

Distance Learning Program, Fall 2021

Innovation Economics - Syllabus

Main instructor

Taras Hrendash, M.A., Ph.D. cand.

taras.hrendash@cerge-ei.cz

Date

Classes: November 1 – December 10, 2021

Exam week: December 13 – 17, 2021

Make-up exam: December 20 – 24, 2021

Lectures

Tuesday, 9.00 - 10.30 a.m. CET (Prague Winter time)

Thursday, 9.00 - 9.45 a.m. CET

Exercise session

Thursday, 9.45 - 10.15 a.m. CET

Office hours

TBD

Course homepage

<https://tf.cerge-ei.cz/moodle/course/view.php?id=16>

Course information

This course will cover selected topics on Economics of Innovation. It will help students to answer the most common questions about economic aspects of innovations: Why do firms innovate and why do they strive to be first in a race of research and development? How can employees be motivated to produce innovative outputs? How innovative ideas spread and foster creation of a new knowledge? How intellectual property of innovators is protected and what are the costs and scope of such protection? Where can innovative start-up firms get money to finance their projects?

The contents of this course are based on insights from macro and microeconomics, contract theory and corporate finance. Previous knowledge in these subjects will be beneficial, but is not required.

Teaching methodology

Along with the theoretical part of this course, which will be taught online and supported with the slides shared with all participants, practical case studies related to selected topics will be provided for in-group discussions. Local TAs will moderate the discussion at each participating university and, afterwards, students will work on individual assignments – essays summarizing their findings from the discussed case studies.

Course outline

Week 1: Competition and innovation

Readings:

Acemoglu, D. (2009). Chapter 12: Modeling Technological Change. In *Introduction to modern economic growth*. Princeton University Press.

Aghion, P., Bloom, N., Blundell, R., Griffith, R., & Howitt, P. (2005). Competition and Innovation: an Inverted-U Relationship. *The Quarterly Journal of Economics*, 120(2), 701–728. <https://doi.org/10.1093/qje/120.2.701>

Week 2: Intellectual property rights protection + Case study on two previous topics

Readings:

Acemoglu, D., & Akcigit, U. (2011). Intellectual Property Rights Policy, Competition and Innovation. *Journal Of The European Economic Association*, 10(1), 1-42. <https://doi.org/10.1111/j.1542-4774.2011.01053.x>

Moser, P. (2013). Patents and Innovation: Evidence from Economic History. *Journal of Economic Perspectives*, 27(1), 23–44. <https://doi.org/10.1257/jep.27.1.23>

Week 3: Incentives for innovators

Readings:

Stock-Homburg, R. M., Heald, S. L., Holthaus, C., Gillert, N. L., & Hippel, E. V. (2020). Need-solution pair recognition by household sector individuals: Evidence, and a cognitive mechanism explanation. *Research Policy*, 104068. <https://doi.org/10.1016/j.respol.2020.104068>

Manso, G. (2011). Motivating Innovation. *The Journal of Finance*, 66(5), 1823–1860. <https://doi.org/10.1111/j.1540-6261.2011.01688.x>


Week 4: Knowledge spillovers + Case study on two previous topics

Readings:

Jaffe, A. B., Trajtenberg, M., & Henderson, R. (1993). Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations. *The Quarterly Journal of Economics*, 108(3), 577–598. <https://doi.org/10.2307/2118401>

Feldman, M. P., & Avnimelech, G. Knowledge Spillovers and the Geography of Innovation – Revisited: A 20 Years' Perspective on the Field on Geography of Innovation. *Handbook of Research on Innovation and Entrepreneurship*. <https://doi.org/10.4337/9781849807760.00020>


Week 5: Financing constraints

 Readings:

Hall, B. H., & Lerner, J. (2010). The Financing of R&D and Innovation. *Handbook of The Economics of Innovation, Vol. 1 Handbook of the Economics of Innovation*, 609–639. [https://doi.org/10.1016/s0169-7218\(10\)01014-2](https://doi.org/10.1016/s0169-7218(10)01014-2)

Czarnitzki, D., Hall, B., & Hottenrott, H. (2014). Patents as Quality Signals? The Implications for Financing Constraints on R&D. <https://doi.org/10.3386/w19947>

Week 6: Markets for technology + Case study on two previous topics

 Readings:

Stephan, P. E. (2012). Chapter Seven. The Market for Scientists and Engineers. *How Economics Shapes Science*, 151–182. <https://doi.org/10.4159/harvard.9780674062757.c9>

Arora, A., Gambardella, A., & Fosfuri, A. (2004). Chapter 1: Markets for Technology. In *Markets for Technology: The Economics of Innovation and Corporate Strategy*. MIT Press. <https://doi.org/10.7551/mitpress/4451.003.0002>

Grading

The final exam will be organized as a 90-min online test (mix of multiple-choices and open questions) which can be filled online from a mobile device. Starting from the second week, each lecture will start with a short online quiz on a topic from the previous lecture (five quizzes in total). Individual assignments will include three one-page essays on discussed case studies. Submitted essays will be graded by the local TAs. Students will also be offered to provide a peer review – written feedback on a randomly assigned peer’s essay – for bonus points.

The split of a total course grade will be the following:

45% - Final exam (Online test)

45% - Essays on Case studies (3*15%)

10% - Quizzes (Online, 5*2%)

+ up to 10% - Peer review

To pass this course, at least 50% is required (NB: bonus points for a peer review are not counted if a student did not show up on a Final exam).

Course materials

Lecture slides and Case studies will be shared via Moodle during the course.