

UPPER DIVISION GENERAL EDUCATION NEW COURSE PROPOSAL
FOR AREA CC – HUMANITIES

Please Read Instructions on Next Page of This Form

Course Number VSAR 331

Course Title Art, Science and Technology

- Radio button options for course status: new course, existing course not satisfying requirement, existing course undergoing change, existing course currently satisfying requirement.

- 1. Please attach a syllabus or draft syllabus of the course.
2. How many units is this course? 3 (Upper-Division General Education courses are limited to 3 units.)
3.a. Does this course have (a) prerequisite (s) other than completion of LDGE requirements?

yes no

- b. Does this course fulfill requirements for a major by the academic unit in which the course is offered? Check the YES box even if the course counts as an elective in the major.

yes no

- c. If you answered "yes" to 3.a. or 3.b., then the course is an exception to the definition printed on the next page of this form, and you must explain why the GE committee should make an exception for this course.

This course is a hands-on studio course intended to serve majors and non-majors. It does not require prior arts training. Non-majors from a variety of disciplines benefit from the course's interdisciplinary focus. Liberal Studies has selected this course for their depth of field curriculum pending UD GE certification. In this class future teachers will explore hands-on ways to demonstrate the overlaps and differences between the arts and sciences. Close observation, questioning, curiosity, experimentation, processes of trial and error are common to these disciplines while in other ways they differ greatly. While scientific experiments have to be standardized and replicable art strives to provide experiences that are new, unexpected, and unique. Copying or repeating is in fact traditionally a "crime" in art. What these similarities and differences reflect in philosophical, scientific and cultural terms is part of the investigation in this course.
Examining the history and the philosophical underpinnings of science as compared and contrasted to the arts is also very useful for science students who will gain a breadth of understanding of their field as it fits into the larger human cultural landscape. Students have the opportunity to pursue hands-on projects that pertain to the discipline of their major. This flexibility allows non-majors to develop lines of inquiry and discovery that directly benefit their studies. The course investigates various directions within the new fields of art and science including environmental art. It serves as an elective in the Environmental Studies Major.
Students in Visual Art and Arts and Technology benefit from the course, as it explores the new and burgeoning fields in the intersection of art and science. Art is a mirror of specific cultures and their concerns. Therefore, art cannot ignore science and technology in today's western societies. Many artists have adopted research as their working method while many scientists have been concerned with the visual and cultural representations of their findings. Most importantly, the agenda of research in a society - what

Read Questions 4-8 in the instructions on the next page of this form and submit your answers as attachments. The instructions do not have to be printed or submitted.

Signatures

Signature lines for Judit Hersko (Originator), Judit Hersko (Program Director), and General Education Coordinator, each with a date line.

General Education Committee Chair

Date

4. The course begins by introducing students to the ray theory of light and to the history of art/drawing/ photography as it relates to this theory. Lectures, readings and videos focus on the artistic innovations of the Renaissance based on the new science of vision and perception. With no prior training students learn how to draw using the tools that were developed by artists during this time to “cheat” and represent forms accurately in space on a 2-dimensional surface such as Albeti’s veil – a grid that artists created on a transparent surface so they could draw what they saw accurately.

During this segment of the course a guest professor from the physics department further elaborates on the theory of light and vision. (please see student binder example) – hence this part of the course brings together the history of art and the principles of physics in lectures as well as hands-on projects. As their second hands-on project, students learn to construct a camera obscura from cardboard (with and without lens) – including a room sized camera obscura in a closet space in one of the art classrooms. In this way, they understand and experience how the theory of light applies not only to how we see but also how photographic representation works.

Criteria for Upper Division Area CC Courses:

5. Please specify how this course represents both past and present approaches to at least one of the following: a) spirituality, b) the arts, c) philosophy or intellectual thought.

In discussing the visual/scientific innovations of the Renaissance the course also covers the spiritual/philosophical developments of this era. We analyze Raphael’s School of Athens in one of the first classes – thereby presenting the two very differing world views of Plato and Aristoteles who are the central figures of this painting. Students also learn how the debate between these two giants of the ancient world was carried on throughout history. (see student binder)

Later in the semester we study current intersections of art and science and the ethical implications of work that involves genetic engineering and the manipulation of plants and animals (as for example the work of Edvardo Kac). We also explore human relationship to the natural environment including discussions of environmental art, sustainability and more.

6. Please specify how in this course students address issues involving both the cognitive and affective aspects of human experience either using critical analysis or creative activity.

In this course students create art projects, which is inherently an affective activity. However, they are exposed to rigorous intellectual and philosophical information through readings, guest lectures, field trips and their own research. The essence of the course is to learn to translate these intellectual explorations into affective artistic responses. This is a tall order but students rise to the challenge.

7. Please provide specific examples of the way in which this course examines at least one of the following: aesthetic, metaphysical, or ethical manifestations of the human intellect in at least one of the following contexts: a) diverse historical contexts; b) diverse cultural contexts.

As discussed above this course explores aesthetic, metaphysical and ethical manifestations as they intersect in art and science from the Renaissance to the present, for example by discussing how the scientific and humanist worldview develops in that era. Raphael’s “School of Athens” as discussed in question 5 introduces the debate between a spiritual and an empirical approach to “knowing.”

These ideas are revisited as the course explores the agenda of science and the activity of artists and looks at these with critical inquiry. How does ethics enter the research agenda and how is that agenda determined? Students reflect on the fact that science is not neutral because by determining what to study and what not to study there are decisions made that impact groups of people differently.

There is also much discussion about our relationship to nature and our current environmental crisis. We also discuss and study the field of biomimicry. Many students choose to make artworks that deal with topics related to nature. The class also receives visit from our campus sustainability director who places sustainability in a larger economic/social and environmental context and gives a tour of campus and its sustainability features.

8. a. Please give examples explaining how the work assigned to students (quizzes, tests, essays, projects, etc.) allows you to measure how successful individual students are in meeting the UDGE learning objectives for this course. Please attach an example of the type of assignment you will use to evaluate how successfully students meet the UDGE learning objectives.

I am attaching three different categories of assessment:

1. Binders:

Two times during the semester students turn in their binder that contains all their lecture notes, reading notes, fieldtrip notes as well as a section with their visualization of information and projects. The binders are a great tool to assess how well students are pursuing and processing the reading and research as well as how well they are taking notes in class. I look at the binders early on to make sure that they are making progress and at midterm they receive thorough written assessment to help guide growth for the rest of the semester. Attached is an example of a binder containing preceded by guidelines and grading sheet:

Pages:

1 – guidelines

2 – grading sheet

Student work:

3-20 lecture and reading notes

21 – project 1 review questionnaire for presenters and viewers followed by reflections, notes

32-36 visualization of information covered in class

38-50 project 2 including reflections

51-66 research documentation – biomimicry

2. Research and Presentation

Based on their reading in the textbook “Information Arts,” that covers the multitude of fields where artists and scientists collaborate, students select a field of interest which they pursue in a research project that they present to the class. Based on their selected interest students are paired and work on the research and presentation with a partner. Attached is a document showing the assignment, the rubrics, the PowerPoint by two students and their accompanying notes.

3. Projects

Students complete three art projects. While the first ones are related to the ray of light (drawings and camera obscura) the second and third projects evolve from their research interest and can build on each other for depth. The example included has the project description and criteria for project 2 and 3 and one student example for a rain catching bench/shelter for the sustainability garden on campus.

(I was unable to remove student names from some of the assignments but since I am not submitting graded assignments hopefully this is not an issue)