

Fall 2007  
History 107  
T-Th 2:35-3:50

John Kenly Smith  
343 Maginnes Hall  
Office Hours 1-2 T-Th  
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## TECHNOLOGY AND WORLD HISTORY

### Introduction:

In this course we will explore the role of technology in human history, and more specifically the importance of technology and technological innovation to various historical civilizations. The actors in our story are not just kings and generals, but farmers, explorers, and inventors. Non-human agents—food sources, germs, geography, genes, and ecological systems all played important roles in determining the fate of humans and their societies. Historically, technological limitations acted as boundaries for the social, economic, political, military, and cultural ambitions of any given civilization. Obviously, societies can become complex only if it has surplus wealth that allows significant numbers of its citizens to specialize in activities other than finding enough to eat. Once established, civilizations become dynamic entities that confront change both from within and without. Often new technologies give people new capabilities which, if assimilated in the host culture, can be used to conquer or destabilize other cultures. In this course we will explore the rise of Europe from a relatively insignificant peninsula on the western Eurasian land mass to near world hegemony by 1900. An important theme in this development will be the gradual evolution in Europe of the belief that new technology provided the keys to wealth to power. The course will end with the catastrophe of World War I that shattered the commonly held idea that advances in science and technology were synonymous with human and social progress.

### Grading:

15% class participation, attendance, and quizzes; 25% short papers; 25% midterm exam;  
35% final exam

### Short Papers

There are three short paper (3-5 pages) assignments. Each paper should provide an overview of the main themes in the reading for that day.

### Books:

James McClellan and Harold Dorn, Science and Technology in World History  
Joel Mokyr, The Lever of Riches  
Daniel Headrick, The Tools of Empire  
Alfred W. Crosby, Ecological Imperialism  
Dava Sovel, Longitude

Schedule:

Aug. 28 Introduction: All the Stuff That's Really Important We Don't Have a Clue About

Aug. 30 Our Technological Heritage

Reading: McClellan, pp. 1-16.

Sept. 4 Agricultural Revolution

Reading: McClellan, pp. 16-41.

Sept. 6 Origins of Civilization: Because People Need to Move Dirt!

Reading: McClellan, pp. 167-172.

Sept. 11 Egyptian Technology: This Old Pyramid

Reading: McClellan, pp. 41-54.

Sept. 13 Metals, Civilization, and the Catastrophe

Sept. 18 Classical Antiquity

Reading: Mokyr, chaps. 1-2; McClellan, chap. 4

Sept. 20 Classical Antiquity II

Reading: McClellan, chap. 5

Sept. 25 Medieval Empires

Reading: McClellan, chaps. 6 and 8

Sept. 27 Medieval Technology (Europe)

Reading: Mokyr, chap. 3, McClellan, pp. 175-82.

Oct. 2 The Great Age of Chinese Technology

Reading: McClellan, chap. 7 and Mokyr, chap. 9

Oct. 4 **MIDTERM EXAM**

Oct. 11 Mechanical Clocks: Why the West Won

Oct. 16 The New World

Reading: Crosby, entire (except chap. 10)

*Short Paper Due*

Oct. 18 Renaissance Technology I

Reading: Mokyr, chap. 4.

- Oct. 23 Renaissance Technology II
- Oct. 25 Scientific Revolution  
Reading: McClellan, chaps. 11-13.
- Oct. 30 Age of Projectors: From Bacon to Swift  
Reading: Sovel, entire  
*Short Paper Due*
- Nov.1 Industrial Revolution in Great Britain I  
Reading: Mokyr, chap. 5, McClellan, chap.14.
- Nov. 6 Industrial Revolution in Great Britain II
- Nov. 8 Rationalism and Romanticism: Britain at High Tide
- Nov. 13 Global Impact of Industrial Revolution  
Reading: Mokyr, chaps.9 and 10.
- Nov. 15 European Imperialism (Asia)  
Reading: Headrick, Intro. and chaps 1-2, 8-13.  
*Short Paper Due*
- Nov.20 European Imperialism (Africa)  
Reading: Headrick, chaps. 3-7.
- Nov. 27 Second Industrial Revolution  
Reading: Mokyr chap.6; McClellan, chap. 15.
- Nov. 29 Second Industrial Revolution II
- Dec. 4 World War I
- Dec. 6 Conclusion

**Accommodations for Students with Disabilities:** If you have a disability for which you are or may be requesting accommodations, please contact both your instructor and the Office of Academic Support Services, University Center C212 (610-758-4152) as early as possible in the semester. You must have documentation from the Academic Support Services office before accommodations can be granted.