

Instructionally Related Activities Funds Request Fall 2016

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IRA Funds Request for UNIV 198 From Stone to Drone

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Instructionally Related Activities Funds Request Summary

Project Sponsor	Ivona Grzegorzcyk
Activity Title	UNIV 198 From Stone to Drone
Activity/Event Date	Fall 2016
Date Funding Needed By	June 2016
Previously Funded?	No
Semester/Year	—
Proposal #	—
Report submitted for previously Funded Activity?	—
Report submitted for previously Funded Activity	—
Additional Report #1	—
Additional Report #2	—
Additional Report #3	—
Additional Proposers	Chris Onzol, Computer Science
Academic Program(s) / Center Name(s)	Mathematics and Computer Science
Estimated total Course Fee revenue	n/a
Amount Requested from IRA	800
Estimated Number of Students Participating	24
Conditions and Considerations	—
Brief Activity Description	This request is to support research projects in an experimental course UNIV 198 From Stone to Drone. The course will introduce students to the techniques of tools development and basic engineering questions with the historical and archaeological perspectives. From the Stone Age, Bronze and Iron Ages through Medieval and Renaissance to modern times, they will explore, analyze and develop various tools and engineering methodology. Students will work individually and in groups on projects, that include mathematical modeling. There will be six open-ended, research-based projects requiring, critical thinking, data collection and analysis, and optimization of designs for specific historical periods considering available resources and science at the time (examples: making of jewelry, pottery and tools (Chumash artifacts), construction of architectural structures (including Arabic designs), drawing of maps, navigation and communication tools (building cryptographic systems, constructing telegraph, telephone), and modern machines (applying cameras, radio waves, planes, cars, drones as services to society). Employment of scientific methodology and hands-on activities will be emphasized throughout the course. Therefore we need to buy some materials, small electronics and 4 Lego drones to support the projects.
Learning Outcomes and Relation to IRA to Course Offerings	Students will learn: <ul style="list-style-type: none"> - how to integrates archaeology, history, mathematics and engineering perspectives and to collaborate on interdisciplinary projects. - how to find, critically evaluate, and effectively use information and apply that to achieve historical accuracy and optimal solutions. - how to work individually and in groups and to conduct research investigations on technical problems and understand the need for building on historical progress. - to understand and explain societal need for engineering, science or mathematics. - to keep ePortfolios , to write summaries of their findings, employed models and contextualized results. - to present results in written and oral form, and explain the workings of specific tools and machinery - to identify unresolved issues for future study.
Description of Assessment Process	Students would be assessed on the basis of their hands-on projects, on their ePortfolios materials (written and designed). They will write reports and give presentations. There will be quizzes on underlying mathematical modeling, historical accuracy and engineering methodology. All students will present their posters at the SAGE conference in May.
Activity Budget	Stone_Drone_2016ira_budget.xlsx
CIA Budget	—
CIA Proposal	—
Course Syllabus	—
CIA Certification	—
Other Sources of	This is a new course, no other sources for classroom support at this time.

Funding	
Target Audience/Student Marketing	We focus on in-coming freshmen, especially on the undecided students. All students interested in sciences and engineering will be invited to participate. The goal is to attract students to sciences and engineering majors (including mechatronics).
Bring Benefit to Campus	n/a
Sustainability	Student projects will focus on optimization issues, including sustainability. Broader understanding of science principles will benefit students comprehension of current and future, local and global sustainability issues.
Program Chair/Director	michael.soltys
Dean	karen.carey
Acknowledgement	I acknowledge that I have reviewed and accepted the Conditions and Considerations herein. Please check off boxes as appropriate.

Program Chair/Director Review

Recommendation	I recommend approval of the IRA Funds Request described on this page
Name	Michael Soltys
Date/Time	2/29/2016 2:41:47 PM
Validation	myCI-signin-LK-0941
Comments	Very interesting project, and I hope that it will be funded.

Dean Review

Recommendation	I do NOT recommend approval of the IRA Funds Request described on this page
Name	Karen Carey
Date/Time	2/29/2016 2:46:06 PM
Validation	myCI-signin-FK-7056
Comments	—

IRA Committee Decision

Decision	—
Comments	—

Current Tasks

Task	Time Assigned	Assigned To
IRA Committee Decision	2/29/2016 2:46:06 PM	David Daniels

Completed Tasks

Task	Time Assigned	Time Completed	Completed By
Review from karen.carey, Dean	2/29/2016 2:41:47 PM	2/29/2016 2:46:06 PM	Karen Carey
Review from michael.soltys, Program Chair/Director	2/26/2016 12:01:37 PM	2/29/2016 2:41:47 PM	Michael Soltys
Fill out Request	2/25/2016 6:10:03 PM	2/26/2016 12:01:37 PM	Ivona Grzegorzczuk

Actions

- [IRA Committee Decision](#)
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