized by type into three main constellations: Permaculture Design Courses (PDC's), Certificates and Diplomas, and Accredited Degrees. This research will serve as a foundation for future studies of individual degree programs to help us understand the unique role such interdisciplinary, experiential permaculture programs can play in college-level agriculture degree programs.

The term, 'permaculture', was coined in the 1970's by Australians Bill Mollison and David Holmgren (Mollison, 1988). It is a contraction of the words 'permanent' and agriculture or the words 'permanent' and 'culture' (Mollison, Slay, & Jeeves, 1992). The term implies the conscious design and maintenance of human systems that have the diversity, stability and resilience of natural ecosystems. In practice this often involves extensive use of perennial polycultures and cooperative human settlements (Holmgren & Holmgren Design Services., 2002). In the late 1970's the first Permaculture Design Courses were offered to groups of students interested in learning this design method. These courses involved 72 hours of classroom instruction in addition to demonstrations and hands-on work during two weeks of on-farm instruction (Mollison, 2003b). Topics included:

1. Philosophy, ethics, society
2. Concepts and themes in design
3. Methods of design
4. Pattern understanding
5. Climatic factors
6. Trees and their energy transactions
7. Water
8. Soils
9. Earthworking and earth resources
10. The humid tropics
11. Dryland strategies
12. Humid cool to cold climates
13. Aquaculture
14. The strategies of an alternative global nation (Mollison, 1988)

Course participants were granted a certificate of completion though the courses were taught informally and were not affiliated with any academic institution or

government accreditation. Most permaculture education since has followed the model of those first courses (ThePermacultureActivist, 2006).

In the last ten years a variety of different types of permaculture education methods have arisen. First came changes to the format of the PDC course itself. Most common examples of this include either lengthening the duration and instructional hours of the course or breaking the course up into shorter units to spread it out over a longer period of time (Hemenway & Hobbs, 2005; RDI, 2005). While this last method of permaculture education makes it easier for working professionals to attend PDC's the content and style of the course remain the same.

There are many examples of courses that are taught in the same way and to the same audience as the PDC but which provide training that offers more depth on individual subjects. These include shorter supplementary courses (on container gardening, or mushroom propagation, for example), and advanced courses (on eco-village design or teacher training, for example) (CascadiaPermaculture, 2005; ThePermacultureActivist, 2006).

Within the last five years permaculturalists in Australia and England have been working with local authorities to offer accredited certificate and diploma programs in permaculture (Francis, 2005; Holdaway, 2005). Generally, these arrangements provide several levels of permaculture instruction from basic overview courses through two-year in-depth studies of a subject of interest to the individual student. Bill Mollison encouraged the creation of such certificates and diplomas as far back as 1993 in a document published on his website (Mollison, 2003a).

In the same document he also encouraged those holding PDC's to set up, in cooperation with their particular federal, state and local authorities, accredited permaculture degree programs in their own countries around the world. These courses should, in Mollison's opinion, be values-based, interdisciplinary and self-directed. He explained that these degrees should be taught by itinerant teachers using an action learning approach (Mollison, 2003a). One such university has been started within the last year in Tennessee. In spring and fall quarters this year they hope to accept students into accredited permaculture degree programs (GAIAU, 2005).

In mainstream institutions of higher learning permaculture has also been integrated into some coursework and degree programs. The degree to which permaculture has been used ranges from single, stand-alone classes on the subject to masters degrees and undergraduate degrees being patterned after permaculture principles (AUS, 2006; Maharishi, 2005; Volate, 2005). The common theme in all of these courses is the list of 14 topics (above) included in the first design courses and the use of the term 'permaculture'. Most germane to agriculture educators at public institutions of higher education is the permaculture minor offered within the Agricultural Studies and Geography bachelor degree programs at California State University, Stanislaus (CSUStanislaus, 2005).

The implication of having a 'permaculture' degree program at a public institution is that enough students, faculty, and administrators thought it was an important enough course of study that it should be offered as something distinct from landscape design, horticultural production, community development or sustainable agriculture. Early conclusions suggest that many students are interested in studying permaculture as part of their degrees but that few schools offer such degrees in this country.

These findings lead me to four questions for future research:

1. Which colleges and universities offer permaculture degree programs?
2. Are there any permaculture degree programs in Research I universities?
3. How appropriate is permaculture for university study?
4. What is the further potential for permaculture as an accredited degree?

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