STS.092
Technology and Environment in Industrial America

Spring 2003
Advanced Undergraduate Reading Course, with CI-m Component, 9 credits (2-0-7)

Instructor: Shane Hamilton, MIT Dept. of Science, Technology, and Society
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Office Hours: Tues., 2-4pm; anytime by appointment

Course Description:
This course will examine the historical dimensions of American industrialization since the mid-19th century, focusing on relationships between technological change and the environment. Readings will explore the meaning of industrialization, showing how the increasing intensity and scale of natural resource use in the 19th and 20th centuries did not develop "naturally," but was driven by political and economic actions that have been structured by cultural and social concerns. Besides exploring the politics of industrialization, this course will probe the meaning of "nature," showing that the environment is not just forests, rivers, or "everything that isn't human," but also includes people, cities, factories, agriculture, fisheries, automobiles, and genetically manipulated plants. A primary goal of the course is to explore not only how technological change has impacted the environment, but also how the environment has shaped technological change.

Assignments:
Class will meet for 2 hours of discussion each week. Students will be expected to read and critically evaluate both secondary works and primary sources for each week's class. Students will prepare a 1-2 page response paper for each week's readings. Each student will lead two class discussions, in consultation with the instructor.

Students will also write a 10-15 page original research paper on a topic of his or her choosing, in consultation with the instructor. Writing the paper will be an iterative learning process, as students will be graded on a proposal, an outline and first draft, and a substantially revised final draft. Students will also orally present the findings of their research to the class at the end of the term.

Readings:
Readings will be available on the web at:
http://web.mit.edu/course/other/sts.092/www/

Grading:
Discussion participation and response papers: 20%
Discussion presentations: 20%
Paper Proposal: 10%
Paper Outline and First Draft: 20%
Final paper and presentation: 30%
First Class: The Industrial Landscape in America (Overview Lecture)

Week 1: Rights and Responsibilities in Commercial Fisheries

Week 2: Railroads and Rural Resources in the 19th Century
- Listen to bluegrass songs: "Orange Blossom Special," "Muleskinner Blues," "Nine Pound Hammer," "East Bound Freight Train" (provided by instructor)

Week 3: Rural Industrial Landscapes, part I

Week 4: Rural Industrial Landscapes, part II
- Brian Black, *Petrolia: The Landscape of America's First Oil Boom* (Baltimore: Johns Hopkins University Press, 2000), 1-81
- "Read" photographs in *Texture of Industry* and *Petrolia*

**********Paper Proposal Due**********

Week 5: Urban Industrial Landscapes, part I

Week 6: Urban Industrial Landscapes, part II
- "Inside an American Factory: Films of the Westinghouse Works, 1904"
  "Coil Winding Machines"—http://hdl.loc.gov/loc.mbrsmi/westhpp.1984
  "Westinghouse Air-Brake Company"—
  http://hdl.loc.gov/loc.mbrsmi/westhpp.2235
Week 7: Conservation and Development in the Progressive Era


Week 8: Fords and Forests


**********Paper Outline and First Draft Due**********

Week 9: Depression and Disaster

- Donald Worster, *Dust Bowl: The Southern Plains in the 1930s* (New York: Oxford University Press, 1979), 1-79
- Listen to Woody Guthrie, *Dust Bowl Ballads* (provided by instructor)

Week 10: Annihilating Pests and Enemies


Week 11: Industrial Cows and Chickens


Week 12: Biotechnology in Historical Perspective


**********Final Paper Presentations**********