History 302
Science and American Culture
Spring, 2017

Jon H. Roberts
Office: 226 Bay State Rd, Room 406
617-353-2557 (O); 781-209-0982 (H)
roberts1@bu.edu

Office hours: Monday: 3:00-5:00,
Tuesday: 9:00-10:00, and by appointment

This course presents the history of the interaction between American science and its cultural setting. The lectures, readings, and discussions will deal with a variety of issues, including the nature of science in British North America, when the colonies were largely dependent on Europe for their structural and their conceptual guidelines; the creation of new scientific institutions and the emergence of a professional scientific community in the United States; the changing cultural authority of science; the impact of major scientific theories on American cultural life; the emergence and development of the human sciences; and the development of significant links between science and technology.

Assigned Work:

The written work in the course consists of a MIDTERM EXAMINATION, tentatively scheduled for March 17, a RESEARCH PAPER (see below), and a FINAL EXAMINATION, tentatively scheduled on May 12 from 12:30 to 2:30. One half of the final examination will deal with material presented after the midterm examination, and the other half will be “comprehensive” (that is, it will require students to draw on material that was addressed throughout the entire course).

Grading:

The following formula will be used to compute the course grade:

Midterm Examination 20%
Research Paper 40%
Final Examination 40%

Students must complete all assigned work in order to pass the course.
Attendance:

Students are expected to attend class regularly and are responsible for all material covered in class. Attendance on days when class discussions are scheduled is especially important.

Required Reading:

Sinclair Lewis, Arrowsmith [ISBN 9780451530868]

Other readings, hereafter abbreviated as BL, will be posted on the course website: http://learn.bu.edu.

Students should obtain the editions of the books that have been listed above. This will facilitate discussions by ensuring that everyone will be referencing the same page numbers.

Research Paper:

Students are required to write a paper dealing with an important individual, episode, or controversy in the history of the interaction of science and American culture. This paper must draw on a substantial body of material (i.e., several books and articles) and will characteristically employ secondary sources to provide background and context for an analysis of primary sources. Students should secure approval of the topic for these papers from the instructor by the end of the fourth week of the term (FEBRUARY 10).

The paper should be 8-10 typed, double-spaced pages in length. Students are required to SUBMIT TWO COPIES of their papers. One copy will be returned to the student. The paper is DUE APRIL 19. All papers must be submitted in hard copy; electronic versions will not be accepted.

Papers are welcome at any point in the semester through the due date, but late papers are not accepted except in cases of serious and unforeseeable misfortune.

IMPORTANT: The penalties for plagiarism and other academic misconduct can be—and properly should be—very severe. Students should consult the University Academic Conduct Code (bu.edu/academics) if they are unsure of official standards.

All ideas, as well as quoted or closely paraphrased material within a paper, must be clearly attributed to the source from which they are taken. Feel free to check with the instructor if you have any questions about this.
**Paper Grading Rubric:**

A research paper in the “A” range:

- Is written in lucid, occasionally even graceful, prose that flows freely.
- Is clearly organized.
- Is thoroughly researched.
- Displays insightful analysis and freshness of thought.
- Contains few, if any, errors of grammar or punctuation.
- Presents a perceptive and persuasive argument.

A research paper in the “B” range:

- Possesses most of the qualities of an “A” paper but is somewhat less ambitious and successful in its overall framing, structure, and/or execution.
- Displays a command of the material but is more modest in aim.

A research paper in the “C” range:

- Displays problems in formulating and sustaining a central argument.
- Is written in prose that is marred by a sizable number of errors of grammar or punctuation.
- Seems rather perfunctory in its description, analysis, and choice of detail.

A research paper in the “D” range:

- Generates prose that has little to do with the ostensible subject of the paper.
- Lacks any discernible organization.
- Is largely unsupported by evidence or argument.
- Is carelessly written, with little attention to grammar, punctuation, or appropriate syntax.

A research paper in the “F” range:

- Dramatically fails to conform to the requirements of the assignment.
- Seems utterly oblivious to the need for argument or evidence.
- Appears to display little effort and little knowledge of course materials.

**Reading Assignments, Discussion Sections, and Written Assignments**

**Week 1**

Reading: I. Bernard Cohen, “The New World as a Source of Science for Europe” (BL)

**Week 2**

Week 3

Reading: Sally Gregory Kohlstedt, "Parlors, Primers, and Public Schooling: Education for Science in Nineteenth-Century America" (BL); Thomas Jefferson, selections from *Notes on the State of Virginia* (BL)

Week 4

Reading: Stephen Jay Gould, "American Polygeny and Craniometry before Darwin" (BL); Peter McCandless, "Mesmerism and Phrenology in Antebellum Charleston: 'Enough of the Marvelous'" (BL)

February 10: DISCUSSION: Readings from Weeks 1-4

Week 5

Reading: Ronald L. Numbers, "William Beaumont and the Ethics of Human Experimentation" (BL); Morgan B. Sherwood, "Genesis, Evolution, and Geology in America Before Darwin: The Dana-Lewis Controversy, 1856-1857" (BL)

Week 6

February 20: UNIVERSITY HOLIDAY

February 21: MONDAY SCHEDULE IN EFFECT

Reading: Scott Appleby, "Exposing Darwin's 'Hidden Agenda': Roman Catholic Responses to Evolution, 1875-1925" (BL); Marc Swetlitz, "American Jewish Responses to Darwin and Evolutionary Theory, 1860-1890" (BL)

Week 7

Reading: Irvin G. Willie, "Social Darwinism and the Businessman" (BL); Henry Adams, "The Tendency of History" (BL)

Week 8

March 15 DISCUSSION: Readings from Weeks 5-7 and Review for Midterm Examination
March 17  MIDTERM EXAMINATION

Week 9

Reading:  Sinclair Lewis, *Arrowsmith*

Week 10

Reading:  John B. Watson, “Psychology as the Behaviorist Views It” (BL); Claudia Roth Pierpont, “The Measure of America” (BL)

Week 11

Reading:  John Carson, “Army Alpha, Army Brass, and the Search for Army Intelligence” (BL)

Week 12

Reading:  P. W. Bridgman, “The New Vision of Science” (BL)

April 14  DISCUSSION:  Readings from Weeks 9-12

Week 13

April 17  UNIVERSITY HOLIDAY

April 19  UNDERGRADUATE RESEARCH PAPERS DUE


Week 14

Reading:  Thomas S. Kuhn, *The Structure of Scientific Revolutions*

Week 15

Reading:  Ronald L. Numbers, “The Creationists” (BL)
May 3 DISCUSSION: Readings from Weeks 13-15 and Review for Final Examination

Conспектus of Lectures

The lecture topics for this course often do not fit neatly into fifty-minute segments. Accordingly, students should understand that the topics listed below may be covered during more than one session:

Science in the New World
Science and Religion in Colonial America
Common Sense Realism and the Baconian/Newtonian Tradition
Doing Science, 1820-1870
Supporting and Diffusing Science
The Problem of Race and the Origin(s) of Humanity
Theories of Mind, 1800-1870
Discovering the Laws and Processes of Nature
Medical Science before “Scientific Medicine”
Evolution Comes to America
Darwinism and Religion in America: Protestantism as a Case Study
The Cultural Authority of Science in America, 1870-1920
Sciences of Society
Science, Determinism, and Human Nature
Science and Technology in Agriculture and Industry
Popular Celebrations of Science
The Making of a Biological Power
American Medical Science, 1870-1920
The American Physical Sciences Come of Age
The Emergence and Development of Scientific Psychology
Genetics and Eugenics
The Salience of Environment and Culture
Some Cultural Implications of Technology
The Psychologizing of America
The Natural Sciences Between the World Wars
Science as Source of Cognitive Ideals and Relativist Realities
Science Fiction as Prophecy and Myth
Freudianism in America
Scientists and the Bomb
Science and Democratic Culture, 1940-1960
Science and the “Sexual Revolution” in Modern America
The Environmental Impulse
Modern Critiques of Evolution: From Scientific Creationism to Intelligent Design
The “Cognitive Revolution” and Humanistic Psychology
Sociobiology and Evolutionary Psychology
“Science Wars”
IMPORTANT: This syllabus and all class lectures are copyrighted by Boston University and/or the instructor. Students who are enrolled in the course are allowed to share with other enrolled students course materials, notes, and other writings based on the course materials and lectures, but they may not do so on a commercial basis or otherwise for payment of any kind. Any sale or commercial use of notes, summaries, outlines, or other reproductions of lectures, constitutes a violation of the copyright laws and is prohibited. Selling or buying class notes, lecture notes, summaries, or similar materials not only violates copyright but also interferes with the academic mission of the University. It is therefore prohibited in this class and will be considered a violation of the student code of responsibility that is subject to academic sanctions.

NOTE: The above schedule and assignments are subject to change by the instructor.