

NEW COURSE PROPOSAL

Courses must be submitted by October 15, 2012, and finalized by the end of that fall semester for the next catalog production.

Use YELLOWED areas to enter data.

DATE (*Change if modified and redate file with current date*)

10/15/12

PROGRAM AREA(S)

ART & BIOLOGY

1. Course Information. *[Follow accepted catalog format.]*

Prefix(es) (Add additional prefixes if cross-listed) and **Course No.** ART 389, BIOL 389

Title: THE SCIENCE OF ART AND THE ART OF SCIENCE **Units:** 3

Prerequisites Art 108 or Biol 200 or consent of instructor

Corequisites

Consent of Instructor Required for Enrollment

Catalog Description (Do not use any symbols): **An interdisciplinary course that explores various aspects of scientific drawing and multimedia. Develops artistic skills that effectively illustrate biological creatures and scientific concepts. Artistic techniques include digital arts, illustration, animation and game design.**

Grading Scheme:

X A-F Grades

Credit/No Credit

Optional (Student Choice)

Repeatability:

Repeatable for a maximum of units

Total Completions Allowed

Multiple Enrollment in Same Semester

Course Level Information:

X Undergraduate

Post-Baccalaureate/Credential

Graduate

Mode of Instruction/Components *(Hours per Unit are defaulted).*

	Units	Hours per Unit	Benchmark Enrollment	Graded Component	CS & HEGIS # (Filled in by the Dean)
Lecture	1	1	24	X	
Seminar					
Laboratory					
Activity	2	2	24	X	
Field Studies					
Indep Study					
Other Blank					

Leave the following hours per week areas blank. The hours per week will be filled out for you.

1 hours lecture per week

4 hours activity per week

Is this course always delivered online? Yes_____ No__X__

2. Course Attributes:

General Education Categories: All courses with GE category notations (including deletions) must be submitted to the GE website: <http://summit.csuci.edu/geapproval>. Upon completion, the GE Committee will forward your documents to the Curriculum Committee for further processing.

A (English Language, Communication, Critical Thinking)

A-1 Oral Communication

A-2 English Writing

A-3 Critical Thinking

B (Mathematics, Sciences & Technology)

B-1 Physical Sciences

B-2 Life Sciences – Biology

B-3 Mathematics – Mathematics and Applications
B-4 Computers and Information Technology

C (Fine Arts, Literature, Languages & Cultures)

C-1 Art
C-2 Literature Courses
C-3a Language
C-3b Multicultural

D (Social Perspectives)

E (Human Psychological and Physiological Perspectives)

UDIGE/INTD Interdisciplinary

Meets University Writing Requirement

Meets University Language Requirement

American Institutions, Title V Section 40404: ☐ Government ☐ US Constitution ☐ US History

Refer to website, Exec Order 405, for more information: <http://senate.csuci.edu/comm/curriculum/resources.htm>

Service Learning Course (Approval from the Center for Community Engagement must be received before you can request this course attribute).

3. Justification and Requirements for the Course. (Make a brief statement to justify the need for the course)

A. Justification: The scientific endeavor is to describe the physical world. The physical world can be understood with observation and experimentation and then described using words and art. The latter, art, is important in understanding and relating to science but is rarely a part of science education. The aim of the course is to introduce science students to art, and art students to science in an interdisciplinary setting, to facilitate a better understanding of scientific concepts while improving student's observational and artistic skills.

“Study the science of art and the art of science.”

-Leonardo da Vinci

B. Degree Requirement: ☐ Requirement for the Major/Minor
☐ Elective for the Major/Minor
☒ Free Elective

Note: Submit Program Modification if this course changes your program.

4. Student Learning Outcomes. List in numerical order.

Upon completion of the course, the student will be able to:

1. Recognize, translate and breakdown key scientific concepts and processes into aesthetic and informative art using artistic media and multimedia applications.
2. Explore the relationships between art and science in an artistic and biological framework.
3. Observe and identify taxonomically important physical traits in plants, animals and microbes and then generate accurate, representative illustrations and animations of the subject matter.
4. Develop artistic skills that effectively illustrate both varied biological creatures and scientific concepts.
5. Combine biological and artist media developed to educate others about science.

5. Course Content in Outline Form. *[Be as brief as possible, but use as much space as necessary]*

I. Learning fundamental and broad reaching scientific concepts in Physics, Biology, and Geology & Chemistry to be developed into art projects

- Weekly videos to be watched outside of the classroom and discussed in class

II. Scientific drawing

- Still life (bird, insect, mammal, microbial)
- Observation and identification of distinctive physical traits in organisms
- Anatomical study and composition
- Realistic and Artistic representation of subject matter

III. Scientific multimedia - Conveying scientific concepts through various art media

- Digital art (computer-generated graphics)

- Computer animation
- Sculpture
- Realism, Representational and Abstract art
- Game design

Does this course content overlap with a course offered in your academic program? **Yes** ☐ **No** ☒

If YES, what course(s) and provide a justification of the overlap. ☐

Does this course content overlap a course offered in another academic area? **Yes** ☐ **No** ☒

If YES, what course(s) and provide a justification of the overlap. ☐

Overlapping courses require Chairs' signatures.

6. Cross-listed Courses (Please note each prefix in item No. 1)

A. List Cross-listed Courses (Signature of Academic Chair(s) of the other academic area(s) is required).

List each cross-listed prefix for the course: ART-BIO

B. Program responsible for staffing: Art & Biology

7. References. [Provide 3 - 5 references]

1. Art + Science Now, *How scientific research and technological innovation are becoming key to 21st-century aesthetics* by Stephen Wilson, Thames & Hudson, 2010
2. Scientific Illustration: A Guide to Biological, Zoological, and Medical Rendering Techniques, Design, Printing, and Display (Design & Graphic Design) by Phyllis Wood, 1994
3. Art and Science, by Eliane Strosberg, Abbeville Press, 2001
4. Leonardo da Vinci on the Human Body: The Anatomical, Physiological and Embryological Drawings of Leonardo da Vinci with Translations, Emendations and a Biographical Introduction by Charles D. O'Malley, J. B. de C. M. Saunders and Leonardo da Vinci, 1952

8. Tenure Track Faculty Qualified to Teach This Course.

Liz King
Erich Fleming

9. Requested Effective Date:

First semester offered: Fall 2013

10. New Resources Requested. **Yes** ☒ **No** ☐

If YES, list the resources needed.

A. Computer Needs (data processing, audio visual, broadcasting, other equipment, etc.)

Access to computers and labs running Adobe Creative Suite software.

B. Library Needs (streaming media, video hosting, databases, exhibit space, etc.)

Coordinate with Art Program to exhibit physical and multimedia artwork created in the course in the Broome Library Art Gallery.

C. Facility/Space/Transportation Needs

Laboratory space for viewing biological samples. Alternatively coordinate with Biology for access to equipment (microscope, dissecting scopes) and preserved biological samples.

D. Lab Fee Requested (please refer to Dean's Office for additional processing) **Yes** ☒ **No** ☐

E. Other



11. Will this new course alter any degree, credential, certificate, or minor in your program? Yes ☐ No ☒

If, YES attach a program update or program modification form for all programs affected.

Priority deadline for New Minors and Programs: **October 1, 2012** of preceding year.

Priority deadline for Course Proposals and Modifications: **October 15, 2012**, of preceding year.

Last day to submit forms to be considered during the current academic year: **April 15th**.

Liz King and Erich Fleming

14 Oct. 2012

Proposer of Course (Type in name. Signatures will be collected after Curriculum approval)

Date


Approval Sheet

Program/Course: ART/BIOL 389 **THE SCIENCE OF ART AND THE ART OF SCIENCE** **Units:** 3

If your course has a General Education Component or involves Center affiliation, the Center will also sign off during the approval process.

Multiple Chair fields are available for cross-listed courses.

The CI program review process includes a report from the respective department/program on its progress toward accessibility requirement compliance. By signing below, I acknowledge the importance of incorporating accessibility in course design.

Program Chair ART		10-15-12
	Signature	Date
Program Chair		
	Signature	Date
Program Chair		
	Signature	Date
General Education Chair		
	Signature	Date
Center for International Affairs Director		
	Signature	Date
Center for Integrative Studies Director		
	Signature	Date
Center for Multicultural Engagement Director		
	Signature	Date
Center for Civic Engagement Director		
	Signature	Date
Curriculum Chair		
	Signature	Date
AVP		
	Signature	Date