

Department: HIST

Course No.: 207W

Credits: 3

Title: Science and Social Issues in the Modern World

Contact: Nancy Shoemaker

Content Area: CA4 Diversity and Multiculturalism

Diversity: CA4 Non-International

WQ: W

Catalog Copy: 207W. Science and Social Issues in the Modern World. Second semester. Three credits.
Roe

Social context of science in the United States and Europe since 1850. Genetics and eugenics; ecology and the environment; nuclear issues; gender, race, and science.

Course Information:

a. This course treats the relationship between social questions and science from the mid-nineteenth century to the present. It is organized around three topics (genetics and eugenics, race and science, post-World War II nuclear weaponry and experimentation) and looks at both historical and present-day examples. The goal is to understand how social issues have impacted science in the past and how contemporary social questions relate to science of the past and present.

b. This course is based primarily on class discussion, with background lectures for each unit. All reading should be completed before class, and participation in class discussion is expected of everyone.

Every student must do one assigned research project, presented first in a short oral report and then in a 7-10-page paper. Topics and dates are picked in class. The first draft of each paper is due within two weeks of oral reports. Each student must then revise his/her paper (after consultation with the instructor). This revised version is due within two weeks of when papers are handed back.

For each of the four films shown in class students are asked to write a 3-page paper. The topic will be assigned in class. They may either count the three highest grades or write reports on three of the four films. All papers must be revised in response to written comments.

There is a midterm exam covering units 1 and 2, and a final exam covering units 3 and 4. Both exams consist of questions drawn from the reading and pertaining to class discussions. The final exam is not cumulative.

Course grade breakdown: Class participation 20%, oral report 10%, written paper (draft and revision) 20%, film papers (3 best) 10%, midterm exam 20%, final exam 20%. Students cannot pass this class without receiving passing grades on the assigned papers.

c. Major themes and topics:

Unit 1 (Genetics and Eugenics). Understanding the rise of genetics in the late 19th and early 20th centuries and its relation to social questions, resulting in eugenic programs and laws (sterilization, immigration). How this historical context helps us to grapple with current-day genetics and the future possibilities of genetic engineering. Film possibilities: *The Web of Life*, *Gattica* .

Unit 2 (Race and Science). How the concept of race acquired a scientific basis in the nineteenth century and how current racial policies retain a scientific aura even after the connection has been disproved. Discussion of examples such as the control

of slave reproduction prior to emancipation, the Tuskegee medical experiment, racially based sterilization in Puerto Rico and in the south, past and current beliefs concerning race and I.Q. Film possibilities: *The Deadly Deception* , *L, Operacion* .

Unit 3 (Nuclear Questions). The development of the fission bomb and debates over its use during and after WWII (including development of the hydrogen bomb). Government control of information on nuclear weaponry through civil defense programs in the

1950s and 1960s. Experiments on soldiers and civilians concerning the effects of atomic blasts, exposure to reactor emissions, and injections of plutonium and other radioactive substances. Film possibilities: *The Atomic Cafe* , *Three-Mile Island* .

Meets Goals of Gen Ed.:

1. Becoming articulate: class discussion, oral reports, written papers.
2. Acquiring intellectual breadth and versatility: understanding the social context of science.
3. Acquiring critical judgment: class discussion of readings and of oral reports.
4. Acquiring moral sensitivity: through discussion of historical examples of the misuse of science in relation to groups of human beings.
5. Acquiring awareness of their era and society: understanding the broader social and ethical context of current scientific debates.
6. Acquiring consciousness of the diversity of human culture and experience: understanding past and present genetic and racial discrimination.
7. Continuing to acquire and use knowledge: learning to view current and future scientific issues within a historical and social context of meaning.

CA4 Criteria: History 207W fulfills the criteria for Diversity and Multiculturalism by introducing students to the misuse of a scientific perspective to dominate, control, and dehumanize groups of human beings. In particular, it meets criteria four and five by focusing on the social and political power of science and how it has and can be inappropriately used to violate human rights.

W Criteria:

1. The writing assignments enhance learning the content of the course by requiring students to critically view relevant films and connect them to course readings and to research and write a longer analytical paper on an assigned topic (for example, eugenics and the Nazis, the "gay gene," welfare and Norplant, U.S. testing of chemical weapons). The students write three 3-page papers and one 7-10-page paper for a total of 16-19 pages. The 3-page papers combined count for 10% of the course grade; the longer paper, 20%. The syllabus clearly states that students cannot pass the course without receiving passing grades on the writing assignments.

2. Writing instruction is handled in two ways. In class, students are given general instructions regarding how to structure their papers, and common problems are discussed when handing papers back. For the longer papers, all students meet individually with the instructor to go over their first drafts.

3. Students must revise at least three of the film papers in reaction to the comments written on each paper. The longer papers must be revised within two weeks of their being handed back and after an individual consultation with the instructor.