

Instructionally Related Activities Funds Request Spring 2020

▼ Submitter

Submitter Name

Mary Woo

Submitter Email

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▼ 1. Basic Details

Activity Title

SoCal SETAC Annual Meeting – Student Participation

Activity/Event Date

Spring 2020, April of May (date TBD)

Date Funding Needed By

February 1, 2020

Previously Funded?

- ☒ No
☐ Yes

Additional Proposers

None.

Academic Program/Center/Organization Name

ESRM

Estimated total Course Fee revenue

960

Amount Requested from IRA

1982

Estimated Number of Students Participating

28

▼ 2. Brief Activity Description

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

Brief Activity Description

For this activity, Spring 2020 ESRM300 students will attend and present a class poster at the Southern California Chapter of the Society for Environmental Toxicology and Chemistry (SoCal SETAC) Annual Meeting. ESRM300 covers topics in Coastal Contaminants and Ecotoxicology, so this conference is a perfect matching of class materials with conference topics.

Students will run tests to optimize ESRM workflows for microplastic analysis on a FTIR microscope. They will test filter materials, analysis precision and filter storage techniques (these are open questions in the field of microplastic research). Then, they will prepare a poster summarizing their results for presentation at the SoCal SETAC conference. During the conference, students will rotate presenting the poster, while others move around the poster session to network and view posters. Students will also have the opportunity to attend oral presentations.

SoCal SETAC hosts an annual conference in the spring (April or May) that includes presentations from a wide range of disciplines: Ecotoxicologists, Chemists, Biologists, State Water Board Officers, Stormwater Managers, Environmental Consulting Firms and more. The annual conference is held in southern California and is small with 100-200 attendees, yet comprises issues on leading edge research and environmental monitoring and regulation. In Spring 2020, the conference will be held in downtown Ventura (date TBD).

Participation in the SoCal SETAC conference will provide students with abundant opportunities to network. Networking at conferences promotes student success on many levels: [a] students are exposed to new fields they may not have considered, [b] students make connections that will benefit them for graduate school and future jobs, and [c] students can observe and learn first-hand the cooperative nature that drives science forward and that is not regularly visible in the laboratory environment. While large conferences can feel intimidating, the small size of SoCal SETAC is beneficial for student introduction to conferences and allows them to practice networking in a relaxed setting. Further, SoCal SETAC integrates academic, public and private sectors, giving students a chance to network broadly and ask questions about the different opportunities each path has to offer (which parallels well with the diverse jobs ESRM alumni acquire).

Preparation of a poster for presentation at a scientific conference enhances learning and builds communication skills. Students will need to generate and then summarize their data in a coherent and concise manner and present it visually on a poster. This process will deepen their understanding as they read literature and discuss related topics in preparation for the conference. At the conference, students will present their work to experts in the field of microplastics who will ask questions, challenge their knowledge and help them to think, again, more deeply about the topic.

Beyond the networking opportunities and nurtured skills, the experience of a conference can change the whole perspective of a student. They may start seeing themselves in roles they never before thought about. Each undergraduate student I have seen return from a conference is glowing with inspiration. They are ready to work that much harder in their classes, apply for graduate school or a particular job, and join the community they met at the conference.

Please provide a list of administrative support work needed to fulfill the goals of the proposal. Indicate the estimated time of year and amount of time needed for each work item to the best of your ability:

Administrative Time

The only administrative support needed will be for paying invoices.

▼ 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

This IRA Proposal targets ESRM300 and several of its learning outcomes are:

- [1] Describe the major pollutants classes including their anthropogenic and natural sources, transport through ecosystems and eventual fate.
- [2] Identify pollutants' exposure pathways and mechanisms of toxicity, as well as coping mechanisms organisms develop in response to pollutants.
- [3] Explain and apply the steps involved in the assessment a polluted field site: sampling strategy, collecting and preserving samples, sample chain of custody, sample preparation for analysis, detection of analytes and data quality control/assurance.
- [4] Examine chemical data and toxicity parameters to identify potential ecosystem and human impacts of different pollutants concentrations.
- [5] Blend existing scientific knowledge and new field generated data to effectively communicate the hazards and mitigation of pollutants to the public.

The proposed activity will contribute to each outcome listed above. Data collection that will take place during 3-4 lab session will comprise outcome [3], while exposure to leading edge reach at the conference that relates to class material will support outcomes [1], [2] and [4]. Presenting the class poster at the conference will contribute to outcome [5] as students will need to blend newly generated data with existing microplastic knowledge and communicate their results to an audience with diverse backgrounds (government, industry and academic).

Lastly, student participation in the data collection and conference phases will contribute to two of CI's 2018-2023 Strategic Initiatives:

- [1] Attending a scientific conference, talking with a diverse set of attendees (undergraduate presenters through agency directors) and seeing the knowledge they learn in class applied, gives students a new perspective on what they can accomplish and thereby contributes to Students Success.
- [2] Building a professional network through interactions at the conference and participating in data collection, synthesis and presentation will support future student success in graduate school and careers (Educational Excellence).

▼ 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

As part of ESRM300, students will be required to write a 2-page reflection on their experience at the SoCal SETAC conference. They will reflect on any leading edge science presented that excited them, material learned in the classroom that connects with studies presented, skills they were able to practice and networking connections they made.

▼ 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

Woo S20 IRA Travel Budget Form fy19-20.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 ESRM Program will support the data collection phase of this proposed activity with FTIR microscope access and related lab supplies. ESRM300 has course fees available, but these are allocated to cover consumables related to the water, soil and air quality equipment (including the FTIR microscope) used during the class, not for transportation or registration at a scientific conference. However, the program will support the student's conference participation via printing the class poster.

▼ 8. Promoting Participation

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

The intended audience is ESRM300 students. All students in ESRM300 will be invited through the course itself. Any remaining open spots to participate will be advertised to students with the help of ESRM Professors – either announcements to their classes or to targeted students that may benefit from participation.

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

There are two built-in and direct benefits to the CI campus from the proposed activity. First, the FTIR microscope in the ESRM Program will be recently purchased; in addition, the application of FTIR microscopes to microplastics analysis is a new and growing field of study in which workflows are still being generated. Thus, workflows around the FTIR microscope need development. The data collection portion of the proposed activity will contribute to FTIR workflows for microplastic analysis. Strong workflows will prepare the instrument for wide use both associated with ESRM lab classes and student research, including independent research and research involving collaborations with agencies, environmental groups and businesses pursuing sustainability.

Second, students returning from a scientific conference return to campus with a vigor, enthusiasm and curiosity that spreads to other students as they share their experience. Networking connections are also shared among students, helping to improve CI Educational Excellence through preparedness for post-graduation endeavors.

▼ 9. Approval and Acknowledgement

Program Chair/Director

Patsch, Kiersten

Dean

Wyels, Cynthia (Arts & Sciences)

Program Chairs and Deans may inform proposer of any staffing capacity needs or limitations (optional comments below):

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. Please note that late applications will not be reviewed by the committee.

▼ 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

 Kiersten Patsch Nov 3 2019

▼ 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

Looks like a valuable, relatively low-cost enhanced learning opportunity for students!

 Cynthia Wyels Nov 22 2019