



<http://www.csuci.edu/ira/index.htm>

Application
Instructionally Related Activities Funds Request
2011-2012 Academic Year
DEADLINE: Fall and Academic Year 3/31/11
Spring 2012 deadline is 10/31/11

Applications must first be sent to the appropriate program chair. Chairs will then recommend and route them to the Dean's Office for review and authorization. The Dean's Office will then forward them to the IRA Committee for consideration.

Activity Title: Science & Public Policy in Yellowstone National Park

Project Sponsor/Staff (Name/Phone): Amy Denton (8458) and Scott Frisch (2770)

Activity/Event Date(s): 5/30/2012 through 6/7/2012

Date Funding Needed By: 1 January 2012

***Please Note that for Fall Requests the earliest that you will be notified of funding availability will be early June 2011 and for Spring Requests early January 2012.*

Please check if any of the following apply to your IRA:

- | | |
|---|---|
| <input type="checkbox"/> Equipment Purchase | <input checked="" type="checkbox"/> Field Trip |
| <input type="checkbox"/> Event | <input type="checkbox"/> Participant data collection for public dissemination, i.e. interviews/surveys that result is a journal/poster session/newsletter |
| <input type="checkbox"/> IT Requirements | <input type="checkbox"/> Risk Management Consultation |
| <input type="checkbox"/> International Travel | <input type="checkbox"/> Late Submission |
| <input type="checkbox"/> Space/OPC Requirements | |
| <input type="checkbox"/> Infrastructure/Remodel | |
| <input type="checkbox"/> Other _____ | |

Previously Funded: YES NO Yes, Request # _____

*If previously funded, please attach copy of IRA Report

Does your proposal require IRB (Institutional Review Board) approval: Yes NO

Assessment submitted for previously Funded Activity: YES NO

Academic Program or Center Name and Budget Code:

720-Biology (Denton); 769-Political Science (Frisch)

Date of Submission: 31 October 2011

Amount Requested: \$14,700
 (Should match item 2. E. on page 4)

Estimated Number of Students Participating: 12

Application
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2011-2012 Academic Year

Conditions and Considerations

Equipment Purchase-If requesting large equipment, Project Sponsor must show proof of correspondence with OPC Administration. In addition, all other purchases must follow Procurement Guidelines.

Events-For a large event, consultation with the events coordinator is recommended.

Participant Data Collection for Public Dissemination-If Project Sponsor proposes to conduct research with human participants then it may be subject to IRB (Institutional Review Board for the Protection of Human Subjects) review. It is the Project Sponsor's responsibility to inquire with the IRB **prior** to IRA application submission to determine if the project is exempt from IRB review so that funding is not delayed. Please indicate on the cover page if your project is exempt from IRB review.

Field Trip-If approved, Identified Risks of Participation and Release Agreement must be submitted for each student to the Program Office (Public Folders-HR Forms).

IT Requirements-Requires proof of correspondence and approval from IT Administration

International Travel-Requires International Travel application be submitted to Center for International Affairs.

Risk Management Consultation-Requires proof of correspondence with Risk Management.

Space/OPC Requirements, Infrastructure/Remodel-Requires proof of correspondence with OPC Administration.

Late Submission - Requires explanation for emergency funding.

Fiscal Management: Project Sponsor's program will be responsible for all costs incurred over and above what is funded through the IRA award and will be responsible for seeing that any revenue that is intended to offset the amount of the IRA award is transferred accordingly.

Application
Instructionally Related Activities Funds Request
2011-2012 Academic Year

Requirements and Signatures

Please provide the following in your application:

1. **Brief Activity Description.** Describe the activity and its relationship to the educational objectives of the students' program or major.
2. **Relation to IRA to Course Offerings.** All IRAs must be integrally related to the formal instructional offerings of the University and must be associated with scheduled credit courses. Please list all classes that relate to the program proposed.
3. **Activity Assessment.** Describe the assessment process and measures that the program will use to determine if it has attained its educational goals. **Please note a report will be due at the end of the semester.**
4. **Activity Budget.** Please enclose a complete detailed budget of the entire Activity **bold** specific items of requested IRA funding. (Page 4)
5. **Sources of Activity Support.** Please list the other sources of funding, and additional support for the activity.
7. **Acknowledgment.** Project Sponsor and Program Chair acknowledge that they have reviewed and accepted the Conditions and Considerations detailed on page 2.

Amy Denton
Scott Frisch
Amy Denton
Scott Frisch
Karen Carey

31 October 2011
10/31/11

Date
31 October 2011
10/31/11

Date

10/31/11

Date

ACTIVITY BUDGET FOR 2011-2012

IRATravel Form

International/Domestic Travel Courses with Course Fees (UNIV 391, 392, etc.)

Number of Students				12	
Number of Faculty				2	
I	Students traveling expenses:	Cost/ea	# Requested	Total	Comments/Additional Notes
	Airfare	600	12	7200	
	Ground Transportation	50	12	600	Roadrunner to/from LAX
	Hotel Accommodations	65	12	780	1 night, may not be necessary
	Registration Fees				
	Entrance Fees				
	Meals				
	Cultural Activities	250	12	3000	Yellowstone Association Institute
	Travel Insurance	75	12	900	
	Vehicle/Van Rental	165	12	1980	
	Other: Yellowstone Overlook field campus	350	12	4200	7 nights cabin accommodations
II	Faculty Travelling Expenses:		# Requested	Total	Comments/Additional Notes
	Airfare	600	2	1200	
	Ground Transportation				
	Hotel Accommodations	125	2	250	
	Registration Fees				
	Entrance Fees				
	Group Meals		14	600	final night group meal in park
	Cultural Activities				
	Travel Insurance	75	2	150	
	Other:				**
	Other:				**
III	Operating Expense Budget	Cost	Comments/Additional Notes: Please be Specific		
	Supplies				
	Printing/Copying				
	Other:		**		
	Other:		**		
	Other:		**		
IV	Out of Pocket Student Expenses	Cost/ea	Comments/Additional Notes: Please be Specific		
	Health Insurance	n/a	Not funded by IRA or the University		
	Tuition/Registration	n/a	Not funded by IRA or the University		
	Other:	n/a	Not funded by IRA or the University		
	Other:	n/a	Not funded by IRA or the University		
Total costs of the trip					
	Total Student Traveling Expenses:			18,660	
A	Maximum IRA funding @ 2/3rd total cost			12,500	
	Remaining 1/3 is payable by students through course fee			6157.8	
B	Faculty Travelling Expenses, funded at 100%			2200	
C	Operating Expenses, funded at 100%			0	
	Total IRA funding Requested (Total of A, B & C)			14700	
	Out of Pocket Student Expenses, not funded by the University			200	variable, mostly meals

We are requesting IRA support to partially fund a trip to Yellowstone National Park as an intensive field study component of **Science and Public Policy in Yellowstone National Park**, a proposed section of UNIV 391 (United States Travel-Study Experience), during Spring 2012. A similar, IRA-supported course, to the Arctic National Wildlife Refuge, was offered for the first time in Spring 2009 (please see Appendix A).

Relation to CSUCI course offerings:

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 and 2011, covering the basics of U.S. policy-making, 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, we offered the Arctic Refuge field trip 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. The six participating students reported deep and lasting impacts from their intensive field study experience in the arctic and have urged us to offer similar opportunities in the future (see Appendix A).

In Spring 2012, we would like to offer **Science & Public Policy in Yellowstone National Park** as an independent, three-unit course, using the UNIV 391 designation. At the end of the semester (30 May - 7 June 2012), twelve students and two instructors will travel to Yellowstone to study the science behind, and policy matters surrounding, various national park land-use controversies including wolf reintroduction, bison migration, and winter use/snowmobiles. Weekly meetings during the semester will cover topics including an introduction to the park's history, natural and cultural resources, current issues and controversies, a briefing on structured information gathering and conflict resolution, a primer on environmental writing and journaling, and a pre-trip orientation. This course will fulfill 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.

Course Rationale:

Established in 1872, Yellowstone is the world's first national park. The park encompasses over 2.2 million acres and is home to 67 species of mammals including grizzly bears, gray wolves, bison, and elk, 322 bird species, 15 fish species, 10 reptiles and amphibians, 1200 plant species and over 400 species of extreme thermophiles (microbes that thrive at high temperatures). Preserved within the park are more than

10,000 thermal features including 300 active geysers, as well as archeological and cultural sites associated with 26 Native American tribes and early U.S. history. 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. Enduring issues include recreation vs. preservation and wildlife management (wolf reintroduction, bear management, endangered species recovery, hunting, protection of private local sheep and cattle herds). Newer concerns include bio-prospecting (mining Yellowstone's thermophilic species for profit in the biotechnology industry), invasive species, 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.

CSU Channel Islands is a member of the American Democracy Project (ADP), a civic engagement program created by the American Association of State Colleges and Universities (AASCU). The goal of this program is to develop new approaches that universities can use to help undergraduates become thoughtful, informed, and engaged citizens. Both Denton and Frisch have participated in an ADP workshop entitled *Politics in the Yellowstone Ecosystem*, spending a week studying how competing but equally legitimate interests in the greater Yellowstone region's public lands are resolved in a democracy. The workshop is geared toward supporting faculty as they develop courses to help undergraduates understand the value and limitations of various interest groups (scientists, policymakers, activists, local business people) in controversies involving public resources. Building on our experiences in the ADP workshop, we will use weekly meetings during the spring semester to provide background and preparation, then spend seven days in Yellowstone immersing our students in a combination of classroom and field activities covering a variety of current controversies including wolves, bison, snowmobiles, bear management, bio-prospecting, and invasive species. We will spend the first part of the week examining the science and history each topic: observing wildlife, exploring appropriate natural resources and park ecosystems, and talking with National Park Service biologists, rangers, and administrators, as well as resource experts such as Montana Department of Livestock veterinarians, Montana Department of Fish, Wildlife, & Parks scientists, and researchers from universities around the U.S. conducting field work in Yellowstone. Later in the week, we will interview citizens and relevant stakeholders to better understand all positions on the issues. We will speak to members of mainstream and activist environmental groups, local business owners and outdoor recreation providers, ranchers, local policymakers and government officials. Wildlife viewing, presentations, classroom space, and meetings with scientists, park employees, local experts and interest groups will be arranged in cooperation with the Yellowstone Association Institute (see Budget Justification).

Science & Public Policy in Yellowstone National Park supports the University's mission in several ways. Environmental stewardship is a core principle of our strategic initiative on sustainability. This course will raise awareness of sustainability by offering students a unique view of ongoing national debate on the protection of natural resources and the role of public lands. It will provide CSUCI students an opportunity to

experience the natural, economic, political, and cultural environment of Yellowstone firsthand, and allow them to view the intersection of science and public policy, and the process of public decision-making, through the perspectives of a diverse group of stakeholders.

Description of itinerary:

Day 1: Fly into Bozeman, Montana, drive to Yellowstone National Park.

1. We will fly into the Bozeman airport and using rented vehicles, drive the 90 miles south into Yellowstone National Park. We will be staying in cabins at the Yellowstone Association's Overlook field campus, which is about 1.5 miles outside of Gardiner, MT, and the north entrance to the park. We will purchase food and supplies for the week in Gardiner, then depending on the time, drive and/or hike through the park to familiarize ourselves with the landscape.

Days 2-8: Yellowstone National Park. As described in the course rationale section, four days in the park will be spent in the field, classroom, and traveling outside the park to talk to local citizens and activists. Park controversies that will be covered include:

1. Gray wolves: science, policy, and impacts of reintroduction of an endangered species to the Yellowstone ecosystem.
2. Recreation vs. preservation: science, policy, and impacts of winter use of snowmobiles in the park.
3. Bison management: science, policy, and impacts of bison migration outside park boundaries.
4. Other topics (subject to coordination constraints): the science and policy behind predator management (*e.g.*, grizzly bears), invasive fish and plant species, and bio-prospecting.

We will have 1-2 free days in which small groups of students work on their individual topics or explore more park issues. Evenings we will be for daily recap and discussions. One group meal is planned for the final evening at the historic Old Faithful Lodge, including an end-of-trip debriefing and student project updates/presentations.

Student Participation and Assessment:

If funded, details of the course and trip will be disseminated to all CSUCI students before the first day of the Spring 2012 semester. Costs, physically demanding nature of the travel, and trip timing will affect the number of students who are interested in a field course, and restrictions imposed by Yellowstone Associate Institute field accommodations and in-park transportation limit the maximum number of student participants to twelve. Interested students will complete an application prior to or during the first week of class, and will be evaluated on their grade-point averages, faculty recommendations, and two short essays in which they describe their motivations and expectations and demonstrate their understanding of conditions they may encounter on the trip. If more than twelve students submit acceptable applications, participants will be

chosen by lottery and a list of alternates generated. Applications from students in all majors will be encouraged.

Yellowstone's interior remains largely inaccessible during spring break, and is not hospitable for alpine hiking and wildlife viewing until May, so by necessity, this trip must take place after the end of the Spring 2012 semester. The neutral "RP" (Report in Progress) designation will be assigned to students as a temporary grade, then changed immediately upon return and completion of course requirements. This procedure was used for the 2009 arctic trip and did not affect transcript and diploma processing for the graduating seniors in the class. Course assessment will consist of weekly brief quizzes and a final project on a topic of the students' choice, developed from an idea or theme introduced in the weekly sessions. Following the trip each student will be responsible for preparing an annotated PowerPoint presentation, poster, or video based on this topic and expanded using images and experiences gained on the trip. These multimedia creations will be posted on the course website, linked to the Biology and Political Science program pages, and used as teaching materials in future BIOL/POLS 345 sections. Students may also use the course web page to publish pictures from the trip as well as their personal reflections.

Activity Budget and Justification:

<u>Costs associated with course fee – Student traveling expenses (per student)</u>	
Roundtrip airfare LAX-Bozeman, MT	\$600
Roadrunner shuttle service to/from LAX	\$50
Travel insurance	\$75
Motel accommodation in Bozeman	
(1 night, may not be necessary – depends on flights)	\$65
Lodging at Yellowstone Association	
Institute's Overlook facility (7 nights)	\$350
Yellowstone Association Institute tours/activities (see below)	\$250
Transportation R/T Bozeman to Yellowstone, and	
within the park (vehicle rental and fuel)	\$165
SUB-TOTAL	\$1555
 <u>Costs associated with course fee – Faculty traveling expenses (total)</u>	
Roundtrip airfare LAX-Bozeman, MT	\$1200
Travel insurance	\$150
Motel accommodation in Bozeman	
(1 night, may not be necessary – depends on flights)	\$250
Group meals	\$600
SUB-TOTAL	\$2200
 Total student traveling expenses (\$1555 X 12 students)	 \$18,660
Maximum IRA funding (@ 2/3 cost)	\$12,500
Faculty traveling expenses	\$2200
TOTAL IRA request	\$14,700

Justification:

IRA funding requested to subsidize two-thirds of the total costs for twelve students plus faculty traveling expenses. The Yellowstone Association Overlook field campus, located 1.5 miles outside the north entrance to the park, will provide cabins and shared full kitchens for all participants, which will reduce students' out-of-pocket expenses for meals. The Yellowstone Association Institute will also organize and facilitate our activities in the park, including park fees and permits, spotting scopes, and telemetry location for wildlife viewing, classroom space, talks by park scientists and administrators, and arranging interviews with local ranchers, businesspeople, activists, and government officials. Funds for a group meal in the Old Faithful Lodge are requested as a part of a culminating evening, where the class can discuss our experiences and students can present updates of their course projects for group input. Because there are not many daily flights in and out of Bozeman, one night's motel accommodation near the Bozeman airport is requested in the event we cannot coordinate a flight with the long drive between Bozeman and Yellowstone – it is our hope that this will not be required. Costs for instructor travel are requested because contributions of both instructors are critical: this is a truly interdisciplinary course. Both Denton and Frisch have completed the ADP *Politics in the Yellowstone Ecosystem* workshop described above. Denton has almost 20 years experience conducting biological fieldwork in alpine settings and is familiar with the terrain, conditions, flora, and fauna of Yellowstone. Frisch provides expertise in public policy and the history of environmental policy-making in the U.S. He has written about environmental policy and politics during the Carter administration, and is working on a project analyzing the influence of President Carter on passage of the Alaska National Interest Lands Conservation Act. Both Denton and Frisch will donate all teaching time required for UNIV 391 and will not charge weighted teaching units to their program budgets.

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

Instructional Related Activities Report Form

SPONSOR	DEPARTMENT
Amy Denton Scott Frisch	Biology Political Science

ACTIVITY TITLE	DATE (S) OF ACTIVITY
ESRM 492-03: Arctic National Wildlife Refuge and Climate Change	6/4/2009 – 6/13/2009

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

Arctic ecosystems are extremely sensitive and under a grave threat from anthropogenic climate change. Alaska has current political and scientific relevance because of its unique situation as our nation's only arctic state and the site of our largest petroleum reserves, and it makes an excellent natural laboratory for an interdisciplinary study of climate change. In June 2009, Amy Denton, Scott Frisch, and six CSUCI students (two Biology majors, three ESRM majors, one Political Science major) traveled to the Alaskan arctic for an optional intensive field study experience as part of Science & Public Policy (BIOL/POLS 345), an interdisciplinary course examining the relationship between science, politics, and public policy. This IRA-funded field course was offered in Spring 2009 as ESRM 492-03 because at the time there was no UNIV course designated for domestic travel. Our class spent six days exploring evidence of the environmental impacts of warming and studying the vegetation, wildlife, and geology of the Arctic National Wildlife Refuge from a remote wilderness base camp on the Kongakut River as the annual migration of the Porcupine Herd of caribou began. We also toured the Prudhoe Bay oil drilling and processing facilities on Alaska's north slope, talked with residents of the Gwich'in Athabascan community of Arctic Village and the Inupiat village of Kaktovik on the Beaufort Sea, hiked in the boreal forest (the Earth's largest carbon sink) and spent two days learning about ongoing climate change research at the University of Alaska Fairbanks.

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, attached). Students were deeply moved by all that they saw and learned about climate change, fossil fuels, arctic ecosystems, and indigenous Alaskan culture, and several intend to pursue these topics in post-graduate study. 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 cultural practices (e.g., whaling) not found in southern California. 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 the Arctic National Wildlife Refuge and Climate Change as an

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

independent, three-unit course, using the new UNIV 391 (United States Travel-Study Experience) designation. Weekly meetings during the semester will cover topics including the scientific basis of climate change and its environmental and economic impacts, climate change policy, the history and establishment of the Arctic Refuge and its relationship to oil and gas development, the indigenous cultures of Alaska, a primer on environmental writing and journaling, better preparing students for specific experiences they may have in the field.

Student comments are attached to this form. In addition, the website for the Spring 2009 trip may be viewed at <http://faculty.csuci.edu/amy.denton/arctic/>.

Channel Islands Class Roster

Spring 2009 Regular Academic Session

ESRM 492 SERVICE LEARNING/INTERNSHIP Section 03 #3105 Independent Study

Time/Day

Room
By Arrangement

Instructor
Denton, Amy L
Frisch, Scott A

Total Enrolled Students 6

Enrollment Capacity 6

Enrolled Students

ID	Name	Grade Basis	Units	Program and Plan	Academic Level
1 000462528	Cox, Ryane Elizabeth	Crd/No Crd	3.00	Undergraduate - BS: Biology, Ecology emp	Junior
2 000541568	Douglass, Bruce Mackenzie	Crd/No Crd	3.00	Undergraduate - BA: Political Science	Junior
3 000408604	Harrison, Steven Alan	Crd/No Crd	3.00	Undergraduate - BS: ESRM, Environmental Sci	Senior
4 000310337	Moran, Timothy Ryan	Crd/No Crd	3.00	Undergraduate - BS: ESRM, Resource Management	Junior
5 000538240	Myers, Lisa	Crd/No Crd	3.00	Undergraduate - BS: Biology	Senior
6 000501060	Newton, Aaron Scott	Crd/No Crd	3.00	Undergraduate - BS: ESRM, Resource Management	Senior

CANCEL

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

Wednesday, April 14, 2010 8:28 AM

Subject: FW: Arctic Trip Help

Date: Monday, April 12, 2010 4:11 PM

From: Amy Denton <amy.denton@csuci.edu>

From: Lisa Myers <Lisa_Myers@patagonia.com>

Date: Mon, 12 Apr 2010 06:04:00 -0700

To: Amy Denton <amy.denton@csuci.edu>

Subject: RE: Arctic Trip Help

Hi Amy,

After having taken several biology classes at CI, my time in Alaska brought the things I learned in the classroom to life. My experience in the Arctic put a face on climate change. Learning about the impacts that climate change is having on the Arctic, and falling in love with this wild, remote place at the same time, made an impact that will forever influence my career.

My time spent in the Arctic were filled with encounters of porcupine caribou, grizzlies, ptarmigan and Arctic Tern. I spent time in the remote Arctic Village with members of the Gwich'in tribe, whose very culture is sustained by the migrating porcupine caribou herd and the rich biodiversity that Arctic provides for them. I have just a few classes left at CI, and my clear image of a delicate, wondrous, yet threatened place offers me extra incentive to excel in my biology career.

I hope this is helpful in solidifying the next Arctic trip! Thanks again for everything you did to make the first trip possible.

See you in lab,

Lisa

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

Wednesday, April 14, 2010 8:28 AM

Subject: FW: Arctic Trip Help

Date: Monday, April 12, 2010 4:12 PM

From: Amy Denton <amy.denton@csuci.edu>

From: Tim Moran <timothy.moran703@dolphin.csuci.edu>

Date: Sun, 11 Apr 2010 12:34:29 -0700

To: Amy Denton <amy.denton@csuci.edu>

Subject: RE: Arctic Trip Help

Dear Amy,

you took the words right out of my mouth with that quote, so feel free to use that one, but here are some others just in case you need more: Basically this trip was one of if not the most meaningful and profound experiences of my college career. This trip not only allowed me to experience firsthand what i learn in the classroom but it also made me feel more connected to the university. By experiencing such an intense learning environment with both students and professors it allowed me to feel like i was a bigger part of my own education. The importance of simply having gone to ANWR and the oil fields cannot be understated. It is one of the biggest topics of discussion and debate in the majority of my classes and I have such a huge advantage over my fellow classmates. Currently in my environmental law class we are having a big final group project in the form of debates. I was placed in a group that will be debating the prospects of drilling in ANWR. I am the only one in the class and 1 of only 6 students in the entire university who can say that i visited ANWR, I saw it with my own eyes, I talked to the natives and heard personally from them how they feel about drilling and global warming, and i saw the effects of global warming firsthand. In this current political environment in which we live, the benefit of removing the filter of the media and individual political agendas cannot be underestimated. If funding for trips like these are cut then future students will not only miss out on an important educational experience, but they will also miss out on what could be one of the great experiences in their lives. The Alaska trip ignited my passion for the environmental sciences in a way that no ordinary class ever could have.

So their you go! I hope you can use some of that. Scott told me that you guys put in the paperwork for another arctic trip. I really hope that goes through because i meant everything i said above and i hope that more students get this opportunity. Anyways Scott and i also briefly discussed watching the ANWR videos he took over some beer and pizza, so i think you should talk to him and we should make that happen!

-Tim Moran

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

Wednesday, April 14, 2010 8:30 AM

Subject: FW: predoc attachment
Date: Wednesday, April 14, 2010 8:30 AM
From: Denton, Amy <amy.denton@csuci.edu>

From: Ryane Cox <ryane.cox822@dolphin.csuci.edu>
Date: Mon, 15 Mar 2010 14:44:58 -0700
To: Amy Denton <amy.denton@csuci.edu>
Subject: predoc attachment

Amy,

This past summer two professors, and six students, including myself, went to Alaska to study the effects of climate change. One of the major effects we learned about was erosion. Due to longer and warmer summers, the top layers of permafrost are melting, causing erosion in many areas. This erosion not only affects the flora and fauna of Alaska, but also many people. This has by far been one of the most influential experiences regarding my determination to succeed in a doctoral program. Sitting on top of "hole in the rock", a name we gave a foothill on our last hike in Arctic National Wildlife Refuge, and gazing out upon the untouched lands of the arctic reinforced the love I have for this earth and the determination to conserve it. Talking to indigenous Inupiat people and learning about erosion and oil spills has helped to prepare me for the many challenges I might face in this field, and has also given me the determination to persevere.

Ryane

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

Wednesday, April 14, 2010 8:28 AM

Subject: FW: Arctic Trip Help
Date: Monday, April 12, 2010 4:10 PM
From: Amy Denton <amy.denton@csuci.edu>

From: Aaron Newton <anewton_10@yahoo.com>
Date: Mon, 12 Apr 2010 10:14:41 -0700 (PDT)
To: Amy Denton <amy.denton@csuci.edu>
Subject: Re: Arctic Trip Help

here is some little pieces i put together

As one of the six students chosen to the ESRM 492 ANWR and Arctic Climate Change trip I felt it was not only a great way to bond with students and teachers but also learn first hand about climate change how our actions are affecting others. While visiting small, remote native villages in Alaska and talking to the native Inupiat about not only there way of depending of wildlife for sustainable hunting but how there villages and way of life are being affected and may be lost due to coastal erosion. While in the refuge we were able to explore the variety of vegetation and wildlife such as Porcupine Caribou, Moose, Tarmigan, and Brown Bear that made up the pristine and untouched land at the base of the Brooks Range. It was amazing to be in such a place were so few people have ever been and not only to visit but camp in what some consider the final frontier.

This trip provided an amazing opportunity to not only talk but interact with people that are being affected first hand and see a such unspoiled landscape which could not be told through reading a book or sitting in a classroom.

It provided an amazing chance to see a piece of the world that I would not normally be able to see without the opportunity provided by this class.

let me know if you need anything else and feel free to re-edit things if needed.
thanks again for the once in a lifetime opportunity!

-Aaron Newton

APPENDIX A: Activity Report for 2009 Arctic National Wildlife Refuge Course

Wednesday, April 14, 2010 8:27 AM

Subject: FW: Need arctic input!

Date: Monday, April 12, 2010 4:25 PM

From: Amy Denton <amy.denton@csuci.edu>

From: Mac Douglass <spartan00054@yahoo.com>

Date: Mon, 5 Apr 2010 16:28:49 -0700 (PDT)

To: Amy Denton <amy.denton@csuci.edu>

Subject: Re: Need arctic input!

Amy,

I am glad to do whatever I can to help. Let me start with some lines I hope are poster worthy:

"It was an odyssey that was at once fantastically empowering, and deeply humbling."

"ANWR taught me what freedom feels like - and made me understand my responsibility to preserve it."

"You step out of your tent in the morning, the sun never having set, and you feel like you're on the moon, yet able to breathe. Yeah, that cool."

"It was a journey that took us from the most miserable of soul-stealing mires of human irresponsibility to a place so pristine and untouched that it touched my heart, and never let go."