Course Outline

Summary:
The aim of this course is for students to gain an understanding about how economists approach questions related to technological change. More generally, we are concerned with how economies grow and develop over time. The emphasis of the reading material is on the process of technological change, its contribution to economic growth, and its influences on the distribution of income. We will study these questions in the context of economic history and will look at some specific instances when technological changes occurred that are seen to have been crucial to the development of modern economies. We will also consider some of the debates and problems in the modern economy. By the end of the course, students should not only expect to have a greater knowledge of technological change and the process of industrialization, but to have also gained a good understanding of the application of economic theory to problems and debates in the study of economic growth in the longer term.

Course Readings:
Reading Package: Available for purchase in the bookstore (some readings available on WebCT)


Required Media: Around Cape Horn (Mystic Seaport, 1985)
King Corn (Mosaic Films Incorporated)

Course Requirements:

Grading Scheme:
- Term Paper: 50%
- Final Exam: 30%
- Discussions and Participation: 20%
Total: 100%
Topics and Readings:

1. The Economics of Technological Change and Production Functions
   - production functions, isoquants, cost functions, cost minimization
   - review related material in principles or intermediate theory texts

   Readings:
   JOHNSON, I. (VIDEO) *Around Cape Horn* (Mystic Seaport, 1985) (from original 16 mm footage shot by Irving Johnson, 1929)

2. Technological Change in World History

3. Invention, Innovation, and Diffusion of New Techniques

   Readings:
   i) invention

   ii) diffusion
   AARON WOOLF, CURT ELLIS AND IAN CHENEY (VIDEO), *King Corn* (Mosaic Films Incorporated).

   iv) technology, competitiveness and Path Dependence

4. Technological Change, Education and Skills

   i) Growth Accounting and Neoclassical Economics of Education
Readings:

ii) Technical Change and Deskilling

Reading:

5. Who Gains from Technical Change?

Readings:

6. Technological Change, Policy and the Environment

Lecture Notes

Suggested Reading:
Available at www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm
Selections from additional readings to be posted on Web CT.