The Hebrew University of Jerusalem

Syllabus

Economics of Innovation - 55704

Last update 05-11-2019

HU Credits: *1*

Degree/Cycle: *2nd degree (Master)*

Responsible Department: *Business Administration*

Academic year: *0*

Semester: *1st Semester*

Teaching Languages: *Hebrew*

Campus: *Mt. Scopus*

Course/Module Coordinator: *Prof Sharon Belenzon*

Coordinator Email: *sharon.belenzon@duke.*

Coordinator Office Hours: *By appointment*

Teaching Staff:

Prof sharon belenzon

Course/Module description:

This course focuses on technical change, its determinants and consequences, and its links to firm strategy and market structure.
Intermediate
microeconomics and econometrics are pre-requisites. Advanced undergraduates or masters
students with appropriate preparation and interest are welcome.

Course/Module aims:

Our objective is to understand
the economic determinants and consequences of technical change. However, technical change
needs to be understood in a historical context, and consequently, the readings cover both
historical description and economic analysis.

Learning outcomes - On successful completion of this module, students should be able to:

At the end of the course students will know the economic detrimants that drives technical changes and innovation and the applications on market structure and the firm strategy

Attendance requirements(%):

80%

Teaching arrangement and method of instruction: The class will be run as a seminar class. You are expected to have done the readings and
come prepared to discuss them in class. We shall guide the discussions (and occasionally
lecture on the more technical material). You will be asked to submit two referee reports on
papers of your choosing

Course/Module Content:

•The (changing) nature of the American innovation ecosystem
Key questions: How has the American innovation ecosystem been changing in the past

several decades and what are the potential implications to firm performance and economic
growth

•The relationship between science and technology
Key questions: What is the relationship between science and technology? Why do corporations participate in scientific research?
• Markets for technology and the division of labor in invention
Key questions: How technology affects the boundaries of the firm? How do firms decide
whether to commercialize their inventions themselves or license them out?

•Intellectual property rights -
- Key questions: How do firms protect their inventions? Do patents affect the rate and direction of technical change?

<u>Required Reading:</u>
Module 1: The (changing) nature of the American innovation ecosystem
1. "The Changing Structure of American Innovation: Some Cautionary Remarks for Economic Growth" (2019) by Ashish Arora, Sharon Belenzon, Andrea Patacconi, and Jungkyu Suh.
2. The decline of science in corporate R&D (with Ashish Arora and Andrea Patacconi),
Strategic Management Journal 39(1): 3-32, January 2018
Key questions: How has the American innovation ecosystem been changing in the past
several decades and what are the potential implications to firm performance and economic
growth?
Module 2: The relationship between science and technology
1. Arora & Gambardella, "The changing technology of technological change" Research
*Policy, 1994, Vol 23, pp 523-532. **
*2. Arora, A., Belenzon, S. and Sheer, L., 2019. Why do Firms Invest in Scientific Research? (No. w23187). National Bureau of Economic Research. **
Key questions: What is the relationship between science and technology? Why do corporations participate in scientific research?
Module 3: Markets for technology and the division of labor in invention
1. Bresnahan and Gambardella, 1998, "The division of inventive labor and the extent of
the market", in Helpman (ed) General Purpose Technologies and Economic Growth, MIT Press
2. Arora, Vogt, and Yoon. 2009. Is the division of labor limited by the extent of the market? Evidence from the chemical industry. Industrial and Corporate Change.

Key questions: How technology affects the boundaries of the firm? How do firms decide
whether to commercialize their inventions themselves or license them out?
Module 4: Intellectual property rights
1. P. Moser, "How do patent laws affect innovation: evidence from nineteenth century
trade fairs", American Economic Review,
2
2. Alberto Galasso and Mark Schankerman (2015), Patents and Cumulative Innovation:
Causal Evidence from the Courts; Quarterly Journal of Economics; Issue: 130; 2015; Pages: 317-369.
Key questions: How do firms protect their inventions? Do patents affect the rate and direction of technical change?

Additional Reading Material:

Course/Module evaluation:
End of year written/oral examination 0 %
Presentation 0 %
Participation in Tutorials 50 %
Project work 0 %
Assignments 0 %
Reports 50 %
Research project 0 %
Quizzes 0 %
Other 0 %

Additional information:
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