

Lecture (B.Sc.)

Economics of Innovation

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Economic Policy, Innovation and Entrepreneurship Group

Winter Term 2021-22

Course organization and times

This course consists of recorded online lectures, which will be available on Moodle before the dates specified below for the individual course sections.

These lectures will be complemented by discussion sessions (starting on November 01, 2021):

- Discussion session 1: Monday, 14:15-15:30 (online via Zoom)
- Discussion session 2: Monday, 16:00-17:15 (Room 0207 in Nora-Platiel-Strasse 6;
NOTE: Discussion session 2 may have to be cancelled depending on COVID-19 conditions)

There will also be a set of assignments during the term. Completing these assignments is not required to pass.

Overview

Innovative products and services provide the foundation of economic change. Many of the products and services that we take for granted today were not even invented or barely known to a broad public 20 years ago. Explaining how innovations are generated, how they diffuse in the economy and how they affect economic growth and development is associated with substantial theoretical and empirical challenges for economics. A rich and diverse literature deals with these challenges. This course will introduce students to selected concepts, theories and findings in the economics of innovation. We will also discuss intellectual property rights and selected contributions to growth theory that focus on innovation. The final section is dedicated to public policy issues related to innovation.

Credits and requirements

6 ETCS credits can be earned based on successful participation in the final exam (90 minutes).

Exam date to be specified during the course due to uncertainty caused by COVID-19.

Outline: Economics of Innovation

1. Introduction: innovation as a challenge to economics (October 25-November 01, 2021)

- 1.1 Innovation and economic development: a preview
- 1.2 Conceptual background: theorizing about the unknown
- 1.3 Schumpeter and beyond: innovation as a subject of research in economics

(MANDATORY reading: Chapter 2 of Schumpeter, J. A. (1911/1934): The Theory of Economic Development, Harvard University Press.)

2. Conceptualizing innovation (November 08-November 15, 2021)

- 2.1 Invention, innovation and diffusion
- 2.2 The innovation process
- 2.3 Innovation as recombination
- 2.4 Competing technologies, path dependence and lock-in
- 2.5 Innovation networks and innovation systems

3. Individuals as innovators (November 22-November 29, 2021)

- 3.1 Motives, incentives and performance of individual innovators
- 3.2 User innovation and crowd sourcing
- 3.3 Lost Edisons: Childhood effects on patenting
- 3.4 Mobility, migration and innovation

(Background reading: Von Hippel, E. (2010): Open user innovation, in: B. Hall and N. Rosenberg (eds.) Handbook of the Economics of Innovation, Elsevier, pp. 411-427.); Lissoni, F. (2018). International migration and innovation diffusion: an eclectic survey. Regional Studies, 52(5), 702-714.

4. The economics of intellectual property rights (December 06, 2021-January 17, 2022)

- 4.1 The case for intellectual property
- 4.2 Patent and other types of intellectual property rights
- 4.3 Why do firms patent? And what are the alternatives?
- 4.4 Are patents good for the economy?
- 4.5 Markets for technology
- 4.6 Patent thickets and patent trolls

(Background reading: Shy, O. (1995): Industrial Organization: Theory and Applications, MIT Press; Bessen, J. and M. J. Meurer (2008): Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk, Princeton University Press.)

5. Innovation and growth (January 24-January 31, 2022)

- 5.1 Theories of economic growth
- 5.2 Some empirical issues

(Background reading: Aghion, P. and P. Howitt (2009): The Economics of Growth, MIT Press; Chapter 5 of Banerjee, A. V. and E. Duflo (2019): Good Economics for Hard Times, Penguin Books.

6. Innovation and public policy (February 07-February 14, 2022)

- 6.1 Theoretical foundations: Why innovation policy?
- 6.2 Instruments of innovation policy
- 6.3 Competition policy and innovation

(Background reading: Bloom, N., J. Van Reenen and H. Williams (2019): A Toolkit of Policies to Promote Innovation. Journal of Economic Perspectives, 33(3): 163-184.)