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The fascinating side of dirt: Soil and the global environment course

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Soil has recently been attracting some renewed public attention due to its inextricable link to current environmental challenges such as climate change, food security and water resource protection. It is increasingly acknowledged that the world's future will require a better understanding of soil science. Yet enrolment in soil related programs at universities in North America and around the world has been declining. One of the proposed causes for this drop is the tendency for soil science education to emphasize the agricultural side of soil science, while our increasingly urban and environmentally conscious student population is more interested in environmental sciences.

To address this issue, in 2011 we created an on-line, first-year soil science course designed specifically to communicate the significance of soil science to global environmental questions. We propose that this type of course is an effective way to help increase interest in higher level soil courses and reverse the downward trend in enrolments.

The course content was centered on prominent environmental issues, which were used to introduce basic concepts of soil science. Course materials emphasized integration with other natural resources disciplines such as ecology, biogeochemistry and hydrology. The online format allowed for a seamless integration of multimedia components and web content into course materials, and is believed to be appealing to technologically savvy new generations of students. Online discussion boards were extensively used to maintain strong student engagement in the course. Discussion topics were based on soil-related news stories that helped demonstrate the relevance of soils to society and illustrate the complex and often controversial nature of environmental issues. Students also made significant use of an online bulletin board to post information about environmental events and share news stories related to the course.

This course was offered for the first time in term 1 of the 2011/12 academic year. Preliminary student feedback was very positive. In the presentation, we will evaluate the overall course performance in generating enthusiasm for soil. We will also present the lesson learned, particularly regarding facilitating student's transition from this introductory course to more quantitative soil science courses.