



<http://www.csuci.edu/ira/index.htm>

Application
Instructionally Related Activities Funds Request
2012-2013 Academic Year
DEADLINE: Fall and Academic Year 3/31/12
Spring TBD

Applications must first be sent to the appropriate program chair. Chairs will then recommend and route them to the Dean's Office for review and authorization. The Dean's Office will then forward them to the IRA Committee for consideration.

Activity Title: CSUCI Programming Guru Contest

Project Sponsor/Staff (Name/Phone): **Prof. AJ Bieszczad, x2773**

Activity/Event Date(s): **October 2012**

Date Funding Needed By: **September 2012**

**Please Note that for Fall Requests the earliest that you will be notified of funding availability will be early June 2012 and for Spring Requests early January 2013.

Please check if any of the following apply to your IRA:

- | | |
|--|---|
| <input type="checkbox"/> Equipment Purchase | <input type="checkbox"/> Field Trip |
| <input type="checkbox"/> Event | <input type="checkbox"/> Participant data collection for public dissemination, i.e. interviews/surveys that result is a journal/poster session/newsletter |
| <input type="checkbox"/> IT Requirements | <input type="checkbox"/> Risk Management Consultation |
| <input type="checkbox"/> International Travel | <input type="checkbox"/> Late Submission (Passed Deadlines: Fall 3/15, Spring 10/15) |
| <input type="checkbox"/> Space/OPC Requirements | |
| <input type="checkbox"/> Infrastructure/Remodel | |
| <input checked="" type="checkbox"/> Other Programming Contest | |

Previously Funded: **YES** NO Yes, Request # _____363_____

Does your proposal require IRB (Institutional Review Board) approval: Yes **No**

Assessment submitted for previously Funded Activity: **YES** NO

Academic Program or Center Name and Budget Code: **770-COMPUTER SCIENCE**

Date of Submission: **MARCH 28th, 2012**

Amount Requested: **\$ 1740.00**
 (Should match item 2. E. on page 4)

Estimated Number of Students Participating: **20**

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Conditions and Considerations

Equipment Purchase-If requesting large equipment, Project Sponsor must show proof of correspondence with OPC Administration. In addition, all other purchases must follow Procurement Guidelines

Events-Attach copy of Events and Facilities Use Request Form (Public Folders-Events & Facilities folder) Consider time frame for set-up and take down.

Participant Data Collection for Public Dissemination-If Project Sponsor proposes to conduct research with human participants then it may be subject to IRB (Institutional Review Board for the Protection of Human Subjects) review. It is the Project Sponsor's responsibility to inquire with the IRB **prior** to IRA application submission to determine if the project is exempt from IRB review so that funding is not delayed. Please indicate on the cover page if your project is exempt from IRB review.

Field Trip-If approved, Identified Risks of Participation and Release Agreement must be submitted for each student to the Program Office (Public Folders-HR Forms).

IT Requirements-Requires proof of correspondence and approval from IT Administration

International Travel-Requires International Travel application be submitted to Center for International Affairs.

Risk Management Consultation-Requires proof of correspondence with Risk Management.

Space/OPC Requirements, Infrastructure/Remodel-Requires proof of correspondence with OPC Administration .

Late Submission (Deadlines: Fall 3/31, Spring 10/15)-Requires explanation for emergency funding.

Fiscal Management: Project Sponsor's program will be responsible for all costs incurred over and above what is funded through the IRA award and will be responsible for seeing that any revenue that is intended to offset the amount of the IRA award is transferred accordingly.

2012-2013 Academic Year

Requirements and Signatures

Please provide the following in your application:

1. **Brief Activity Description.** Describe the activity and its relationship to the educational objectives of the students' program or major.

The students will compete in a local, CSUCI, programming competition for the title of CSUCI Programming Guru. The event will have two stages: preliminaries and the final. The best programmers from online preliminaries will compete in finals that will be hosted in a classroom, but refereed by an automatic judge.

This is the fifth time the event is organized. It was very successful in the past and the title gained respect in the student community. There are pictures from the contest and a plaque with the picture of the reigning Guru along with the names of past winners exhibited by the Computer Science labs. It has a high motivational value.

Programming is not the only one, but still the most important skill of a computer scientist. The students are very often overwhelmed with theoretical aspects of their studies and do not spend enough time on practicing their programming skills. The only way to become a good programmer is to program a lot in a repetitive environment, and that is not suitable for regular class work. The proposed program is a vehicle designed to help students become proficient programmers. They will learn to solve problems better and faster, to design better algorithms that apply the theoretical knowledge acquired in regular courses, to improve their programming skills, and to learn to work under conditions of the real world: competition and time pressure.

Two of the most critical programming courses at CSUCI, COMP105 (Introduction to Programming) and COMP150 (Object-Oriented Programming) are General Education courses with traditionally a large population of non-CS major students. There are also many non-CS students who take higher level programming courses; some of them within the framework of the Minor in Game Design and Development and Minor in Computer Science. All CSUCI students will be encouraged to participate. The CS program will ask all CS instructors to promote the contest in their classes.

As part of our outreach efforts, last year, we invited students from local community colleges to participate. In response, for the first time, we hosted several students from Moorpark College. We hope to extend that to students from Oxnard and Ventura CCs as well as to other local institutions of higher education.

2. **Relation to 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. Please list all classes that relate to the program proposed.

Programming is a fundamental skill in many areas of science and art, so elements of programming are taught not only in virtually all Computer Science courses, but also in some Math, Art and Physics courses such as:

MATH137 Strategies and game design
MATH 337 Mathematics for game development
MATH348 Analysis of algorithms
ART 206 Animation
ART312 Time-Based imaging and compositing
ART 315 Animation media and techniques
ART 326 Digital media art: 3D computer animation
PHYS 345 Digital Image Processing
PHYS 445 Image Analysis and Pattern Recognition

In the contest, students will exercise their programming skills in a holistic context that is not tied to one particular aspect of programming, but rather forces the student to integrate the knowledge and skills acquired in numerous classes. Through this activity, the students will become better programmers. That will help them with working through subsequent courses and with finding attractive employment.

3. **Activity Assessment.** Describe the assessment process and measures that the program will use to determine if it has attained its educational goals. **Please note a report will be due at the end of the semester.**

Students performance will be analyzed and used in adjusting the syllabi of courses with programming components. The results will be archived and used in annual assessment of the effectiveness of Computer Science courses in equipping students with skills that allow them to become successful computer programmers.

The internal contest will also help our teams to compete in the ACM International Collegiate Programming Contest, an event sponsored by IBM and Google that involves over 1800 universities from around the world sending over 6000 teams to regional, and then world programming championships. Participation in the contest is a certificate of a quality program that is not afraid of standing up to others in this once-a-year event.

4. **Activity Budget.** Please enclose a complete detailed budget of the entire Activity **bold** specific items of requested IRA funding. (Page 4)

The contest is managed through an automatic judge that is a free software implemented at CSU Sacramento, however it requires a time consuming setup. This work is tedious but can easily be done by Computer Science students that would be contracted for the work.

The most consuming part of the event is preparation of programming challenges. We need 10 such challenges, and each requires a good solution along with a template that is used by automated judge. Automated judge just follows what it is told, and the syntax is very strict for that. Preparing a single challenge requires on average 8 hours of time, so we need funding for approximately 80 hours of consultant time. Since students cannot be involved in preparing the contest, the rate has to match the market value for such services.

To motivate student participation (and working on the skills) we have been awarding the title of the CSUCI Programming Guru to the winner of the annual contest. To extend the motivation, we would like to award the forerunners titles of

CSUCI Programming Ninjas. We would like to give small awards (as required with less than \$50 value) and T-shirts with the Guru logo to all participants.

The finals will be followed by an award ceremony to celebrate the accomplishments.

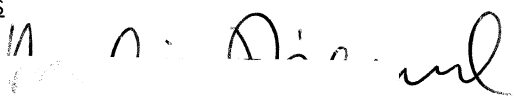
The students commit to approximately 6 non-stop hours in the classroom, so we need to serve light refreshments.

5. **Sources of Activity Support.** Please list the other sources of funding, and additional support for the activity.

None.

7. **Acknowledgment.** Project Sponsor and Program Chair acknowledge that they have reviewed and accepted the Conditions and Considerations detailed on page 2.

Signatures and Dates

Project Spc  3/28/12
Date

Program C AJ Bieszczad
Peter Smith ✓ Date 3/29/12

Dean Karen Carey 4/2/12


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ACTIVITY BUDGET FOR 2012-2013

1. Operating Expense Budget

- | | |
|--------------------------------------|---|
| A. Supplies | <u>\$ 500.00</u> |
| B. Vendor Printing | _____ |
| C. InState Travel | _____ |
| D. OutofState Travel | _____ |
| E. Equipment Rental | _____ |
| F. Equipment Purchase | _____ |
| G. Contracts/Independent Contractors | _____ |
| H. Honorarium | _____ |
| I. OPC Chargeback | _____ |
| J. Copier Chargeback | _____ |
| K. Other (Please Specify) | <u>\$ 1000.00 (20 awards)+\$ 240.00 (20 T-shirts)</u> |

TOTAL Expenses \$ 1740.00

2. Revenue

- | | |
|--|-------|
| A. Course Fees | _____ |
| B. Ticket Sales | _____ |
| C. Out of Pocket Student Fees
(exclusive of course fees) | _____ |
| D. Additional Sources of
funding
(Please specify
And indicate source) | _____ |
| E. Requested Allocation
from IRA | _____ |

Total Revenue _____