

WATERSHED ECOLOGY

Departments: Biological Sciences & Geosciences

Course Number: BIO/GSC 542/642 Credit Hours: 3

Spring, even numbered years

First taught in 1986, Watershed Ecology is designed as a capstone course for students in ecology, hydrology, and the aquatic sciences. Water is the next oil. The world is running painfully short of freshwater, and the political and environmental consequences will be severe.

Areas emphasized include the hydrologic cycle and its influence on groundwater, lotic, and lentic systems; the effect of water on plant and animal communities; and the influence of human activity on watershed structure and function.

The course explores the broader aspects of water movement through environments from rainfall to its return to the oceans focusing on ecosystem effects. Most courses in hydrology and aquatic systems consider one phase of the hydrologic cycle or water as it exists only in the specific system. The mechanisms of how water arrives or departs from the system and the influence this movement may have on biophysical components of the system are often omitted or covered very briefly. The course covers in detail the hydrologic cycle, its relationship to plant and animal communities, and how human activities alter the hydrologic cycle and thus the plant and animal communities. This course is offered as a companion course to hydrology, limnology, and stream ecology. The course is designed for upper level students in both Geosciences and Biological Sciences.

