

Instructionally Related Activities Funds Request Fall 2016

Signed in as: david.daniels | [Signout](#)

- [Workflows](#)
- [Current Tasks](#)
- [My Workflows](#)
- [My History](#)

IRA Funds Request for Hawaii's humpback whales; assessing habitat and health in a recovering population

[View IRA Funds Requests](#)

Instructionally Related Activities Funds Request Summary

Project Sponsor	Rachel Cartwright
Activity Title	Hawaii's humpback whales; assessing habitat and health in a recovering population
Activity/Event Date	March 18th-25th 2017
Date Funding Needed By	October 2016
Previously Funded?	Yes
Semester/Year	Spring 15
Proposal #	0627
Report submitted for previously Funded Activity?	Yes
Report submitted for previously Funded Activity	IRApostrireport_Maui2015.pdf
Additional Report #1	irareport0475.pdf
Additional Report #2	—
Additional Report #3	—
Additional Proposers	Cindy Wyels - Mathematics
Academic Program(s) / Center Name(s)	Biology Mathematics
Estimated total Course Fee revenue	5,606
Amount Requested from IRA	24,983
Estimated Number of Students Participating	10
Conditions and Considerations	Field Trip
Brief Activity Description	<p>Enrolled students will participate in all aspects of this conservation-based research study, from experimental design to post-trip data analysis, providing new information that can be directly applied to management of Hawaii's critical humpback whale habitat. Every winter, humpback whales from across the North Pacific travel thousands of miles to the waters around Maui, Hawaii. Adults breed, females give birth and young humpback whale calves spend their first crucial few months in this region. As this endangered species recovers from the threat of extinction, our research contributes directly towards the effective local management, ensuring the health, well-being and survival of future generations of humpback whales.</p> <p>In addition to participating in this valuable research study, the trip provides students with the opportunity to immerse themselves in the unparalleled natural environment and the culture of the Hawaiian Islands. Rainforest hikes in remote island regions are combined with snorkeling and other activities so that students can appreciate the challenges that arise in this unique location. They see first-hand the conflicts that develop in the management of areas where high levels of human recreational activity and fragile marine habitat overlap. Associated outreach activities and featured local speakers that meet with our students round out the trip to allow students to fully consider and appreciate the human footprint in regions such as this.</p> <p>To date, our results from this study present a compelling picture of how human activity may impact marine mammal use of critical habitat. Findings from the first three years of the research study were published in the Journal PLOS ONE (Impact factor 4.3), and a second publication was released in January 2016.</p> <p>However, to be effective, conservation-based work such as this needs to be communicated to the public at large. Consequently, the larger goals of this study provide a perfect vehicle for the involvement of students and faculty from the range of disciplines across our campus. Previously, students from the Communications, Art and Business programs have participated in the course and made substantial contributions to the overall impact of this activity. We plan to maintain this interdisciplinary approach to our work, promoting the course across campus and actively encouraging applications from students outside the traditional sciences.</p> <p>Participating students will work in small, interdisciplinary groups and conduct their own related studies during their time in Hawaii. Previous studies have ranged from the impact of eco-tourism to underwater noise and many students have continued to develop these studies, incorporating their work into capstone and other independent research projects. We see this as one of the most valuable outcomes of the course, as students voluntarily pursue their own original interests.</p> <p>On completion of the trip, students will present their findings at the end-of-year Sage Research Forum. Additionally, they will be fully involved in the dissemination of their results locally, as we launch a local PR campaign to encourage safe boating practices in the region.</p>
Learning Outcomes and Relation to IRA to	<p>Students who participate in the course will:</p> <ul style="list-style-type: none"> • Design experiments to test scientific hypotheses, collate data, conduct statistical analyses and evaluate research outcomes. • Gain first-hand experience in problem solving

Course Offerings	<ul style="list-style-type: none"> Identify topic appropriate research materials, synthesize information from a variety of sources and gain experience in effective communication of results in a variety of media. Develop communication skills and the ability to work as an effective team member in a diverse cultural setting Use analytic and data collection equipment in situ. Work as part of federally permitted research team, and contribute to ongoing efforts for the conservation of a federally listed, endangered species. <p>Related courses: Quantitative Methods in Biology (Biology 203): Study results will be compiled into a sample database and used three to four times over the course of the each semester, providing examples of sampling design and data analysis. Marine Biology (Biology 312): Ecology of marine mammals, management of marine resources and marine field techniques. Two lectures, one lab. Research Design and Data Analysis (Math 430): The study provides real world illustration of the underlying principles of experimental design. Independent and directed Research (Biology 494/497): Students been involved in long term studies, looking at photographic data and working with tissue samples from stranded animals to investigate the development of breath-holding capacity in marine mammals. For these students, seeing whales in the field is invaluable in allowing their full appreciation of the context of the lab based work they are engaged in.</p>
Description of Assessment Process	<p>All students will be required to collaborate on the production of posters and presentations for the Sage research forum here on campus and grades (as credit / no credit) will be assigned based on these presentations and posters.</p> <p>Students will be provided with a marking rubric, emphasizing the statement of clear questions and associated hypotheses, the explanation of key components of their methods, results and full analysis and interpretation.</p> <p>We will also seek additional opportunities for the dissemination of the data at professional conferences. Following the last trip, 7 students traveled to the Marine Mammalogy Society conference to present their findings.</p>
Activity Budget	ira_travel_budget_form_2016_RCCW.xlsx
CIA Budget	---
CIA Proposal	---
Course Syllabus	---
CIA Certification	---
Other Sources of Funding	<p>The Keiki Kohola Project, a Maui-based non-profit 501 (c) 3 organization, will provide access to its research vessel, logistic support, in-field training and most of the field equipment required by the students. This represents an in-kind donation of around \$3000 per student, based on current eco-tourism trips such as Earth Watch / similar programs offered for profit by other universities, which charge for participation in this type of project.</p> <p>Monitoring equipment provided by Keiki Kohola Project includes cameras, computer equipment, acoustic recording and water quality monitoring equipment.</p> <p>Course fees will be in the region of \$600 per student. Students will encouraged to participate in fund raising activities after the trip. Planned activities include the sale of photography and t. shirts. Production costs of these items will be covered by the Keiki Kohola Project and profits generated may be used to offset student costs and to cover the purchase of carbon offsets to cover the air travel involved in this itinerary.</p>
Target Audience/Student Marketing	<p>This activity will be offered to all students across the campus. Flyers will be posted to inform students of application dates and details, and all applicants will be encouraged to attend a set of informational meetings prior to submitting their applications. Additionally, a note will be added to the CI Facebook page, with a link to a purposed page on the Keiki Kohola Project website.</p> <p>It may be worth noting; the trip is currently well known within the student body. I receive multiple notes requesting information throughout the year and for the Spring '15 trip, we received 70+ applications from students within a large variety of disciplines.</p> <p>Students included comprised of a combination of biology, ESRM, communications and mathematics students. This inter-disciplinary make-up of the group is perhaps one of the key strengths of this trip.</p>
Bring Benefit to Campus	<p>For the benefit of the campus community, on completion of the trip in Spring 17, students will prepare posters on their research topics and these will be displayed to the general student body during a Hawaiian- themed marine mammal event to be held in the students union, or similar central location.</p> <p>All trip participants will be required to attend, and share their experiences with other students. Underwater and surface videos will be displayed and acoustic recordings of whale song will be available for other students to listen to. Additionally, students participating in the trip will identify current conservation issues that are impacting marine mammal populations. They will compile accurate information and options for active support, and will provide this to other students during this event. This event will therefore provide campus-wide education on the current status of marine mammals and associated issues relating to the health of the marine environment. The materials that the students prepare will also be collated and prepared for possible display at the Channel Islands Boat Center, as part of an on-going effort to reach out to the general public through this facility.</p> <p>Notably, the publication of our most recent paper, tracking the development of the physiological aspects of dive capacity in young baleen whales received widespread attention in the media; Maui News, KEYT, NPR and Canadian Broadcasting all featured the paper, and highlighted the inclusion of our students in this research, bringing valuable recognition to this type of opportunity here at CI.</p>
Sustainability	<p>Participation in this activity primarily impacts student attitudes towards sustainability. Spending time in a potentially pristine region, such as Hawaii, provides students with an opportunity to develop their own attitudes to this issue, through direct experience and reflection on the impact that anthropogenic activities can have, both on the larger marine environment and on marine megafauna.</p> <p>Students who have completed the course will be more informed on these issues and hopefully persuaded by their own experiences to better embrace the ideologies and principles of sustainability. Furthermore, with the incorporation of the educational outreach event on campus, this impact will disseminate across the campus, to contribute to the general level of environmental awareness of our student body.</p>
Program Chair/Director	amy.denton
Dean	karen.carey
Acknowledgement	I acknowledge that I have reviewed and accepted the Conditions and Considerations herein. Please check off boxes as appropriate.

Program Chair/Director Review

Recommendation	I recommend approval of the IRA Funds Request described on this page
Name	Amy Denton
Date/Time	2/29/2016 1:31:52 PM
Validation	myCI-signin-VX-0744
Comments	---

Dean Review

Recommendation	I recommend approval of the IRA Funds Request described on this page
Name	Karen Carey
Date/Time	2/29/2016 1:33:33 PM
Validation	myCI-signin-PV-6907
Comments	---

IRA Committee Decision

Decision	---
Comments	---

Current Tasks

Task	Time Assigned	Assigned To
IRA Committee Decision	2/29/2016 1:33:33 PM	David Daniels

Completed Tasks

Task	Time Assigned	Time Completed	Completed By
Review from karen.carey, Dean	2/29/2016 1:31:52 PM	2/29/2016 1:33:33 PM	Karen Carey
Review from amy.denton, Program Chair/Director	2/29/2016 12:50:30 PM	2/29/2016 1:31:52 PM	Amy Denton
Edit Request	2/29/2016 12:50:30 PM	2/29/2016 12:54:18 PM	Rachel Cartwright
Fill out Request	2/29/2016 11:57:20 AM	2/29/2016 12:50:30 PM	Rachel Cartwright

Actions

- [IRA Committee Decision](#)
- [View IRA Funds Request](#)