In this course, we will explore how information technology is reshaping the U.S. labor market: its mix of occupations, the skills required to perform an occupation, the way work is organized, labor productivity, and wage levels and wage inequality.

We begin from the perspective the brain is a wonderful information-processing instrument, but when a computer and the brain perform a task in roughly the same way the computer can do it more cheaply. This fact leads to a pair of crosscutting market forces:

(1) Information technology is opening up many new opportunities through its complementarity with some human skills.

(2) Information technology is replacing human labor in certain tasks by substituting for other human skills.

We will explore the current limits on computers' ability to substitute for human skills, the human skills that computers complement, and the net effect of these forces on the labor market.

Class Schedule, texts, etc: The class meets Tuesdays and Thursdays 9:00 - 10:30. In addition, Hoyt will conduct a weekly recitation section at a time to be determined in class. All readings for the course will contained in a set of three readers on sale at MIT CopyTech (11-004). The first reader is available now.

Grading: Grading will be based on bi-weekly problem sets, a mid-term, and a final exam. Doing the problem sets required reading and understanding about three working papers/chapters/articles per week.

Approximate Course Outline:

February 5, 7, 12: An Overview of the Economy

February 14, 21: What Do We Mean By Skill?


February 26, 28: Some Basic Ideas in Cognition


March 5,7: IT and Tasks: Rules Based Applications


March 12, 14: IT and Tasks: Neural Nets and Pattern Recognition

March 19: 21: IT and the Reorganization of Work


March 26-28, MIT Vacation Week

April 2 and 4: Information v. Meaning, a Prelude to Markets


April 9: Midterm

April 11, 16, 18: IT and Markets


April 23, 25: IT and Productivity


April 30, May 1: Putting Pieces Together

This ends the formal syllabus. We will use the remaining to handle overruns and additional topics we agree deserve attention.

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