

7-2008

The Science Behind The Policy: An Integrated Water Resources Course

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Recommended Citation

Cockerill, Kristan M., "The Science Behind The Policy: An Integrated Water Resources Course" (2008). 2008. Paper 33.
http://opensiuc.lib.siu.edu/ucowrconfs_2008/33

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5.05 Poster

The Science Behind The Policy: An Integrated Water Resources Course

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The Science Behind The Policy: An Integrated Water Resources Course

Anyone who has reviewed water management practices recognizes that there is often a gap between scientific consensus on water realities and the policies put in place to manage water. The same is true in the academic community. Courses typically segregate the hydrological lessons from the policy lessons. To address this, we have created a course that fully integrates hydrology and policy into a single course. This new course combines our usual courses on hydrology (Anderson) and policy (Cockerill). The course employs case studies, where the readings for each session describe a specific issue in a specific place (e.g. tourism and groundwater pumping in Texas; development and wetlands in Florida). Using the case study as the starting point, each class period will include hydrological information, including the hydrological cycle, ground-water-surface water interaction, and hydrological modeling. Each class will also cover the policy process and address how hydrologic information has historically been applied and how it might be applied in contemporary society. Together the instructors will address the difficulties and disconnects between how science “works” and how policy “works” and the ramifications for society in terms of our water supply. A key feature of this course is that both instructors will interact throughout each class session to help the students grasp the common intersections, as well as the potential for increased interaction between hydrology and policy. While more time intensive than a traditional “team approach” that does not integrate the disciplines, our experience with integrated efforts, as well as the conclusions drawn from the literature indicate that this approach has greater potential to improve student understanding of the complexity of water supply science and management. We will report the results from assessments throughout the semester to determine how the integrative approach is affecting student attitudes and knowledge levels. We will also compare the outcomes from this class to student performance in the previous semesters where we taught more traditional courses on hydrology and water policy.