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GOVT 119d  
**Shaping the Modern World:  
Science vs. Religion?**  
Mon./Wed., 12:00–1:15, Amador 260  
Spring 2006

### Course Description

This course is about the relationship between science and religion. Do science and religion offer different answers to the same questions, or do they address different questions? Do they complement or threaten each other? What can each learn from the other, and what can we learn from their interaction over the past four centuries? The first part of this course explores different interpretations of the famous conflict between Galileo and the Catholic Church; the next part takes up Darwin's theory of evolution and the various responses to it by nineteenth-century social theorists; the last part considers efforts to require that public schools supplement or replace the teaching of evolution with religious accounts of creation. Course materials will include an overview text on the relationship between science and religion, selections from the writings of Galileo and Darwin, two plays, several films, accounts of the Scopes "Monkey Trial" of 1925, and documents from recent legal battles over teaching intelligent design in public schools.

### Course Texts

The following required books are available at the campus bookstore:

- Ian G. Barbour, *When Science Meets Religion* (HarperSanFrancisco, 2000).
- Bertolt Brecht, *Galileo* (Grove/Atlantic, reissue ed., 1991).
- Wade Rowland, *Galileo's Mistake: A New Look At the Epic Confrontation Between Galileo and the Church* (Arcade Publishing, 2004).
- Philip Appleman, ed., *Darwin*, 3rd edition (W. W. Norton & Co., 2000).
- Jerome Lawrence and Robert E. Lee, *Inherit the Wind* (Ballantine Books, reprint ed., 2003).

### Course Requirements

This class will be conducted as a seminar, with most of each class devoted to group discussion. It is thus essential that you attend every class on time, and that you come to class having already completed (and thought carefully about) *all* the assigned reading. We will make use of the university's WebCT system for distributing class materials and communicating between classes, so all students should familiarize themselves with WebCT. Grades will be based on the following assignments:

Three argumentative essays with rough drafts (5% per rough draft, 15% per final essay = 60%).  
Essays should be approx. 5 pages. A rough draft of each essay of at least 4 pages is also required.

Due dates are indicated in the syllabus. Drafts will be collected and randomly distributed back to the class on the same day for in-class peer review—that is, students will read and comment on each other's papers, following a set of guidelines provided in advance. Drafts will be graded pass/fail. *If you do not complete a rough draft, you cannot participate in the peer review.* I will distribute essay topics and grading criteria in class. I strongly encourage you to meet with me during office hours to discuss your rough draft and/or your final essay. Late final essays will be penalized by 5% for each day they are late. To improve your grade, you may rewrite any of your final essays, provided that you meet with me to discuss the essay. The final grade will be the average of the original and the rewrite.

Ten Study Question Quizzes (20%). We can only have productive discussions if everyone has done the reading, and students have often told me that nothing gets them to read like the prospect of a quiz. Hence, on ten randomly selected days during the semester, students will be asked to answer the study questions on the reading assigned for that day. Study questions for each day's reading assignment will be available on the course website at least one week in advance. Students who are absent (for whatever reason) will receive zero points for that quiz, but in calculating your grades I will drop your lowest quiz score.

Attendance and Participation (10%). Given the seminar format of this class, each student's learning experience depends on the participation of the other students. In addition to the rough drafts submitted in class, there will be occasional worksheets and group projects that will contribute to your grade. I will also take attendance on randomly selected days throughout the semester. You may miss two classes without penalty. Any additional absences require a serious and appropriately documented excuse.

In-class final exam (10%). The exam will give you a choice of several essay questions covering the key aspects of the course. Prior to the exam, I will solicit suggestions for questions from the class, and we will review possible questions in class. I may veto questions and add my own questions to fulfill the purposes of the course, but you will receive all the potential questions prior to the exam.

Grades: Final grades will be calculated according to the traditional scale: A > 93%...A- > 90%...B+ > 88%...B > 83%...B- > 80%...etc.

### **Please Note**

If you have a disability and require accommodations, please discuss your needs with me after class or during my office hours early in the semester. You will need to provide disability documentation to the CSUS Office of Services to Students with Disabilities (SSWD), Lassen Hall 1008, (916) 278-6955.

Finally, it should go without saying that all the work you submit for this class must be your own. If you are not sure what constitutes plagiarism, please ask me or consult the library plagiarism information website at <http://library.csus.edu/content2.asp?pageID=353>. Plagiarism will be punished in proportion to the severity of the case, but any plagiarism is likely to result in a failing grade for the course and may lead to additional administrative penalties, including expulsion from the University.

## Preliminary Outline of Topics and Assignments

Assignments marked with an asterisk (\*) will either be distributed in class or made available through the library's electronic reserve service. Assignments marked with a hyperlink are available online. Minor changes to this schedule are likely and will be announced in class.

### INTRODUCTION

- Jan. 23 Introductory lecture.  
Jan. 25 Barbour, *When Science Meets Religion*, Intro. and Chap. 1, pp. 1-38.

### THE GALILEO CASE

- Jan. 30 Brecht, *Galileo*, Scene 1-11.  
Feb. 1 Brecht, *Galileo*, Scene 12-14
- Feb. 5 FILM: "Galileo: Battle for the Heavens"  
Feb. 7 Rowland, *Galileo's Mistake*, chaps. 1-8.
- Feb. 13 Rowland, *Galileo's Mistake*, chaps. 9-10.  
Feb. 15 \*Galileo's Letter to the Grand Duchess Christina (1615)
- Feb. 20 Rowland, *Galileo's Mistake*, chaps. 12-18.  
Feb. 22 Rowland, *Galileo's Mistake*, chaps. 19-20.  
FIRST ESSAY ROUGH DRAFT DUE AND IN-CLASS PEER REVIEW
- Feb. 27 \*Galileo's Fourth Deposition, Sentence, Abjuration (1633)  
Mar. 1 Rowland, *Galileo's Mistake*, chaps. 22-26.  
[Pope John Paul II, "Faith Can Never Conflict with Reason," October 31, 1992.](#)  
FIRST ESSAY DUE

### EVOLUTION VS. CREATIONISM

- Mar. 6 Barbour, *When Science Meets Religion*, chap. 4.  
Mar. 8 Barbour, *When Science Meets Religion*, chap. 5.

### *Spring Break*

### Darwin and Evolution

- Mar. 19 Darwin, *The Origin of Species*, Intro., chaps. 2-5 (part), 14, in *Darwin*, ed. Appleman, pp. 95-98, 106-124, 158-174.  
Mar. 21 National Academy of Sciences, "Evolution and the Nature of Science" (1999), in *Darwin*, pp. 289-300.

### Evolution and Social Theory

- Mar. 27 Essays by Hofstadter, Carnegie, Kropotkin, Nowak et al., Wilson, and Gould, in *Darwin*, pp. 389-419.

Mar. 29 Dewey, "The Influence of Darwin on Philosophy," in *Darwin*, pp. 483-489.  
SECOND ESSAY ROUGH DRAFT DUE AND IN-CLASS PEER REVIEW

### **Evolution and Religion**

Apr. 3 Mainstream Religious Support for Evolution, essays in *Darwin*, pp. 527-541.

Apr. 5 Fundamentalist Creationism and the Scopes Trial, essays in *Darwin*, pp. 534-576.  
SECOND ESSAY DUE

Apr. 10 Lawrence and Lee, *Inherit the Wind*, Act 1-2.

Apr. 12 Lawrence and Lee, *Inherit the Wind*, Act 3.

Apr. 17 Dorothy Nelkin, "From Dayton to Little Rock: Creationism Evolves,"  
*Science, Technology, & Human Values* 7:40 (1982): 47-53.

Apr. 19 Christopher P. Toumey, "Modern Creationism and Scientific Authority,"  
*Social Studies of Science* 21 (1991): 681-99.

### **SCIENCE AND RELIGION IN PUBLIC EDUCATION**

Apr. 24 Jeffrey Burkhardt, "Scientific Values and Moral Education in the Teaching of  
Science" *Perspectives on Science* 7.1 (1999) 87-110

Apr. 26 Mike U. Smith and Lawrence C. Scharmann, "Defining versus describing the  
nature of science: A pragmatic analysis for classroom teachers and science  
educators," *Science Education* 83:4 (1999): 493-509  
NAS, "Frequently Asked Questions about Evolution and the Nature of  
Science," in *Darwin*, pp. 617-623.

May 1 *Kitzmiller et al. v. Dover Area School District*, excerpts on course website.

Robert T. Pennock, Dover Expert Report, excerpts on course website.

May 3 THIRD ESSAY ROUGH DRAFT DUE AND IN-CLASS PEER REVIEW

May 8 Steve Fuller, Rebuttal of Dover Expert Reports, excerpts on course website.

May 10 Review discussion.

THIRD ESSAY DUE

May 19 FINAL EXAM: 10:15 a.m. – 12:15 p.m.