

History 561
Winter, 2002

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ASSIGNMENT SHEET

Each student is expected to have in hand a xerox packet available at Cop-Ez in Tuttle Park Place (open 24 hours). The packet contains large parts of two articles and large parts of two books, which are out of print and unavailable in any other form: *Science in America*, edited by Burnham; and Burnham, *How Superstition Won and Science Lost*. Students are also expected to have in hand a book available ONLY from University Bookstore on Tuttle Place: *Science in 19th Century America*, edited by Reingold; There may also from time to time be additional short handouts: watch for announcements in class.

There will be one 50-minute examination (100 points) and a final examination (220 points); the final examination will have a 50-minute segment covering the material after the hour examination, and a 60-minute segment, covering the entire course. In addition, 60 points will be assigned on the basis of class discussion of the reading materials (or an occasional written quiz may be substituted). Attendance is expected, and unexcused absences will be penalized by up to 6 points per meeting. Students will be expected to be ready to discuss each assignment on the day it is due or on any succeeding day.

The goal of the course is to introduce students to the ways in which Americans from the earliest times to the era of "big science" understood nature and natural phenomena and developed ideas and institutions around that understanding. Those institutions were a part of American society, and a second level of understanding, then, is how that society at different times helped form the ideas and institutions of science. By the end of the course, the student should be able to understand what it meant to "do science" and how science related to society in all of the eras of American history--and see the continuity that persisted through the changes. Basic themes in the course are found on page vi of *Science in America*.

All students must be officially enrolled in the course by the end of the second full week of the quarter. No requests to add the course will be approved by the Department Chair after that time. Enrolling officially and on time is solely the responsibility of each student. Anyone who feels the need for an accommodation based on the impact of a disability should contact the instructor at once to make any necessary arrangements. We rely on collaboration with the Office for Disability Services, and students who may be affected are urged to contact that office.

Part I. Science to 1900

January 7 Introduction; Royal Society handout
January 9 Science in America, 2-8, Winthrop (#1), Hall (#2), Logan (#3), Franklin (#4)
January 14 Science in America, Williamson (#5), Daggett (#6), Pascalis (#7)
January 16 Science in America, 66-74; Science in 19th Century America, 1-28, 59-92, 127-128,

134-145, 152-161

January 21 No class; University closed

January 23 Science in America, Walker (#9), DeKay (#8); Science in 19th Century America, 29-58

January 28 Science in America, Caldwell (#10), Savage and Wyman (#11); How Superstition Won, 3-44, 127-156

January 30 Science in America, Gray (#12), Agassiz (#13), Holmes (#15), Remsen (#17); Science in 19th Century America, 162-199, 236-250

February 4 Science in America, Trowbridge (#14), Clarke (#18), Newcomb (#16); Science in 19th Century America, 200-225, 251-314. Examination materials to be distributed.

February 6 Science in America, Powell (#19); Science in 19th Century America, 323-328; How Superstition Won, 156-169

February 11 **HOOR EXAMINATION**

Part II. Science Since 1900

February 13 Science in America, 252-259, Webster (#20), Loeb #21, Thorndike (#22); How Superstition Won, 170-175

February 18 Science in America, Millikan (#23), Rice (#24)

February 20 Science in America, Buckham (#25), Bridgman (#26), Struve (#28)

February 25 Science in America, 360-368, Lyons (#29), Goldsmith and Rabinowitz (#30), Jewett (#32); How Superstition Won, 175-179; selection of pp. 72-84 (1st ed.) or pp.120-137 (2nd ed.) from Penick, et al., The Politics of American Science, on reserve at Main Library

February 27 Science in America, Juergens (#33), Cox (#35), Sonneborn (#34), du Vigneaud (#31)

March 4 Science in America, Hornig (#37), Weinberg (#36), Townes (#38), Iltis, et al. (#39)

March 6 How Superstition Won, 179-262

March 11 Lederman, "Science: The End of the Frontier?" (pages 4-5, 8-18) (1991); May, "The Scientific Wealth of Nations" (1997)

Examination materials to be distributed.

March 13 Review for final examination. Class will not meet. Instructor will be available in his office on Friday.

March 20 (Wednesday), 9:30 a.m. **FINAL EXAMINATION** (All students except graduating seniors **MUST** take the examination at this time.)

In addition, graduate students will have a short research paper, devised in consultation with the instructor.

For one list of additional readings, there is an annotated bibliography, Marc Rothenberg, *The History of Science and Technology in the United States*.