14.461: Part I: Technological Change

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This course will cover selected topics in theoretical and empirical analysis of technological change. The course will draw both on Acemoglu, *Introduction to Modern Economic Growth*, Princeton University Press, 2008, and various research articles.

There will be three problem sets, which will count towards 30% of your final grade. The remaining 70% will be from a project due in November (exact time to be determined). This project will either be a proposal for a research article, or application of an empirical paper from a prearranged list, or a detailed critique and extension of an existing theoretical article. More details on the available choices for the project will be provided later.

Course details:
My e-mail: daron@MIT.edu.
Lectures: TuTh 1-2:30, E51-361.
Recitation: F 2:30-4, E51-361.
Teaching Assistant: Dana Foarta e-mail: ofoarta@MIT.EDU.

Topics

Review of Basic Models of Endogenous Technological Progress (one lecture)

Main reading:

Other references:


**Knowledge Spillovers and Diffusion (one lecture)**

Main reading:


Other references:


**Competition, Policy and Technological Change (one lecture)**

Main reading:


Other references:


**Technology, Tasks and the Labor Market (one lecture)**

Main reading:


Other references:


**Directed Technological Change and Implications (two lectures)**

Main reading:


Other references:

Innovation and Reallocation (one lecture)

Main reading:
- Acemoglu, Daron, Ufuk Akcigit, Nicholas Bloom and William Kerr (2013) “Innovation, Reallocation and Growth” NBER working paper.

Other references:

Firm Size Dynamics (one lecture)

Main reading:
- Acemoglu, Daron and Dan Cao (2010) “Innovation by Entrants and Incumbents” mimeo.

Other references:

Climate Change and Technology (one lecture)
Main reading:

Other references:
Modeling Creativity and Technological Leadership (one lecture)

Main reading:

Other references:
Misallocation and Productivity Differences Across Countries (one lecture)

Main reading:


Other references:


Sectoral Linkages: Implications for Growth and Volatility (two lectures)

Main reading:


Other references:


