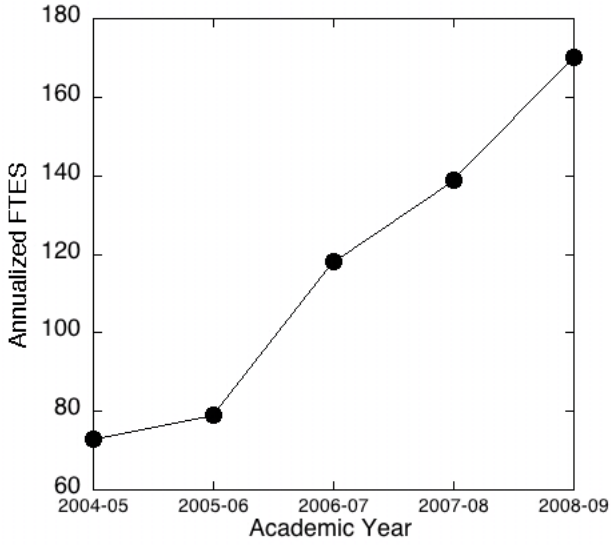
Environmental Science BS Program Annual Report 2008-09
Department of Earth & Environmental Sciences

The Department of Earth and Environmental Sciences in the College of Science offers degrees in Geology (minor, B.A., B.S., M.S.) and Environmental Science (B.S. with 3 options in Environmental Systems & Resource Management, Life Science, and Physical Science).

Enrollments

Enrollments in courses offered by the Department's programs have continued to increase. Annualized departmental FTES indicate a significant increase in enrollments by a factor of 2.3 in the last 5 years. The figure shows annualized FTES for courses taught for the last 5 years. The Department has primarily increased its enrollments through greater participation in the General Education Program. In addition, the Department has been successful in participating in the Freshmen cluster program; the Department taught in 3 clusters during AY 2007-08 and taught in 4 clusters during AY 2008-09. More specifically, Environmental Science is involved in 2 clusters during AY 2008-09.



Articulation, Outreach and Curricular Revisions

The Department is continuing to evaluate all of its articulation agreements with Community Colleges and four-year institutions in California. The main purpose is to develop clear transfer pathways for Community College students into our programs. To facilitate transfer of Community College students into the programs of the Department, we have been meeting with local community colleges and have developed new lower-division coursework as part of our revision of the Environmental Science BS curriculum that becomes effective in Fall 2009. The new lower-division courses include Environmental Biology (ENSC 2400), Environmental Biology Lab (ENSC 2401), and Field Activity in Environmental Science (ENSC 2900). New upper-division courses in the major include Environmental Hydrology (ENSC 3500), Hazardous Waste Management (ENSC 4140), and Global Change (ENSC 4200). We are looking forward to

improved articulation with Community Colleges and the encouragement of Community College students transferring into our program.

New Faculty Hire

The Department hired a new tenure-track faculty member, Dr. Jean Moran, in Environmental Hydrogeology who joined our Department during the Fall Quarter 2008. Dr. Moran has already begun to provide instructional and research opportunities for students in both the Environmental Science and Geology Programs.

Assessment

The Environmental Science program continues to assess student learning outcomes during the capstone experience, ENSC 4800 Environmental Science Seminar. In this seminar, senior ENSC majors choose, investigate and report to the class on two environmental issues according to the general subject areas chosen for that year. Faculty evaluate students on the quality of the research (depth and interdisciplinary comprehension of environmental issues), as well as on their oral and written presentations. However, as part of our 5-year review process that will begin in Fall 2009, the Environmental Science faculty have undertaken an overhaul of our Student Learning Objectives to improve alignment with our newly revised curriculum and to facilitate assessment.

Environmental Science B.S. students have done very well in job placement upon graduation. Currently our graduates are employed with Cal EPA-Regional Water Quality Control Board, Alameda County Department of Agriculture, U.S. Geological Service, Stanford Linear Accelerator program, as well as in private environmental consulting firms. Employment opportunities in environmentally related jobs are currently increasing and are expected to increase significantly in the future. Employment data provided by the Tri-Valley Business Council on green and environmentally related jobs indicates the need for broadly trained Environmental Scientists particularly in the fields of environmental restoration, conservation management, and water quality/resources. In addition, a number of our majors are now in graduate programs in Chemistry, Biology, Environmental Management, and Geology.

Lastly, the Department is still working to form an Environmental Science Program Advisory Committee composed of professional scientists from industry and local and statewide agencies to help evaluate and inform and curricular changes.