

Instructionally Related Activities Funds Request Fall 2018

▼ Submitter

Submitter Name

Clare Steele

Submitter Email

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▼ 1. Basic Details

Activity Title

Exploring the impact of eco-tourism on marine megafauna in Maui

Activity/Event Date

01/07/2019

Date Funding Needed By

11/07/2018

Previously Funded?

- No
 Yes

▼ Previously Funded Proposal

Semester/Year

Spring 2017

Proposal # (if known)

0795

Report submitted for previously Funded Activity?

- No
 Yes

Please upload a copy of the report

[ira-report-form-post trip_Maui17.docx](#)

Additional Report #1

Additional Report #2

Additional Report #3

Additional Proposers

Cindy Wyels

Academic Program(s)/Center Name(s)

ESRM

Estimated total Course Fee revenue

10,807

Amount Requested from IRA

54,900

Estimated Number of Students Participating

18

▼ 2. Brief Activity Description

Describe the activity and its relationships to the educational objectives of the students' program or major

Brief Activity Description

Students will enroll in a special section of ESRM/BIO 313 Conservation Biology Laboratory. Enrolled students will participate in all aspects of this conservation-based research study, exploring the impact of eco-tourism and the aquarium trade in Maui. Marine mammal and manta observation are important sectors of ecotourism in Maui, however, there are concerns that the industry is impacting the critical reproductive and feeding behaviors of marine megafauna. The concentration of human activity, combined with aquarium fish collection may be altering animals time budgets and habitat use.

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.

Manta ray observation is a popular tourist activity that relies upon the behavior of manta's repeatedly returning to known places near reefs either for parasite-cleaning at cleaner wrasse stations, or to feed on high density aggregations of zooplankton. Recent heavy impacts of tourist reef use and aquarium-trade collections of cleaning fishes may be changing the behavior of manta rays, lowering the frequency of their occurrence on reefs they previously frequented. This study will compare heavily impacted reefs with less impacted reefs and explore the capacity for sustainable multi-sector use of coral reef habitats.

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.

To date, our results from this study present a compelling picture of how human activity may impact marine animal use of critical habitat. Findings from the first three years of the humpback research study were published in the Journal PloS One (Impact factor 4.3), and a second publication was released in January 2016.

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.

▼ 3. Learning Outcomes and Relation of 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.

1. Please list all classes that directly relate to the proposed activity.
2. For each class listed, describe in detail how exactly the IRA activity will be integrated with the class's activities, how often/ on what expected date(s), and to what extent

Learning Outcomes and Relation of IRA to Course Offerings

Students who participate in the course will:

- Design experiments to test scientific hypotheses, collate data, conduct statistical analyses and evaluate research outcomes.
- Gain first-hand experience in problem solving
- 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.

Related courses:

Conservation Biology (ESRM/BIO 313): Study results will be compiled into a sample database and used three to four times over the course of the semester, providing examples of sampling design and data analysis.

Coastal and Marine Management (ESRM 462): Current issues in marine management, aquarium trade, eco-certification, overexploitation of whales and population recovery, habitat use.

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.

▼ 4. Activity Assessment

Describe the assessment process and measures that the program will use to determine if it has attained its educational goals.

Please note that a report will be due at the end of the semester.

Description of Assessment Process

Students enrolled in ESRM/BIO 313 laboratory section in Spring 2019 will analyze data collected on humpback whale behavior, coral reef community composition and health and aquarium target fish density. All students will be required to collaborate on the production of posters and presentations for the SAGE research forum here on campus and part of the student's overall grade will be assigned based on these presentations and posters.

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. We will seek additional opportunities for the dissemination of the data at professional conferences. Following prior trips, students travelled to the Marine Mammalogy Society conference to present their findings.

▼ 5. Activity Budget

Please enclose a complete detailed budget of the entire activity. Indicate specific items that you are requesting IRA to fund.

You should use either the Regular Activity budget (for events on campus) or -- if your event involves any travel-- you MUST use the IRA Travel Budget Form.

You can download both of the IRA Excel Budget sheets at <http://www.csuci.edu/ira/application.htm>.

Activity Budget

[ira-travel-budget_Winter 19_Maui_pretrip.xlsx](#)

▼ 6. International Trips

If your event is an international trip submitted through the Center for International Affairs, you must include copies of:

1. Complete Center for International Affairs/ UNIV 392 proposal
2. The program budget as submitted to the Center for International Affairs (to ensure congruency between the two budgets)
3. as well as a copy of the course syllabus

Center for International Affairs Budget

Copy of Center for International Affairs Proposal

Course Syllabus

Certification

I certify that students attending this trip are not previous or repeat attendees of a prior International UNIV 392 Trip

▼ 7. Sources of Activity Support

Please list the other sources of funding (including course fees), and exact expected amounts of additional support for the activity. Please indicate if there are no other sources of funding

Other Sources of Funding

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. Monitoring equipment provided by Keiki Kohola Project includes cameras, computer equipment, acoustic recording and water quality monitoring equipment. Course fees will be in the region of \$600 per student. Students will also be involved 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.

▼ 8. Promoting Participation

What is your intended audience and how do you intend to market this to your students?

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 in Fall 2018 prior to submitting their applications.

If this is an event that is off campus, how do you plan to bring back the benefit of this event to campus?

For the benefit of the campus community, during Spring 2019, students will prepare posters on their research topics and these will be displayed to the general student body during a celebratory event in concert with Costa Rica and New Orleans service learning participants to be held in the students union, or similar central location. 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.

▼ 9. Sustainability

If appropriate, indicate how the content or delivery of the project promotes sustainability at CI.

Sustainability

Sustainability

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.

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.

▼ 10. Approval and Acknowledgement

Program Chair/Director

Anderson, Sean S

Dean

Adler, Mary

Conditions and Considerations

- Artist/Performer/Speaker Fees & Honoraria:** On the Activity Budget, please indicate whether the vendor's price was set by you/CI Representative, or is a fee that was set by the vendor.
- Large Event:** For a large event, consultation with the campus Event Coordinator's office at (805)437-8548 is required.
- Field Trip:** Sponsor must comply with all policies found at:
<http://www.csuci.edu/rm/programs/academic-field-trip-guidelines-and-forms.htm>. If approved, Identified Risks of Participation and Release Agreement must be submitted for each student to the Program Office (Public Folders-HR Forms).
- Involves Human Subject Data Collection for Public Dissemination -Requires IRB Approval :** If Project Sponsor proposes to conduct research with human participants, the proposal may be subject to Institutional Review Board for the Protection of Human Subjects (IRB) review. All research that involves any type of interaction with human subjects - from simple surveys to complex biomedical procedures - must be reviewed and approved by the IRB prior to starting the research. Data for "Public Dissemination" indicates interviews/surveys that result in a journal/poster session/newsletter, etc.
- IT Requirements:** If your activity has IT requirements, coordination with and approval from IT Administration is required.
- International Travel:** Requires International Travel application be submitted to Center for International Affairs. Include copy of CIA budget and course syllabus in your IRA application. Must utilize the University's Foreign Travel Insurance Program (FTIP) and follow all International Travel Guidelines listed at: <http://www.csuci.edu/rm/insurance/foreign-travel.htm>
- Risk Management Consultation:** Events that involve or engage students directly with a performer or artist (i.e. in a workshop or other than as a passive audience member) will require consultation with Risk Management. Requires proof of correspondence with Risk Management.
- Space/Facilities Services Requirements:** Consultation and coordination with Facilities Services is required.

Acknowledgement

- I acknowledge that I have reviewed and accepted the Conditions and Considerations herein. Please check off boxes as appropriate.

▼ Chair Review

Recommendation

- I recommend approval of the IRA Funds Request described on this page
- I DO NOT recommend approval of the IRA Funds Request described on this page

Comments



▼ Dean Review

Recommendation

- I recommend approval of the IRA Funds Request described on this page
- I DO NOT recommend approval of the IRA Funds Request described on this page

Comments

