



<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 2012 deadline is 10/31/12

Applications must first be sent to the appropriate program chair. Chairs will 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: Guest Musicians – Physics of Music

Project Sponsor/Staff (Name/Phone): Jerry Clifford, 437-2798

Activity/Event Date(s): Spring semester 2013

Date Funding Needed By: March 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 |
| <input type="checkbox"/> Space/OPC Requirements | |
| <input type="checkbox"/> Infrastructure/Remodel | |
| <input checked="" type="checkbox"/> Other: guest speakers for class | |

Previously Funded: YES NO Yes, Request # 425 for 2011-2012

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: Applied Physics

Date of Submission: 7/20/2012

Amount Requested: \$1500 & parking fees
 (Should match item 2. E. on page 4)

Estimated Number of Students Participating: 24

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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 - 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.

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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 Physics of Music is a popular course designed to give a useful and fun understanding of music and sound for general education students, applied physics majors and performing arts students, and anyone interested in music and speech. Over the past several years, we have invited professional musicians who understand the art of their instrument to be guest presenters. The students find the professional musicians add greatly to their understanding of the individual instruments. This aspect of the course always rates highest on our end-of-class surveys.

As the students investigate each musical instrument group, the guest musicians show the students how the instrument is constructed and how it can produce a variety of musical sounds. Having knowledgeable musicians share their intimate understanding adds immeasurably to the depth and breadth of the course. The live musical demonstrations integrate well with our active format of lectures, demonstrations, and hands-on activities. Guest musicians present these instruments: violin, electric guitar, acoustic guitar, drums, marimbas, saxophone, flute, clarinet, trumpet, didgeridoo and the human voice.

Enticing professional musicians to make guest presentation usually requires some payment. Most musicians work for several orchestras and teach private lessons. We have to compensate the musicians for their time and expertise. We plan to invite five musicians per semester to each make a one-hour presentation to the class on a specific instruments or group of instruments.

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.

This proposal would support the existing courses PHYS 335/PAMU 335, which is a 3 unit course offered in the Spring semester. The enrollment is limited to 24 students because of lab constraints.

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.**

After each guest presentation, the students will answer a brief questionnaire about the presentation, and specific questions will be included in the bi-weekly quizzes about the instrument, its construction, its playing and/or its unique sound characteristics. The information will be collected into a report at the end of the semester.

The students have been very enthusiastic during the guest presentations and have participated with good questions. Many students talked with the guests after their presentations and appeared motivated by the artists' careers. In general, I couldn't be happier with the contribution the guest musicians have made this year.

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

This year we had five professional musicians at \$200 each for \$1000 per semester, for a total of \$2000. In the Spring 2013 semester, we would like to increase the payment for each musician to \$300. Each musician would make a one-hour presentation to the class. Each would be expected to prepare a lecture/presentation along with their performance. Most of the musicians are from LA and the compensation only entices them to drive from LA because they like interacting with our students. Parking should also be provided.

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

Rock City Music Studio in Camarillo has generously supported the class by opening their studio for a class period. Four members of their staff did presentations and performances on a variety of musical instruments. They also discussed the design of studio acoustics. This year we gave them one of the \$200 honorariums. We expect their support to continue in 2012-2013.

CSUCI faculty musicians have made guest presentations to the class. Ted Lucas discussed and played the violin. Paul Murphy demonstrated acoustic guitars to the class. Their participation has allowed us to reduce the number of paid guest musicians.

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

JERRY CLIFFORD

7/20/2012

Date

IVONA GRZEGORCZYK

7/20/12

Date

KAREN CARLY

7/24/12

Date

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ACTIVITY BUDGET FOR **2012-2013**

1. Operating Expense Budget

A. Supplies	none
B. Vendor Printing	none
C. In-State Travel	included
D. Out-of-State Travel	none
E. Equipment Rental	none
F. Equipment Purchase	none
G. Contracts/Independent Contractors	none
H. Honorarium	\$1500
I. OPC Chargeback	none
J. Copier Chargeback	none
K. Other (Please Specify)	parking fees
 TOTAL Expenses	 \$1500 & parking fees

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)	_____
 Total Revenue	 \$1500
 E. Total Requested from IRA	 \$1500

**Instructional Related Activities
Report Form**

SPONSOR	DEPARTMENT
Jerry Clifford	Physics

ACTIVITY TITLE	DATE (S) OF ACTIVITY
Guest Musicians for Physics of Music class	Fall 2011

E-mail to the Dean's Office
30 days after activity

Activity Relation to Course:

The Physics of Music course is designed to give a useful and fun understanding of music and sound for general education, physics and performing arts students interested in music and speech. The format includes lectures, demonstrations, and hands-on activities. After covering the basic foundations of sounds and music, the students investigate each musical instrument group, including percussion, plucked strings, bowed strings, air pipes, reed instruments, horns and the human voice.

My musical ability consists of playing the radio – and sometimes I get talk radio. To go beyond my playing happy birthday one note at a time, which is not always recognizable, I wanted professional musicians who could demonstrate their instruments with skill. Over the past four years, we have invited professional musicians who understand the art of their instrument to be guest presenters. The students find the professional musicians add greatly to their understanding of the individual instruments. This aspect of the course always rates highest on our end-of-class surveys.

Description of Activity:

As the students investigate each musical instrument group, the guest musicians show the students how the instrument is constructed and how it can produce a variety of musical sounds. Having knowledgeable musicians share their intimate understanding adds immeasurably to the depth and breadth of the course. The live musical demonstrations integrate well with our active format of lectures, demonstrations, and hands-on activities.

Guest musicians for the fall semester were:

Dan Peyton invited the class for an evening session at Rock City Music Studio in Camarillo. Dan and his staff covered the plucked string instruments, including the acoustical and electric guitar and the banjo. Topics discussed during the two hours included:



- Show several string instruments, particularly looking at the construction and materials.
- Demonstrated the different sounds of a classical flamenco guitar with nylon strings vs. a steel-string guitar with brighter sound.
- Show three acoustic guitars that all had different sounds because of the sizes of the resonance boxes.
- Showed electric guitars with the many types and locations of magnetic pickups.
- Explain how you get different

sounds from instruments by playing in different locations and lightly touching the strings causing node points.

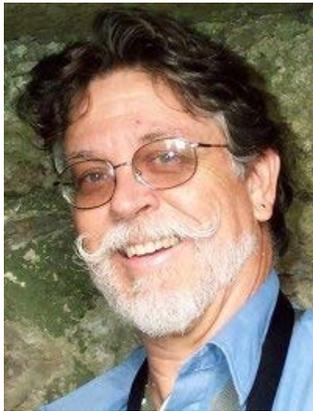
- Showed different techniques of playing for different genre of music.
- Show how plucking with fingers and picks gives different sounds.

Chris Banta brought in a home-made marimba and mesmerized the students with an outstanding performance. Chris showed how each bar is tuned by trimming wood from the lower portion of the bar. Specific harmonics for each bar are tuned separately by trimming in slightly different locations. Chris brought his frequency tuner to show how he zeros in on the note. He also showed how the individual resonating cavities are designed and built to fit underneath each bar. Finally he showed how the different mallets affect the sound. His music was a big hit, especially the bass marimba.



Steve Marsh played four saxophones, two flutes, a piccolo, and two clarinets. As a Los Angeles studio musician, he is expected to be very versatile with reed and edge-tone instruments. He said that he has to produce a myriad of sounds for movies, advertisements or other gigs. He showed the frequency ranges of the instruments and the ways that you can jump octaves. He showed how and why the mouthpiece for a saxophone or clarinet affects the sound. He talked about selecting and testing the reeds to get one or two good ones out of a packet. The students loved when he played the Pink Panther theme.

Chris Tedesco showed the various horns, especially the trumpet. He demonstrated the basics of horns using a piece of garden hose and a funnel. He showed how the three keys on the trumpet changed the length of the instrument – and thus the sound. He showed how differences in air pressure changed the tone from the fundamental frequency to the higher harmonics. He demonstrated over a dozen different mutes and discussed the kinds of music where a specific mute might be appropriate. The students were fascinated by the wide range of sounds produced by the different mutes.



James Browne is a barbershop singer and chorale director with a long history of singing. He engaged the students in a series of exercises to develop their singing voice. The exercises helped students understand the way a singer tunes his/her voice, particularly to achieve the “singer’s formant” which allows them to be heard unamplified about a full orchestra. Jim’s engagement of the students was lots of fun and very instructive.

At the end of the course, the students filled out questionnaires rating the guest musicians. On a scale of 1 (waste of time) to 5 (great presentation/performance), the student results are:

Guest	Avg	SD
Dan Peyton	4.4	0.7
Chris Banta	4.6	0.7
Ted Lucas	4.4	0.5
Steve Marsh	4.7	0.5
Chris Tedesco	4.8	0.6
James Browne	4.5	0.7
Paul Murphy	NR	

(Paul Murphy and Ted Lucas, as a members of the faculty, was not supported by IRA funds.) So the students found the guests to be an important part of the course.

Accounting:

The musicians are paid directly from IRA funds. Each guest musician was paid \$200 for an hour presentation / performance. The total was \$1000 for the five musicians. The Physics of Music course was not offered in the spring semester so only half the 2011-2012 requested funds, \$2000, was spent.

Conclusion:

The guest musicians are a valuable asset for the Physics of Music course and we hope IRA support will continue to bring these talented artist to CSU Channel Islands.