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Instructional Related Activities
Report Form

SPONSOR	DEPARTMENT
Amy Denton Scott Frisch	Biology Political Science

ACTIVITY TITLE	DATE (S) OF ACTIVITY
UNIV 391-03: Science and Public Policy in Yellowstone National Park	6/30/2012 – 7/6/2012

PLEASE EXPLAIN (1) DESCRIPTION OF ACTIVITY; (2) HOW DID THE ACTIVITY RELATE TO A COURSE(S); AND (3) WHAT YOU LEARNED FROM THE PROCESS.

1. Established in 1872, Yellowstone is the world's first national park. The park encompasses over 2.2 million acres and is home to a tremendous diversity of plants and wildlife, as well as archeological and cultural sites and more than 10,000 geothermal features. Yellowstone's iconic status often intensifies conflicts over public land usage and the park is an excellent natural laboratory in which students can explore the scientific and political aspects of both long-standing and emerging controversies involving recreation vs. preservation and wildlife management. Our class focused on two specific issues: the reintroduction of wolves to the greater Yellowstone region and the migration of Yellowstone bison outside park boundaries in the winter. Many of these free-roaming bison, and to a lesser extent, elk, carry the disease brucellosis and put livestock in the surrounding communities at risk for infection. We used monthly meetings during the spring semester to provide background and preparation, then spent seven days in Yellowstone immersing our students in a variety of activities including wildlife observation, exploration of natural resources and park ecosystems, and talking with relevant stakeholders to better understand all positions on the environmental, economic, and social impacts of Yellowstone wolves and bison on the park itself and the surrounding region.

To study wolves, we went wolf-watching several times at various locations within the park and discussed wolf biology with Yellowstone Association Institute biologist Brad Bulin, toured sites important to the wolf reintroduction program such as the 1995 acclimation pens and the earliest dens, interviewed rancher/outfitter Martin Davis about how wolves in Yellowstone affect his cattle production and elk-hunting businesses, and learned about the early history of wolf reintroduction from National Park Service wolf biology technician Rick McIntyre.

Our class observed many large herds of bison in the park and toured the NPS Stephens Creek bison corrals with Dr. Rick Wallen, an NPS biologist who was able to give us a feel for what the park bison go through during the annual brucellosis testing and quarantine process. We also visited Druska Kinkie, whose family has operated a cow and calf ranch in the Paradise Valley outside of Yellowstone for over 100 years. Ms. Kinkie, a rancher and activist, vividly described the impacts of roaming bison and

brucellosis from the Montana rancher's point of view.

During our trip we had outstanding wildlife viewing and in addition to wolves and bison, our students got to see important and/or endangered North American wildlife species such as elk, pronghorn, grizzly bear, black bear, badger, coyote, mule deer, bighorn sheep, mountain goat, long-tailed weasel, bald eagle, golden eagle, osprey, peregrine falcon, great horned owl, kestrel, sandhill crane, and boreal toad. Finally, students were able to explore the park's geological, ecological, and historical features both with our Yellowstone Association Institute guide and on their own.

2. Science & Public Policy (BIOL/POLS 345) is an interdisciplinary, GE course that examines the relationship between science, politics and public policy and prepares students to make informed decisions concerning the societal implications of many rapidly advancing avenues of scientific research. Development of this course was the direct outcome of an award from the Center for Integrative Studies. We co-taught Science & Public Policy in Spring 2006, 2007, 2009, 2011, and 2012, covering the basics of U.S. policymaking, the scientific method, and in-depth case studies of climate change, embryonic stem cell research, genetically modified food crops, public immunization, endangered species, and the creation of the Channel Islands National Park. In response to student comments expressing the desire for more in-depth coverage of specific, current issues, in 2009 we offered an IRA-funded field course in the Arctic National Wildlife Refuge as an optional high-impact, hands-on experience component to BIOL/POLS 345, focusing on the science and policy issues surrounding climate change in the Alaskan arctic. To provide this type of field-based, intensive science and policy experience to a larger number of students, in spring 2012, we offered **Science & Public Policy in Yellowstone National Park** as an independent, three-unit course using the new UNIV 391 designation. Twelve students (three political science majors, four ESRM majors, five biology majors) participated (see attached roster). This course can be used to meet the cross-disciplinary course requirement for Biology majors in the Evolution, Ecology, and Organismal emphasis, or majors may substitute this course for any three-unit upper division biology elective. Political Science students will be allowed to substitute this course for three units of the required fifteen units of upper division elective coursework required for the degree.

3. We learned several things from this experience, and hope to incorporate them into future course offerings. First, we learned what a large and enduring impact this first-hand experience had on our students (see students' emailed comments and project acknowledgments, attached). Students were deeply moved by all that they saw and learned about the intersection of the Yellowstone region's scientific, conservation, park management and local ranching communities. It was very gratifying for us as educators to witness how engaged the students were with the issues; we frequently caught them talking about the course topics during their free time and several of them are seriously interested in graduate programs or jobs that would allow them to stay involved in these matters.

We also learned how well our students rise to rigorous physical and mental challenges they do not typically experience in on-campus classroom courses. We found that our students could be tough, adaptable, curious, adventurous and sensitive to unfamiliar ways of life (*e.g.*, cattle production).

Finally, we learned that students would get even more out of this field experience with

additional pre-trip preparation. To this end, we would like to offer future sections of this course with a weekly or twice-monthly schedule of meetings. We will also require some type of assessment to be completed earlier in the semester in order to expedite the grading process.

Student comments and poster projects are attached to this form. In addition, a video made by student participant Evan Lashly may be viewed here:

http://www.youtube.com/watch?v=9I2KrBDw3qc

From: [redacted]@gmail.com>
Date: July 24, 2012 11:39:57 AM PDT
To: <amy.denton@csuci.edu>
Subject: Re: 2122 (Spring 2012) US TRAVEL STUDY EXPERIENCE-03

Hi Amy,

For your final IRA report:

For me one of the highlights of the trip was being able to discuss the bison and wolf issues with those closest to the issues on both sides. These are issues that are easy to have a strong opinion about when you are isolated in a classroom. After we met with the ranchers it was much harder to take a strong stand against the individuals who are fighting for their livelihood, the way I typically would have when studying the issue in the classroom. This week gave us the opportunity to meet real people who dealing with bison and wolf issues daily and don't have the luxury of allowing someone else to find a solution.

Thanks again for the great trip!

From:
Date: July 30, 2012 2:38:26 PM PDT
To: Amy Denton <amy.denton@csuci.edu>
Subject: Re: 2122 (Spring 2012) US TRAVEL STUDY EXPERIENCE-03

Hi Amy,

Feel free to post the video wherever you like, here's a few sentences about the trip:

US TRAVEL STUDY EXPERIENCE-03: Science and Policy in Yellowstone National Park is absolutely a highlight of my academic career at CSUCI so far. The experience in Yellowstone opened my eyes to the huge variety of opportunities within the National Park system. The trip further kindled the fire of interest I have in the Park Service as a career opportunity, which I am actively persuing. Our guide, Brad Bulin from the Yellowstone Association, was particularly helpful. Brad was incredibly knowledgable, friendly and helpful. His knowledge and interpretation of our surroundings in the park was informative and engaging. This class has made me want to persue more schooling in the fields of wildlife management and field methods.

Thank you!
Evan