

Instructionally Related Activities Funds Request Spring 2020

▼ Submitter

Submitter Name

Jason Isaacs

Submitter Email

jason.isaacs@csuci.edu

▼ 1. Basic Details

Activity Title

DARPA SUBTERRANEAN CHALLENGE

Activity/Event Date

February 2020

Date Funding Needed By

January 2020

Previously Funded?

- ☒ No
☐ Yes

Additional Proposers

Academic Program/Center/Organization Name

Computer Science / Mechatronics Engineering

Estimated total Course Fee revenue

0.00

Amount Requested from IRA

27350.00

Estimated Number of Students Participating

20

▼ 2. Brief Activity Description

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

Brief Activity Description

The proposed instructionally related activity is a one week field trip to the location (TBD) of the DARPA SUBTERRANEAN CHALLENGE (<https://www.subtchallenge.com>). The DARPA challenge is the top robotics competition in the country. Past challenges have included the DARPA Urban Challenge which started the autonomous car technology push (<https://www.darpa.mil/about-us/timeline/darpa-urban-challenge>) and the most recent DARPA Robotics Challenge (<https://www.darpa.mil/about-us/timeline/darpa-robotics-challenge>) which demonstrated the state of the art in humanoid robotics. This challenge deals with search and rescue operations in underground environments such as tunnels, urban underground, and caves. CSUCI will compete in the Urban Underground phase against the top robotics programs in the country including MIT, UC Berkeley, Carnegie Mellon, and others.

The students who participate in the activity will be integral in the setup and operation of our robots during the competition. Additionally, the student participants will be exposed to students and professors from top robotics graduate programs in the world. During the down time of the competition there will be exhibits to visit and plenty of networking time.

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

I estimate 4 hours of administrative time to support booking travel arrangements and travel reimbursements.

▼ 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

The primary learning outcomes include many of the positive outcomes associated with project-based learning:

- Learning to work in a community
- Learning to take responsibility for their learning
- Learning to work with a diverse group with varying strengths and skills
- Learning critical thinking skills

This activity is open to all students who are interested in learning more about robotics.

There is no specific class associated with this activity. Currently I am holding open lab times from 1 PM to 4:40 PM each Thursday in SIE 1141 where interested students can meet to work on the project.

▼ 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

I plan to have each student write a pair of essays related to this experience. The first essay will document student expectations, and the final essay will be a reflective essay about the experience. I also plan to use a survey tool to quantify student outcomes before and after the experience.

▼ 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

[Isaacs-DARPA-budget-actual-2019.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

We are partnering with an existing team in the DARPA challenge called Coordinated Robotics. This team has already won prize money (\$250,000) in the virtual competition and they plan to help support our team effort by funding most of the hardware and equipment needed to participate in the physical competition.

The only thing left not covered is the cost of student travel to participate.

▼ 8. Promoting Participation

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

This event is open to all students interested in learning more about robotics. I plan to advertise on the TV screen in the lobby of Sierra Hall, through student emails, and flyers around campus.

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

I plan to present the results of the competition at venues such as the Student Research Luncheon Lecture series, the local chapter of IEEE, and the Library Lecture Series.

▼ 9. Approval and Acknowledgement

Program Chair/Director

Soltys, Michael

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

I strongly recommend this proposal, as it fits very well in the mission of the department, and indeed of CI.

 Michael Soltys-Kulnicz Nov 5 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

...with appreciation to the proposer for providing students this learning opportunity!

 Cynthia Wyels Nov 22 2019