ENV 961 Ecosystem Science and Management

Course Description

Given the tremendous challenges to biodiversity and environmental health, perhaps it is not surprising that we have generated many buzzwords/phrases for managing ecosystems: Ecosystem Management, Environmental Management, Ecosystem-Based Management, Integrated Ecosystem Assessment… the list could go on. Despite the rhetoric, two important themes have emerged over the past three decades. The first is that we need to manage ecosystems for both structure (i.e. species, populations, communities) and function (i.e. ecosystem services), grounded in the best available science. The second theme is that to manage ecosystems, you have to necessarily manage people. This course explores both of these themes, with the overall goal of giving students the scientific grounding and the practical skills necessary to critically evaluate the use of science in management efforts in both terrestrial and marine ecosystems.

I encourage you to make use of this course for your own needs. Maybe you could use a refresher in ecosystem ecology; perhaps you are interested in writing an ecosystem management plan. Overall, three learning objectives will guide the structure of the course. Students will (1) develop a strong foundation in ecosystem science, which will inform your study of future DEL courses and Masters Project; (2) explore a range of “hot” topics and controversies in conservation ecology so that we can better predict how management strategies may change in the near future; and (3) create elements of a management plan that addresses key ecological and social issues. Two short writing assignments (~1000 words each), an open-book exam, and a final group project will be required, along with sustained participation and occasional short presentations during our weekly webconferences and discussion forum.