



Generation Green: Service-Learning at Stanford University

Karin Cotterman,
Associate Director
for Engaged
Scholarship

The Sustainable Stanford Initiative; The Stanford Challenge



- Sustainable Stanford is a university-wide effort to reduce our environmental impact, preserve resources and show sustainability in action. We're determined to lead in researching, teaching and practicing environmental sustainability. Our vision: create a healthier environment now and richer possibilities for generations to come.
- <http://sustainablestanford.stanford.edu>
- <https://pgnet21.stanford.edu/get/layout/tsc/Environment>

Students for A Sustainable Stanford



- Mission: Students for a Sustainable Stanford works to ensure that environmental sustainability is a core principle behind social, structural, and educational development in our community. We execute and support initiatives to broker a harmonious relationship between the University and its ecosystem.
- <http://sustainability.stanford.edu/cgi-bin/index.php>



Haas Center for Public Service

The Haas Center for Public Service at Stanford University connects academic study with community and public service to strengthen communities and develop effective public leaders. The Center aspires to develop aware, engaged and thoughtful citizens who contribute to the realization of a more just and humane world.

Engaged Scholarship at the Haas Center



- The Haas Center is committed to helping faculty engage in teaching, research, and service that strengthens student learning while addressing significant community needs.
- Through service-learning courses and research with a public purpose, engaged scholarship recognizes the multiple ways of knowing and acting that shape university and community collaborations directed toward greater understanding of and sustainable action on public issues.

Three Service-Learning courses

- Entrepreneurial Design for Extreme Affordability
 - Interdisciplinary course offered through d.school
 - Two quarters, project based
 - Taught by faculty team
- Design for a Sustainable World
 - Civil and Environmental Engineering
 - Taught by graduate students
 - Two quarters, project based
- Earth Systems Senior Capstone 2009,
 - Taught by senior lecturer



Entrepreneurial Design for Extreme Affordability

- Class Overview
- Our design activities are built around a two-quarter, graduate-level project course called Entrepreneurial Design for Extreme Affordability, where students design comprehensive solutions to challenges faced by the world's poor. The course is hosted by the Stanford Institute of Design, and involves graduate students from all seven schools at Stanford. Multidisciplinary student teams work to create innovations that lie at the intersection of business, technology, and human values. The class is project based, and all projects are done in close partnership with a variety of local and international organizations. These organizations host student fieldwork, facilitate the design development, and implement ideas after the class ends.



Example Projects



- Ignite Innovations
- Pressure Pump
- Tripod Pump
- D.light design
- Respira
- InfiniCan
- Deep Lift Pump
- Embrace

CEE 177S Design for a Sustainable World



- Design for a Sustainable World is a project-based course in which students work on technology-based problems faced by resource-constrained communities worldwide. This course seeks to help developing communities ensure individuals' human rights via sustainable, technology-based solutions and to increase Stanford University's stewardship of global sustainability.
- Teams of four to five students will take on practical projects with guidance from project advisors to help mature technical/scientific innovations into useful products or processes.
- Students will partner with organizations abroad to work on the concept, feasibility, design, implementation, and evaluation phases of these projects (depending on the project).

Example Projects



- Sustainable Sanitation Systems in Mexico
- Tsunami Preparedness and Design in Indonesia
- Solar Powered refrigeration in Tanzania
- Green Building Design in Nicaragua
- Ecosanitation (Haiti and Stanford Community farm)
- Indigenous Earthquake Safe Design in the Himalayas

Earth Systems Senior Seminar



- Dumpster Diving and Service Learning 2009 Capstone
- Taught by Julie Kennedy, Senior Lecturer
- Team of Undergraduate students
- <http://sites.google.com/site/stanfordrefuse/>

Big Picture Considerations



- Initiative for Greening the Curriculum can come from multiple directions (tenured faculty, students, lecturers)
- Consider best practices in partnerships- project based vs. ongoing project. Be clear about deliverables. Consider links between student groups and initiatives as a means of continuity
- Thoughtfully prepare students for service. Working across identity differences creates great opportunities for learning, as well as for reinforcing stereotypes.
- d.school model utilizes corporate sponsorship as a means of funding
- Find faculty and administrator champions

Additional information



- Engineers for a Sustainable World
 - http://www.stanford.edu/group/esw/wiki/Main_Page
- Hasso Plattner Institute of Design at Stanford (the d.school)
 - http://extreme.stanford.edu/big_picture/our_vision.html
- Embrace:
 - <http://storybank.stanford.edu/stories/extreme-affordability>
 - Final Project for Earth Systems Capstone
 - <http://sites.google.com/site/stanfordrefuse/>
- Haas Center for Public Service
 - Haas.stanford.edu; karinc@stanford.edu