

Economics of Innovation

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The course is for MA students in economics and business. Participating students are required to have a solid background in microeconomics and macroeconomics. Contents build upon the fundamentals of innovation covered in the Bachelor's course FEB13044 (a short summary will be given in lecture 1). The course is designed for seven weeks, with one 3 hours lecture every week. The objective of the course is to provide students with a comprehensive and advanced understanding of the origins, dynamics, and consequences of innovation from an economic perspective. Doing so, the course taps into many different fields within economics, including macroeconomics, industrial organization and labour economics.

Lecture 1 – Introduction (04.01.2012 in T3-17)

- Schumpeter, J. 1942. *Capitalism, Socialism and Democracy*. New York: Harper, ch. 7, 81-86.
- Baumol, W. 2002. *The Free Market Innovation Machine – Analyzing the Growth Miracle of Capitalism*. Princeton University Press, ch. 1, 1-16.
- Fagerberg, J. 2005. Innovation – A guide to the literature. In: Fagerberg, J., Mowery, D. and Nelson, R. (Eds). *The Oxford Handbook of Innovation*. Oxford University Press, ch. 1, 4-9.
- Smith, K. 2005. Measuring innovation. In: Fagerberg, J., Mowery, D. and Nelson, R. (Eds). *The Oxford Handbook of Innovation*. Oxford University Press, ch. 6, 148-177.

These four articles are posted on Blackboard.

Lecture 2 – Innovation and economic growth (11.01.2012 in M1-17)

- Sørensen, P.B. and Whitta-Jacobsen, H.J. 2005. *Introducing Advanced Macroeconomics*. McGraw Hill, ch. 9 & 10, pp. 249-310.

The two chapters can be bought online at <https://create.mcgraw-hill.com/shop/#/catalog/details/?isbn=9781121410879> for 7.99USD. Alternatively, you can copy the chapters from the book in the library.

Lecture 3 - Incentives to innovate and market failure (18.01.2012 in T3-17)

- Arrow, K. 1962. Economic welfare and the allocation of resources for invention, In R. Nelson, Ed: *The Rate and Direction of Inventive Activity*. Princeton University Press, Princeton.

Available at <http://www.nber.org/chapters/c2144.pdf>.

Lecture 4 – Market structure and innovation (25.01.2012 in T3-17)

- Cohen, W. and Klepper, S. 1992. The anatomy of industry R&D intensity distributions. *American Economic Review* 82(4), 773-799.

Available at <http://www.jstor.org/stable/10.2307/2117344>.

Lecture 5 – Diffusion of innovations (01.02.2012 in T3-17)

- Stoneman, P. 2002. *The Economics of Technological Diffusion*. Blackwell Publishers, Oxford. Chapter 2-3, 12-54.

Available at the EUR library or at http://www.amazon.co.uk/gp/offer-listing/0631219773/ref=sr_1_1_olp?ie=UTF8&qid=1324473661&sr=8-1&condition=new, starting at 9.99 British Pounds.

Lecture 6 – Strategic management of innovations in network markets (08.02.2012 in T3-17)

- Arthur, B. 1989. Competing technologies, increasing returns, and lock-in by historical events. *Economic Journal* 99(394), 116-131.
- Katz, M. and Shapiro, C. 1985. Network externalities, competition, and compatibility. *American Economic Review* 75(3), 424-440.

Available at <http://www.jstor.org/stable/10.2307/2234208> and at <http://www.jstor.org/stable/10.2307/1814809>.

Lecture 7 – Labor market effects of innovation (15.02.2012 in T3-17)

- Acemoglu, D. 2002. Technical change, inequality, and the labor market. *Journal of Economic Literature* XL(March), 7-72.

Available at <http://www.jstor.org/stable/pdfplus/2698593.pdf>.

Examination:

- 10% Homework assignment 1 (due 25.01.2012)
- 10% Homework assignment 2 (due 15.02.2012)
- 80% closed book exam

Background reading:

As mentioned above, students are required to have a solid background in microeconomics and macroeconomics. I recommend the following material to “bring you up to speed” and as a valuable resource for your studies:

- Varian, H. 2006. *Intermediate Microeconomics*. Norton. Chapters 1, 15, 16, 18, 22-24, 27-29, 34-36.
- Sørensen, P.B. and Whitta-Jacobsen, H.J. 2005. *Introducing Advanced Macroeconomics*. McGraw Hill. Chapters 1-3, 5.