



Instructionally Related Activities Funds Request Spring 2015

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IRA Funds Request for Tools for Biol/Art 389 - Scientific Illustration

Instructionally Related Activities Funds Request Summary

Project Sponsor	Erich Fleming
Activity Title	Tools for Biol/Art 389 - Scientific Illustration
Activity/Event Date	Starting 1/20/2015
Date Funding Needed By	12/10/2014
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	—
Academic Program(s) / Center Name(s)	Biology and Art
Estimated total Course Fee revenue	0
Amount Requested from IRA	2950
Estimated Number of Students Participating	24
Conditions and Considerations	IT Requirements
Brief Activity Description	We are asking for funds to purchase equipment that will support and greatly improve course related activities for Biol/Art 389 – The Science of Art and the Art of Science. Biol/Art 389 is an interdisciplinary course that explores various aspects of scientific drawing. It develops artistic, observational and conceptual skills in students through the study and then illustration of biological organisms and scientific concepts. One field of emphasis is that of taxonomy or classification of organisms based on physical characteristics. Nearly all of the physical samples students can study in this class must be small in size (e.g. insects, fruit, flowers, nuts). Larger organisms can only be studied based on photographs collected from books or the internet. While useful, photographs are a poor substitute for studying live or preserved specimens. We are asking for funds to purchase magnifiers and digital

	<p>microscopes to better observe and study the natural specimens used in this course. Magnifiers are simply magnifying glasses attached to a stand. They magnify images 2-3 times and are useful for studying whole organisms the size of insects, or small plant organs like seeds, flowers, or thorns. Digital microscopes have a magnification range of 20-200 times that of the human eye. These scopes will allow students to observe and study minute characteristics such as the shapes of spider mandibles, the ornate structures of pollen grains, or the distribution of pigment cells in flower petals. Many of these tiny characteristics are important in making correct taxonomic classifications but undetectable without this technology. In addition, the digital microscopes can be easily hooked up to university or student computers allowing the students to capture and save useful images for later study and for drawing outside of class. These simple tools will dramatically increase the scope and effectiveness of this course and introduce students to an entire new realm within the natural world.</p>
Learning Outcomes and Relation to IRA to Course Offerings	<p>Biol/Art 389 – The Science of Art and the Art of Science</p> <p>The magnifiers and microscopes will be used to study small organisms (i.e. insects, zooplankton) and fine details of small and larger organisms (i.e. plants). Taxonomy is an important focus in this course. Students study many physical characters of organism and accurately recreate them in their artwork. The magnifiers will be used to observe and study whole insects and larger characteristics of plants. The microscopes will be used to study fine details off all live and preserved samples used in the course. The equipment will be used throughout the course but used extensively during the first 7-8 weeks of the semester. It will also be an integral part of the course, used repeated in every future course offering. We would like to have the microscopes and magnifiers for the course in Spring of 2015.</p> <p>Other courses that could benefit from this equipment could be Biol 311 - Plant Biology, Biol 312 - Marine Biology, Biol 319 - Plant Systematics and Identification, Biol 451 - Ornithology, and Biol 452 - Entimology</p>
Description of Assessment Process	<p>The microscopes and magnifiers will be used in multiple activities and projects. Students will use the magnifiers and microscopes to study various natural samples, identify defining characteristics of the samples and then generate artwork to illustrate the physical nature of a feature or traits, the underlying mechanism or structure of a trait or differences between traits in separate organisms. Students will also need to write up a short summary describing important characteristics or phenomena as well as their process in depicting said characteristics or phenomena in their artwork. Both artwork and written description will be critiqued and graded by the instructors. Constructive feedback will then be provided to each student.</p>
Activity Budget	1314iraregularbudgetFleming.xlsx
CIA Budget	—
CIA Proposal	—
Course Syllabus	—
CIA Certification	—
Other Sources of Funding	There are currently no other sources of funding.
Target Audience/Student Marketing	The intended audience is the Biol/Art 389 students. The use of the microscopes and magnifiers would be integral part of this course every time it is taught.
Bring Benefit to Campus	—
Sustainability	—
Program Chair/Director	amy.denton
Academic Affairs AVP	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 Approval

Approval	I approve the IRA Funds Request described on this page
Name	Amy Denton
Date/Time	10/1/2014 2:02:17 PM
Validation	myCI-signin-CM-7919

Academic Affairs AVP Approval

Approval	I approve the IRA Funds Request described on this page
Name	Karen Carey
Date/Time	10/1/2014 2:05:53 PM
Validation	myCI-signin-GF-5776

