History 411
History of American Technology
C. A. Dunlavy

4116 Humanities, 3-1854
Ofc. hrs. Tues. 4 p.m. and
Wed. 9 a.m. (or by appt.)

REQUIRED BOOKS
(marked with an * in the reading assignments)

Hugh G. J. Aitken, Scientific Management in Action: Taylorism at
Watertown Arsenal, 1980-1915.
John F. Kasson, Civilizing the Machine: Technology and Republican Values
in America, 1776-1900.
Merritt Roe Smith, Harpers Ferry Armory and the New Technology: The
Challenge of Change.

LECTURE TOPICS AND READING ASSIGNMENTS

Jan. 19 Introduction: Technology in American History
Jan. 21 Production and Distribution in a Colonial Economy

SUGGESTED READING
Victor S. Clark, History of Manufactures in the United States, 3 vols.
Chs. 1-9.
George Louis Beer, The Commercial Policy of England Toward the
American Colonies (Columbia College, 1893; reprint ed., New York:
Peter Smith, 1948).

Jan. 26 No Class
Jan. 28 Technology's Challenge to Republican Values

REQUIRED READING
Kasson, Civilizing the Machine, pp. 3-51 (Ch. 1).
Hugo A. Meier, "The Ideology of Technology," in Technology and Social
Change in America, ed. by Edwin T. Layton, Jr. (New York: Harper

Feb. 2 The War of 1812: Economic Independence
Feb. 4 The "American System": Protecting Infant Industry and Promoting
Internal Improvements

REQUIRED READING
Thomas C. Cochran, Frontiers of Change: Early Industrialism in America
(Oxford: Oxford University Press, 1981), pp. 60-100 (Ch. 4, New
Methods of Production, 1785-1825, and Ch. 5, Industrial Upsurge,
1825-1840).
Henry Clay, "In Defense of the American System," speech in the U.S.
Senate, Feb. 1832, in The Life and Speeches of Henry Clay, vol. 2
Feb. 8 DISCUSSION SECTION (Required Reading)

Feb. 9 The Industrial Revolution: An Overview
Feb. 11 Borrowed Technology: European Technology in the New Nation

REQUIRED READING

Feb. 16 Two Paths to Industrialization: Textiles in Lowell and Philadelphia
Feb. 18 The Internal Improvements Debate: Canals or Railroads?

REQUIRED READING
*Kasson, Civilizing the Machine*, Ch. 2 (pp. 55-106).

Feb. 22 DISCUSSION SECTION (Required Reading)

Feb. 23 A Second "American System": Interchangeable-Parts Manufacturing
Feb. 25 Mechanizing Agriculture

REQUIRED READING

Mar. 1 Sectors of Change: Steam Power and Heavy Industry
Mar. 3 Labor in American Industrialization

REQUIRED READING
*Smith, Harpers Ferry Armory and the New Technology*, Chs. 8-9, 11.
March 7 DISCUSSION SECTION (Required Reading)

Mar. 8 The Impact of the Civil War
Mar. 10 MIDTERM EXAM

REQUIRED READING
Clark, History of Manufactures, 3:14-53.

SPRING BREAK: MARCH 12-20

Mar. 22 From "Mechanics" to "Engineers": Professionalization of Engineering
Mar. 24 Celebrating Technology: International industrial Exhibitions

REQUIRED READING
Kasson, Civilizing the Machine, pp. 183-234.

Mar. 29 Rise of Big Business and Big Labor
Mar. 31 The Mass-Production and -Distribution Technologies

REQUIRED READING

Apr. 4 DISCUSSION SECTION (Required Reading)

Apr. 5 Rationalizing the Workplace: Scientific Management
Apr. 7 Technology and the Great War

REQUIRED READING
Aitken, Scientific Management In Action, pp. 3-48, 85-185.
Apr. 12 Motorizing America: The Rise of the Automobile Industry
Apr. 14 The Great Depression: Technology at Fault?

REQUIRED READING
David Hounshell, From the American System to Mass Production (Johns Hopkins University Press, 1984), pp. 216-301 (Ch. 6, The Ford Motor Company and the Rise of Mass Production in America; Ch. 7, Cul-de-Sac: The Limits of Fordism and the Coming of 'Flexible Mass Production').
Henry Ford, Moving Forward (1930), pp. 62-79 (Ch. 5, "Unemployment or Leisure?).

Apr. 18 DISCUSSION SECTION (Required Reading)

Apr. 19 Technology in World War II
Apr. 21 The Military-Industrial Complex

REQUIRED READING

Apr. 26 Sputnik and the Space Race
Apr. 28 Modern Technology and Its Critics: The Alternative Technology Movement

REQUIRED READING
Loyd S. Swenson, Jr., et al., This New Ocean: A History of Project Mercury (Washington, D.C.: NASA, 1966), pp. 3-31 (Ch. 1, The Lure, the Lock, the Key).
David Dickson, Alternative Technology and the Politics of Technical Change (Fontana, 1974), pp. 15-40 (Ch. 1, The Case Against Contemporary Technology).
May 2  DISCUSSION SECTION (Required Reading)

May 3  The Information Revolution: Computerizing Production and Distribution
May 5  Crisis and International Competition: The Limits of Mass Production

REQUIRED READING
David F. Noble, "Social Choice in Machine Design: The Case of
Automatically Controlled Machine Tools," in Case Studies in the
Press), pp. 18-50.
Charles F. Sabel, Work and Politics: The Division of Labor in Industry
(Cambridge: Cambridge University Press, 1982), pp. 194-231 (Ch. 5, "The End of Fordism?").