

The University of Arizona
ASTR 333: Astronomy and the Arts
Dr. Richard L. Poss
Fall 2014

Description:

This course examines the intersection of astronomy and the arts by studying astronomical ideas as they occur in works of art, literature, and music. Students will be exposed to a diverse assortment of cultural works from different periods, all portraying and responding to astronomical ideas. From frescoes in ancient Rome to contemporary space painting, we will examine the artifacts for what they reveal about both the poetic and the scientific worlds. In this process students will become acquainted with the details of the astronomical content which is the context for the work. Classroom sessions will be a combination of lecture and discussion. Participants study the materials first, and then we will discuss them in class. There will be reading quizzes, mid-term exams, a final exam, small writing assignments, and a research project.

Texts:

Friedrich Dürrenmatt, *The Physicists* (Grove Press) 1991.

Bertolt Brecht, *Galileo* (Grove Press) 1966.

Voltaire, *Micromegas and other Philosophical Tales*,

Thomas Hardy, *Two on a Tower: A Romance* (Penguin) 1999.

Heinar Kipphardt, *In the Matter of J. Robert Oppenheimer* (Hill & Wang) 1997.

Course Outline: *(This class meets MWF from 2:00 to 2:50pm in Steward 204.)*

Mon. Aug. 25	Introduction and Overview: What can we expect from this class?
Wed. Aug. 27	Some definitions: Scientific Method, Art & Artifact, Aesthetics.
Fri. Aug. 29	<i>The Physicists</i> (D. 9-56) Characters and Disguises.
Mon. Sept. 1	<i>Labor Day – No Classes.</i>
Wed. Sept. 3	<i>The Physicists</i> (D. 57-96) The role of absurdity.
Fri. Sept. 5	Ethical position of the 20 th century scientist.
Mon. Sept. 8	Art and Archaeoastronomy. Making art from ancient artifacts.
Wed. Sept. 10	The Greek Philosophical Background. The <i>Antikythera</i> .
Fri. Sept. 12	Medieval Models, Medieval Arts
Mon. Sept. 15	Renaissance and Revolution: Ptolemy and Copernicus.
Wed. Sept. 17	Galileo at the Crossroads: The Telescope and the Trial.
Fri. Sept. 19	History vs. Brecht's <i>Galileo</i> (Brecht 47-129)
Mon. Sept. 22	Uses and Abuses of Galileo (Brecht 9-42, 133-155)
Wed. Sept. 24	Periods and Styles: Medieval, Renaissance, Baroque.
Fri. Sept. 26	Neoclassical art and the Newtonian Revolution.

Mon.	Sept. 29	Exam #1
Wed.	Oct. 1	Astronomy in the Art of the Old Masters: Leonardo, Elsheimer
Fri.	Oct. 3	Cigoli, Van Eyck, Van Aachen
Mon.	Oct. 6	Pietro da Cortona, Vermeer.
Wed.	Oct. 8	Donato Creti
Fri.	Oct. 10	Astronomy in lyric poetry: Alexander Pope, William Blake
Mon.	Oct. 13	John Keats, Walt Whitman.
Wed.	Oct. 15	Modern Astronomy and its philosophical ramifications.
Fri.	Oct. 17	Plurality of Worlds: Wilkins, Huygens, Fontenelle.
Mon.	Oct. 20	Voltaire and the Philosophical Tale.
Wed.	Oct. 22	Voltaire, <i>Micromegas</i> .
Fri.	Oct. 24	Hardy's poetry, William Dyce. Role of Darwin, Freud.
Mon.	Oct. 27	Thomas Hardy and the Romance of the Stellar Universe (Hardy 2-127).
Wed.	Oct. 29	Dynamics of the 19 th century novel (H. 128-262).
Fri.	Oct. 31	<i>Two on a Tower</i> in the context of Hardy's other novels.
Mon.	Nov. 3	Ethics, the Bomb, Opera: John Adams, <i>Doctor Atomic</i> .
Wed.	Nov. 5	Physics and Theater: Heisenberg and Oppenheimer (Kipphardt 5-68).
Fri.	Nov. 7	Hydrogen Bomb and Cold War. Galileo and Oppenheimer (K.69-126).
Mon.	Nov. 10	Exam #2
Wed.	Nov. 12	Space Art: Bonestell, Rudaux, Pesek
Fri.	Nov. 14	The canon of space art: Rawlings, Hartmann, Hardy, Poor, Cook.
Mon.	Nov. 17	Modernism: Eliot, de Chirico, Ernst, Kahlo
Wed.	Nov. 19	Rene Magritte, Joseph Cornell
Fri.	Nov. 21	Contemporary and Conceptual Art: Salgado, Kronos Quartet
Mon.	Nov. 24	Classical Music: Herschel, Holst, Glass
Wed.	Nov. 26	Astronomy in Film and Television
	Nov. 27 – 30, 2014,	<i>Thanksgiving Break – No Classes</i>
Mon.	Dec. 1	Astronomy and social media, YouTube Videos.
Wed.	Dec. 3	NASA Art Program, Hubble Images.
Fri.	Dec. 5	Student Presentations
Mon.	Dec. 8	Student Presentations
Wed.	Dec. 10	Review and Evaluation, Papers Due.
Thur.	Dec. 11	Reading Day

Final Exam Friday, Dec. 12, 1-3pm, Steward 204.

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Class Meets: MWF at 2:00 – 2:50pm, Steward 204.
Instructor: Dr. Richard Poss
Office: Steward Observatory 212
Email: rposs@email.arizona.edu
Telephone: 621-8630
Office Hours: 3:00 - 3:50 Monday/Wednesday, 2:00 - 2:50 Tuesday, and by appointment.

CLASS POLICIES:

CLASS PARTICIPATION: It is important to keep up with the day-to-day reading assignments, reading the selections **before** coming to class. Always bring your text to class with you. Expect occasional short quizzes or writing exercises over the day's reading assignment. Try to marshal your thoughts (favorable or unfavorable) about the material before coming to class. Then argue your point of view when class begins. **You are encouraged to get to know each other during the semester, and to study together if possible.**

ATTENDANCE: Regular attendance is **essential**. Your attendance and your participation in class discussion are important, and are taken into consideration in preparing your final grade. In addition, the exams and paper topics are all geared to class discussion. If you are not present and alert, it will not be possible to do well in this course.

GRADING: Your grade is based on the two exams, the term paper, the final exam, participation in class, and reading quizzes and writing exercises. The term paper is a research paper for which you will turn in a rough draft which will be returned to you. You will be expected to make a brief presentation to the class on the results of your research paper.

Exam #1	20 %
Exam #2	20 %
Term Project	30 %
Final Exam	20 %
Class Participation (including quizzes and writing exercises)	<u>10 %</u> 100 %

INTEGRITY: Absolute academic integrity is expected of every student in all academic activities. All students are expected to be aware of and follow the *University of Arizona Code of Academic Integrity*. The *Code* prohibits all forms of academic dishonesty, including cheating, plagiarism, and fabrication. The repercussions for all of those found guilty of violating the *Code* will include loss of credit for the work (grade=0) and may include failure of the course or more extreme measures.

CONDUCT: *No laptops are allowed during class.* No Ipads, tablets, texting or cell phones are allowed during class. Cell phones must be turned off when class begins. Do not eat, drink, or read newspapers in class. When another student is speaking to the class, please give them your attention. You are expected to treat your fellow students with dignity and respect.

STUDENTS WITH DISABILITIES:

If you anticipate barriers related to the format or requirements of this course, please meet with me so that we can discuss ways to ensure your full participation in the course. If you determine that disability-related accommodations are necessary, please register with Disability Resources (621-3268; drc.arizona.edu) and notify me of your eligibility for reasonable accommodations. We can then plan how best to coordinate your accommodations.

MISSED TESTS: The exams are already scheduled and posted on the class schedule. If you know that you will miss a test (before the test), you must make arrangements (for valid reasons) for an exam at a time and date *prior to* the written test. Missing one of the midsemester exams is an automatic loss of 20% of your grade. Missing the final is a loss of 20%.

EXCUSED ABSENCES: All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.

THREATENING BEHAVIOR: The University prohibits threatening behavior, which it defines as "Any statement, communication, conduct or gesture, including those in written form, directed toward any member of the University community that causes a reasonable apprehension of physical harm to a person or property." If you would like more information, it can be found here: <http://policy.web.arizona.edu/threatening-behavior-students>

GRADES: You have one week from the time an exam is returned to challenge any perceived errors. Although rare, there are occasions when grading errors occur, and you should review your returned work.