

AN INTERDISCIPLINARY APPROACH TO TEACHING WATERSHED FIELD SCIENCE

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Through NSF support, faculty at the University of Vermont have designed a watershed field science class that involves students from an array of disciplines including geology, geography, engineering, natural resources and education. The course was originally held for four weeks during the summer but was modified to weekly lectures during the semester followed by a two-week field-intensive component in order to better suit faculty and student schedules. The goals of this course are to promote the interaction and communication of students from different disciplines, provide an understanding of field fundamentals, and to compare field observations and data with state-mandated watershed assessments.

Lectures and fieldwork focus on the physical, environmental, and social issues in the watershed of Lake Champlain, New England's largest inland water body. An overlying theme of the course is to encourage holistic thinking about watershed science from different disciplinary perspectives. Lectures delivered by faculty and graduate students from geology, geography, natural resources, and engineering, provide students with a common level of background knowledge. Students learn field techniques, equipment operation, data collection, and the importance of detailed observations during the first week of the field component. In the second week, students apply these skills to assess watershed quality on a transect from Mount Mansfield's headwaters down the Winooski watershed to Lake Champlain. As a final project, students present a group poster in which they synthesize their watershed transect data and observations in order to answer the broad question "how and why does the channel, streamside environment, and flux of sediment and nutrients change as you move from headwaters to the mouth of the Winooski River?" The question is intentionally left broad to evaluate the students' level of critical thinking and their ability to make connections between data, observations, and background knowledge.

In final course evaluations, students rated the field component very highly but they also indicated that the lectures provided essential information that prepared them for the field work. The syllabus and teaching materials are available (uvm.edu/watercamp) for those interested in interdisciplinary field-based education.

[2009 Portland GSA Annual Meeting \(18-21 October 2009\)](#)

[General Information for this Meeting](#)

Session No. 113--Booth# 310

[Field Geology Education—Historical Perspectives and Modern Approaches \(Posters\)](#)

Oregon Convention Center: Hall A

9:00 AM-6:00 PM, Monday, 19 October 2009