



Instructionally Related Activities (IRA)

Proposal for NEW Recognition – Effective Fiscal Year (FY) 2016-2017

PLEASE READ BEFORE COMPLETING THIS PROPOSAL

If you are applying for an IRA for the first time and you currently have club status or you are trying to decide between applying for club status or IRA recognition, please carefully consider the following information: The university recognizes three distinct types of student organizations: student clubs, Independent Student Organizations (ISOs) and Instructionally-Related Activities (IRAs). Each of these organization categories enjoys the rights and privileges of recognition by the university but have unique funding approaches. Student organizations are assigned to only one of these categories based upon organizational purpose and funding eligibility and cannot occupy a dual status. Therefore, a group that currently functions as a student club or ISO will lose its club/ISO status and associated funding if it receives IRA recognition.

Please keep answers concise - Completed forms not to exceed five pages in length.

Boxes automatically expand as you type.

1. Proposed Activity Name

Innovation Sandbox

2. Coordinator (Cal Poly Faculty or Staff member)

Dr Brian E Granger

Professor

Name

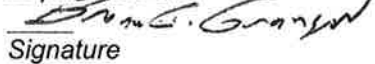
Title

Physics/Data Science

COSAM

Department/Unit

College/Division



2/27/16

Signature

Date

bgranger@calpoly.edu

6-2424

E-mail Address

Phone Number

3. Category

Pick the category that best matches the proposed activity.

- College** – Activity will primarily impact one or two colleges.
- University Interest** - Activity will impact three or more colleges and the university at large and fits into one of the following subcategories:
 - Performing Arts
 - Media
 - Cal Poly Heritage
 - Campus Community
- University Interest Student Affairs** – Activity will impact three or more colleges and the university at large and the originating unit/department is housed in Student Affairs.

4. Purpose and Goals

- a. Briefly state the purpose of this proposed IRA.
- b. Concisely describe the goals for this proposed IRA and the plan for achieving those goals.
- c. Clearly explain what portion of the plan will be supported by IRA funds.

a) Innovation Sandbox is a physical and programmatic environment where students of all academic levels from all majors across campus can come together to explore and develop their early-stage ideas. The goal is to stimulate creative play outside of the traditional academic environment through a mix of formal and informal engagement, allowing innovations to progress beyond a single classroom project or exercise, and decoupling innovation from a particular course or department. It is a hybrid maker space, new technology demonstration/experience area, and student project workspace.

b) The goals for this IRA are to facilitate interdisciplinary collaboration and formation of student teams across the six colleges at Cal Poly. The program is currently looking to expand beyond the Bonderson Project building into the library to better serve the campus community. The Sandbox provides both curricular and extra-curricular supporting equipment, and helps develop student leaders that are evangelists across campus to the learn by doing making culture at Cal Poly and help train students that utilize the Sandbox. IRA funding is projected to impact at least 1000 students from all colleges during the 2016-2017 academic year, in both project and unstructured learning.

c) The IRA funds requested in this application will support an estimated 14% of the annual operating budget for supplies and student stipends. We are in the process of actively seeking additional support from corporate sponsors, private donors, and grants, for capital expenditures and program expansion that is consistent with the goals of moving the space into the Kennedy Library.

5. Funds

a. Briefly describe efforts and success to date in obtaining funds from other sources.

Cumulative external funds to date include approximately \$70,000 in alumni donations, a \$10,000 external seed grant, and an additional alumni pledge of \$50,000 specifically related to helping the IRA with costs associated with moving to its new programmatic space in the library. We are currently working with Advancement to prepare a proposal for alumni and corporate sponsors.

b. If the proposed activity receives recognition, what is the projected IRA subsidy amount that will be requested: \$ 5,000 of support from the College of Science and Mathematics

6. Estimated Involvement

a. Number of students projected to be active participants in the planning and implementation of this activity
30 student leaders, 100 heavy users, 800 total participants and their major(s) of origin all across Cal Poly. Historically the space has had 20 student leaders 20-30 heavy users and 200 total participants, utilizing the current small space (550 sq. ft.) that is located in a less visible area on campus. The expansion will put the space in a far more visible area and increase the size to 2100 sq. ft.

b. Number of target audience (as applicable): students 2500 on the CIE mailing list others The audience expands greatly to become all students using the Kennedy Library.

7. Key Learning Outcomes

a. Provide a list of what students will learn, do, or value as a result of their participation in this IRA. Use action verbs to describe cognitive, affective, and performance skills Bloom's Taxonomy

1. An ability to understand technology trends and the intersection with societal trends.
2. An ability to communicate to a wide audience using appropriate technical vocabulary.
3. An ability to articulate project goals and build an appropriate team.
4. An ability to physically realize early ideas through appropriate physical and digital prototypes.
5. An ability to apply discipline skills in highly interdisciplinary projects.
6. An ability to develop ideas and identify and communicate value creation.
7. A respect for diverse viewpoints.
8. A recognition of the need for, and an ability to engage in, learning and teaching complex concepts throughout ones career.

b. Check the University Learning Objectives below that align with the learning outcomes provided in #7a.

All students who complete an undergraduate program at Cal Poly should be able to:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Think critically and creatively. | <input checked="" type="checkbox"/> Communicate effectively. |
| <input checked="" type="checkbox"/> Demonstrate expertise in a scholarly discipline and understand that discipline in relation to the larger world of the arts, sciences, and technology. | <input checked="" type="checkbox"/> Work productively as individuals and in groups |
| <input type="checkbox"/> Make reasoned decisions based on an understanding of ethics, a respect for diversity, and an awareness of issues related to sustainability. | <input checked="" type="checkbox"/> Use their knowledge and skills to make a positive contribution to society. |
| | <input type="checkbox"/> Locate and gather credible information from a variety of sources such as library, internet, etc. for completion of projects (one attribute of "engage in lifelong learning"). |

c. Check the Diversity University Learning Objectives below that align with the learning outcomes provided in #7a.

All students who complete an undergraduate or graduate program at Cal Poly should be able to make reasoned decisions based on a respect and appreciation for diversity as defined in the Cal Poly Statement on Diversity, which is included in the catalog. They should be able to:

- Demonstrate an understanding between diversity, inequality, and social, economic, and political power both in the United States and abroad
- Demonstrate knowledge of contributions made by individuals from diverse and/or underrepresented groups to our local, national, and global communities
- Consider perspectives of diverse groups when making decisions
- Function as members of society and as professionals with people who have ideas, beliefs, attitudes, and behaviors that are different from their own

8. Assessment Plan for 2016-17

a. Check the assessment methods that will be used to determine to what degree participating students met the intended learning outcomes provided in #7a.

- | | | |
|--|--|--|
| <input checked="" type="checkbox"/> Exhibits of Student Work | <input type="checkbox"/> Student Surveys | |
| <input checked="" type="checkbox"/> Student Focus Groups | <input checked="" type="checkbox"/> Student Interviews | <input checked="" type="checkbox"/> Other – describe One research paper published. Second paper accepted for presentation. |

9. Course Affiliation

a. List one to three courses where the subject matter supports the activities or goals of the proposed IRA.

Note that IRA funds cannot be used to cover course expenses; therefore, participation in a specific IRA cannot be a requirement of a course.

Course Prefix: PHYS206

Course Title: Experimental Physics

Course Prefix: PHYS256

Course Title: Electrical Measurements Laboratory

Course Prefix: _____

Course Title: _____

10. Criteria

a. Provide justification for recognition by checking the IRA Criteria below that apply :

<input checked="" type="checkbox"/>	The program/activity description is clearly articulated.	<input checked="" type="checkbox"/>	The program/activity is clearly connected to the academic mission of the division, college, and/or department, as confirmed by the appropriate Dean or Vice President.
<input checked="" type="checkbox"/>	There is demonstrated support from the division, college, and/or department in the form of funds, facility use, supplies, faculty advisor, faculty/staff support time, etc.	<input checked="" type="checkbox"/>	The program/activity is clearly affiliated with one or more identified course(s) or major(s)/minor(s), though participation in the program/activity occurs outside an organized instructional setting.
<input checked="" type="checkbox"/>	Learning outcomes are defined for students participating in the program/activity.	<input checked="" type="checkbox"/>	One or more students will participate directly in the program/activity and be enriched by the experience.
<input checked="" type="checkbox"/>	There is evidence of, or a plan for, sound financial management of the program/activity.		
In addition:			
<input checked="" type="checkbox"/>	The public may have access to view or listen to the program/activity.	<input checked="" type="checkbox"/>	The program/activity may enhance Cal Poly's reputation, thereby benefiting students (e.g., through increased employment opportunities),
<input checked="" type="checkbox"/>	It is strongly encouraged that attempts are made (or have been made) to secure funds from other source(s).		

b. Briefly describe how specific features of the proposed activity align with the IRA criteria.

- **The program maintains a website to publicize it's mission, objectives, and projects.**
- **The program supports 3D printing for student class projects from all of the colleges on campus. A print queue of historical and future print jobs with student major is maintained.**
- **Facilities in the library are being offered to the program in recognition of its cross campus impact.**
- **The program reaches out to classes from across campus and hosts classes for tours of the space and informational meetings.**
- **The program has raised funds from alumni and has worked with Advancement to establish donor marketing materials.**
- **The program has hosted tours for outside groups including students from Los Osos Middle School and presented at the local Maker Faire.**
- **The program encourages students to spend their free time implementing their disciplinary skills in teams working with others on projects of passion. These projects, and this productive use of a students time outside of class, are particularly interesting to employers.**

11. Recommendation – The Department Chair/Head or Division Director and the College Dean/Vice President confirm that this activity is connected to the academic mission of the department, college, and/or division, and undertake to assign university faculty and/or staff to advise/supervise/support these activities consistent with university policies and procedures.

Department Chair/Head or Division Director
(name)

Robert Esch
Department Chair/Head or Division Director
(signature)

1/20/16
Date

Derek Gragson
College Dean/Vice President (name)
Associate Dean

Derek Gragson
College Dean/Vice President (signature)

1/20/16
Date

Angelique Duenas
Student Council Chair or ASI President (type name)

Angelique Duenas
Student Council Chair or ASI President (signature)

2/12/16
Date

Academic Programs Office (<http://www.academicprograms.calpoly.edu>)

FOR USE BY IRACC ONLY

IRA Recognition:

- Approval Recommended
- Approval Not Recommended
- University Interest

Rationale:

Mary E. Pedersen, IRAAC Co-Chair

_____ Date

Proposed IRA Name: Innovation Sandbox
Department Name and DEPT ID: _____

Important - Complete this form only if seeking FIRST time recognition.

This proposed budget should demonstrate how IRA funds, if approved, will be utilized. Budget should align with the explanation provided in #4c of the Proposal for New Recognition.

Note: Balances on June 30th in excess of 20% of the allocation will require a written explanation per the year-end student fee reporting process. Unexpended balances in excess of the 20% may be subject to transfer to division level accounts.

SOURCES OF FUNDS	2016-17 Projected Amount
Requested IRA subsidy:	<u>5,000.00</u>
College/Department discretionary funds:	_____
College-based fees:	_____
*Other (Explain below):	<u>30,000.00</u>
Total sources of funds: \$	35,000.00

ALLOCATION RECOMMENDATIONS	
To be completed during the funding process April/May	
College recommended IRA subsidy	
\$	_____
(print name) College Dean / or VR Student Affairs / or IRAAC co-chair (Univ Int)	
Signature	Date
(print name) Student Council Chair (college) or ASI President (Univ Interest)	
Signature	Date
(print name) Budget Analyst	
Signature indicates projected uses or funds are within expenditure guidelines	
Signature	Date

***Provide detailed explanation of "Other" Sources of Funds.**
 - \$10,000 expected contribution from Center for Innovation and Entrepreneurship to support student stipends and materials and supplies
 - \$10,000 expected contribution from CENG and OCOB (IRA's)
 - \$10,000 expected external donor contribution

USES OF FUNDS	
To program reserve:	_____
Salaries & wages:	<u>7,500.00</u>
Supplies & services:	<u>25,500.00</u>
Travel:	<u>2,000.00</u>
Other:	_____
Total use of funds: \$	35,000.00

Provide detailed explanations of all projected expenditures on page 2.

Expenditure Guidelines are available on the IRA website at http://www.academicprograms.calpoly.edu/content/IRA/ira_budget_guidelines_032405

I verify this budget report is accurate and submit this proposal to request funding.

IRA Coordinator (print) _____ Signature _____ Date _____
 Department Chair/Head (print) _____ Signature _____ Date _____

Supplemental Explanations - Use of IRA Funds

For any amounts entered under "Use of IRA Funds" on page one, please provide detailed explanations of planned expenditures. Double click in any box to begin typing.

To program reserves: Explain why funds will be held in reserve.

Salaries & Wages: To whom are salaries and wages paid? What is their role for this IRA? Note that salaries, stipends, or wages for faculty, students, or others to participate in IRA programs/activities may not be paid using IRA funds. However, a case may be made to pay employees such as lab technicians or truck drivers to perform tasks essential to the provision of IRA programs/activities in which students will participate.

Student stipends will not be paid from IRA funds, but will be paid either from CIE contributions or external "Earn By Doing" stipends.

Supplies & Services: Provide a detailed list of supplies & services. Explain how they relate to this IRA.
 - 3D Printing filament and repair parts (supports this service to students)
 - Hand tools (provided to students for use on their projects)
 - Materials for student projects (Students apply for funding of their projects through the Sandbox)
 - Equipment for the space (e.g. Oculus Rift, OtherMill, Shapeoko CNC)
 - Maintenance Contract for Laser Cutter (being acquired this year)
 - Filters for HEPA filtration system for the Laser Cutter
 - Vinyl, Foam, Wood, Wax, and other materials used for rapid prototyping

Travel: Explain who is traveling, where they are traveling to, and why. Show break-down of expense details
 The Innovation Sandbox has subsidized travel to attend the San Mateo Maker Faire, one of the two largest Maker Faires in the nation. The Sandbox charters a bus for this one day opportunity to see this unique mix of corporations and hobbyists that are driving the Maker Movement in this country.
 - Bus Charter: \$1400
 - Tickets for 50 students (\$2000)
 Students contribute their own funds to make up the difference between the total cost and the Sandbox subsidy.

Other: Explain in detail any other expenses and how they relate to this IRA.