Instructionally Related Activities:
Proposal for New Recognition—Effective Fiscal Year 2020-2021

PLEASE READ BEFORE COMPLETING THIS PROPOSAL
Instructionally Related Activities (IRAs) are extra-curricular activities that are integrally related to formal instructional offerings or developmental opportunities at Cal Poly. IRAs are intended to enhance student learning and/or enrich the student experience. Please note: The university recognizes two distinct categories of student organizations: clubs and Instructionally-Related Activities (IRAs). Each enjoys recognition by the university but has unique sources of funding. Student organizations are assigned to only one of these categories based upon their purpose and funding. Therefore, a group that currently functions as a student club will lose its club status and associated funding if it receives IRA recognition.

Please keep your answers concise. Attach supporting documentation if applicable—web pages, newspaper articles, etc.

1. Proposed Activity Name
   boxes automatically expand as you type.

   Civil Engineering Design

2. Proposer/Advisor (Cal Poly Faculty or Staff Member)

   Terry Johnson

   Name

   Civil & Environmental Engineering

   Department/Unit

   tjohn123@calpoly.edu

   E-mail Address

   Assistant Professor

   Title

   CENG

   College/Division

   6-1234

   Phone Number

3. Category

   Select the category that best matches the proposed activity.

   ☑ College – Activity will tend to draw participants from the college and be aligned with the objectives of one or more academic programs.

   ☐ Student Affairs – Activity will draw participants from the broad campus community and be aligned with the objectives of one or more departments or programs within Student Affairs.

   ☐ University Interest - Activity will draw participants from the broad campus community but will not be directly aligned with Student Affairs.
4. Purpose and Goals

a. What is the purpose of the proposed activity? The purpose is general and should be consistent from year to year. For example: To provide students with the opportunity to develop and present business plans in competition with students from other institutions of higher learning. Students will work as a team, applying their knowledge of Civil and Materials Engineering to design a bridge, elevated walkway, or similar structure as part of an inter-collegiate competition.

b. How does the purpose of the activity align with the mission of your department, college, division, or university? The mission of the College of Engineering is “To provide an excellent Learn by Doing education and graduate in-demand, day-one ready professionals.” These competitions require students to apply what they have learned in their engineering courses to real-world design scenarios - Learn by Doing activities which will help prepare them to be ready day-one for careers in civil engineering.

c. Briefly state one to three goals for this IRA. These may change from year to year. Make it clear how, through these goals, the activity will accomplish its purpose. For example, in the purpose stated above, one goal may be to send a team of students to a particular conference to compete against teams from other universities.

1. For 2020-21, students will design and build a 1/20th scale bridge according to the requirements of the IABCCVE competition in Seattle, using Civil Engineering best concepts and their knowledge of materials.
2. Compete against West Coast university teams at the regional conference in Winter 2021.
3. Win 1st or 2nd place at the regionals and go on to compete in the nationals in Spring 2021.

5. Learning Outcomes

For each goal listed in #4c, provide up to three outcomes for what students will know, be able to do, or come to value as a result of their participation in the IRA.

Learning outcomes examine cognitive skills that students develop related to measurable, transferable skill development. They are statements indicating what a student will know, think, or be able to do as a result of the activity or program.

ABCD Structure of a Learning Outcome:

Audience: Who does the outcome pertain to? (In most cases this is the student)

Behavior: What do you expect the audience (student) to know/be able to do? (This needs to include as action verb to describe the learning, chosen from the Bloom’s Taxonomy word bank contained in the guidelines noted below.

Condition: Under what conditions or circumstances will the learning occur?

Degree: How much will be accomplished, how well will the behavior need to be performed, and to what level?

Please refer to the guidelines for How to Write Learning Outcomes for help in formulating these.

As a result of participation, students will:

Goal 1, outcome 1.1: Students will design a bridge with materials and structural integrity that meet or exceed the requirements of the IABCCVE competition.

Outcome 1.2: Students will continuously test and improve the designs while preparing for the competition.
Outcome 1.3: _____

Goal 2, outcome 2.1: Students will explain and justify their design to the judges.

Outcome 2.2: Students will apply the required stresses to their model and demonstrate structural integrity.
Outcome 2.3: _____

Goal 3, outcome 3.1: _____
Outcome 3.2: _____
Outcome 3.3: _____
6. **Assessment Plan**

Describe how you will assess the learning outcomes of this proposed activity. Results will be reviewed in future continued funding proposals, should this activity be recognized as an IRA.

a. Which learning outcomes from #5 above will you be assessing? e.g. 1.1, 2.3, and 3.2? 1.1, 1.2, 2.2

b. Check the assessment methods that will be used to determine to what degree participating students met the intended learning outcomes provided in #5.

- Student Focus Groups
- Student Surveys
- Rubric-based evaluation of artifacts/performances
- Student Interviews
- Other – describe Team ranking in the competition

c. When do you plan to gather this data? faculty advisor will design and use a rubric for assessing the final student design prior to the competition at the end of Fall Quarter. We will also record team ranking at the end of the competition in Winter Quarter.

d. How will you analyze/interpret the results produced from the above assessment method(s)? Using the rebric designed by the faculty advisor, we will analyze how well the design met or exceeded the requirements of the competition to determine how well the students understood the requirements and applied their understanding of Civil Engineering and Materials. Ranking in the competition will give additional information regarding the student's understanding of these and Civil Engineering best practices.

e. How will you use the results to improve the activities of this IRA in future years? We will determine areas where students need additional guidance and emphasize these in the instruction of future teams.

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7. **Instructional/Program Affiliation.** IRAs must be related to a formal program or instructional offering at Cal Poly. See [CSU Executive Order #429](#). List one or more courses, majors, or other type of program where the subject matter supports the activities or goals of the proposed IRA. For example, the subject matter taught in Materials Engineering and Civil Engineering support the design work for the Steel Bridge competition IRA. Note that IRA funds cannot be used to cover course or program expenses.

*Courses or programs:* Civil Engineering degree program, Materials Engineering degree program

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8. **Estimated Involvement**

Number of students projected to be active participants in this activity from each college

CAFES 1, CAED 1, OCOB 0, CENG 15, CLA 0, CSM 1

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9. **Club Status.** Note that an activity cannot be both an ASI-recognized club and an IRA. If an existing ASI club is recognized as an IRA, it will lose its club status and funding.

   Is the proposed activity currently recognized as an ASI Club?
   - Yes/No No

   If Yes:
   - Name of club ______

   Why do you wish to change to IRA recognition? ______

   Will the activities of the club be changed in any way and, if yes, how will the activities change? ______
10. Approvals. All signatures are required. Forms with missing signatures will not be considered by the committee.

By signing below, I confirm that this activity is aligned with the academic mission(s) of the program, department, college, and/or division, and that I will advise/supervise/support these activities consistent with university policies and procedures.

____________________________________
Proposer/Advisor signature (from # 2)                    Date

By signing below, we confirm that this activity is aligned with the academic mission(s) of the program, department, college, and/or division, and that we will assign university faculty and/or staff to supervise these activities in a manner consistent with university policies and procedures.

Francis Sojourn
Department Chair/Head or Program Director
(Name)
___________________________________
Signature                    Date

Jordan Chen-Coget
College Dean or Associate Dean/Vice President
(Name)
___________________________________
Signature                    Date

Academic Programs and Planning (https://academicprograms.calpoly.edu/content/IRA/index)

Friday 1/31/2020: Proposal and Budget Forms, with all signatures, are due to your College Dean’s Office or, for Student Affairs IRAs, the Vice President Student Affairs, no later than end of day.

Monday 2/10/2020: All forms reviewed and approved by Deans and VP Student Affairs are due to Jessica Carson in Academic Programs and Planning no later than end of day. Forms may be scanned and emailed to carson@calpoly.edu or sent through campus mail to Jessica Carson, Academic Programs and Planning.

The IRA Advisory Committee will review all proposals and determine recognitions no later than 3/23/2020, after which all proposers, colleges, and VP Student Affairs will be notified.