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Proposed Justice Brandeis Semester:

The Environmental Field Semester

Fall 2010

Instructors: Dan Perlman, Brian Donahue

The Environmental Field Semester (EFS) was first taught by Dan, Brian, and Laura Goldin in fall 2007. It was taught again in fall 2008 by Dan and Brian. We would like to propose offering it again in fall 2010, substantially as we have taught it before. We would be delighted to have it considered as a Justice Brandeis Semester.

Summary

The EFS is an integrated four-course offering that explores the history, ecology, conservation and stewardship of land in New England. From 12 to 15 students enroll in a roster of courses that are team taught in a single, coherent program that includes major blocks of guided field research, numerous field trips, and engagement with community organizations.

The purpose of the EFS is to give students intensive experience in the stewardship of land and natural resources, using conservation land in Weston as our living laboratory. In the process students gain an in-depth understanding of the history, ecology, laws and politics behind how land is used. They also begin to master skills in research, writing, Geographic Information System (GIS), presentation and management that make for effective environmental protection and sustainable engagement at the community level.

Academic Work

The Environmental Field Semester consists of:

BIOL32a "Field Biology" with Dan Perlman,

AMST106b "Food and Farming in America" with Brian Donahue,

ENVS100e "Geographic Information Systems and Field Methods: The New England Landscape" with Dan Perlman and Brian Donahue (a double credit course).

In practice these courses are integrated into a seamless program of classroom and field work. Class meets on Mondays, Wednesdays, and Thursdays (with variations to work around holidays). All told, the EFS tallies something in excess of 240 contact hours. Mornings are generally devoted to classroom work and afternoons to field work. Tuesdays and Fridays are often also used for field trips early in the course, and for field and archival research in the second half of the course.

Class meets in the mornings for two 1.5 hour blocks. Topics include the historical and ecological development of New England and particularly Waltham and Weston, contemporary environmental challenges, and the legal and political context in which decisions about land are made. We pay particular attention to how these communities have been shaped as part of the development of greater Boston, the impact of the Wetlands Protection Act and other environmental regulations, protection of species and ecological services in a fragmented suburban environment, and sustainable local food and wood production. Morning sessions are also used for GIS training.

Afternoon sessions are devoted to field walks to learn plant identification and the basic structure and functioning of local ecological communities, and to field work on research projects. Throughout the semester students engage in coordinated group projects involving parcels of conservation land in Weston. Working in small teams they explore land use history, conduct ecological inventories, and design stewardship and education plans. They work closely with community organizations such as the conservation commission and school department. Students learn research skills such as GIS mapping, inventory methods, and field and archival historical research, along with communication skills in effective writing and public presentation. They write detailed reports, and at semester's end present their findings at a forum which is attended by members of the Brandeis and Weston communities.

Field Trips

The EFS also features several all-day or multi-day field trips. We kick off the semester with a canoe trip up the Charles River in Waltham and a hike across Weston. The second weekend of the semester we take a field trip to western Massachusetts to study regional biodiversity, stopping off at Harvard Forest to introduce students to the history of land use in New England. We take trips to Appleton Farm and Crane Beach in Ipswich, Minute Man National Historical park in Concord, a tour of downtown Boston to learn about the history of the lower Charles and Harbor, and a tour of the Food Project in Dorchester. In October, we have a five day trip to northern Vermont to explore old-growth forests, relict glacial bogs, large-scale forest conservation, sustainable forestry, sustainable farming, and more land use history. These field trips are essential to give students a full grasp of the larger urban, rural, and natural contexts surrounding suburban conservation issues in New England.

Some afternoon sessions are devoted to field trips to local sites that illustrate particular aspects of ecology, conservation, and land stewardship. These trips help convey the

material in the course, and also provide support and training for course projects. One afternoon each week is spent helping out at Land's Sake community farm in Weston, giving students direct experience in the actual tasks of sustainable food and wood production. Activities include maintaining trails, splitting and stacking firewood, and cultivating and harvesting crops. Finally, the EFS includes weekly farm lunches along with several dinners that feature local, seasonal foods.

Assessment

Students in the EFS receive three distinct grades, one for each course. The grades are determined by enthusiastic and full participation, field quizzes, a series of essays, GIS homework, written exams on course content and readings, but most of all by student preparation of their research findings in a variety of formats for effective presentation. Students present their work as a technical research paper, a public summary report, and an op-ed article. In addition, each student group makes an oral presentation.

Conclusion

The purpose of the EFS is not only to teach students how to come to a deep understanding of the natural and human communities surrounding Brandeis, but to develop a full range of skills for engaging with the future of places wherever they come to live. Student evaluations lead us to believe that it works. Many EFS graduates have already gone on to successful internships and senior projects that have extended their EFS work, and several have begun careers in land conservation and stewardship.