

Economics 2070 - Macroeconomics
Endogenous Growth Module

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 Office Hours: M,W 2:30-4:00
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Course description: This module of 2070 will examine endogenous growth theory, with a focus on innovation-based, or “Schumpeterian” growth theory. Schumpeterian theory focuses on industrial innovations arising from R&D as the mainspring of economic growth. It integrates the microeconomic theory of R&D into a macroeconomic growth model, making clear who gains and who loses from technological change, and showing how long-run growth is determined by the competitive process of creative destruction. The course will cover the details of model building and will also survey some of the literature confronting the theory with empirical evidence.

Lectures: There will be 9 lectures, according to the following schedule:

Monday (10am – noon)	Wednesday (10am – noon)	Friday (1:30 – 3:30 pm)
Sept 28	Sept 30	Oct 2
Oct 5	Oct 7	--
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Oct 19	Oct 21	

Grading: There will be an exam, to be scheduled later, worth 70 points. Problem sets will count for 30 points.

Readings: Mostly I want you to read journal articles. For reference you might want to consult Aghion, Philippe, and Peter Howitt. *The Economics of Growth*. MIT Press, 2009, which covers most of the topics to be discussed; the two chapters in the list below can be found at: http://www.econ.brown.edu/fac/peter_howitt/2070-2015/Econ_2070.html, which also has some unpublished notes and other material. Here is a list of readings, roughly in chronological order.

- Aghion, Philippe, and Peter Howitt. *The Economics of Growth*, chs 2,3.
 Romer, Paul M. “Endogenous Technological Change.” *Journal of Political Economy* 98 (October 1990): S71-S102.
 Aghion, Philippe, and Peter Howitt. “A Model of Growth Through Creative Destruction.” *Econometrica* 60 (March 1992): 323-351.
 Grossman, Gene, and Elhanan Helpman. “Quality Ladders in the Theory of Economic Growth.” *Review of Economic Studies* 106 (1991): 557-86.
 Howitt, Peter, and Philippe Aghion. “Capital Accumulation and Innovation as Complementary Factors in Long-Run Growth.” *Journal of Economic Growth* 3 (June 1998): 111-30.
 Jones, Charles I. “R&D-Based Models of Economic Growth.” *Journal of Political Economy* 103 (August 1995): 759-84.

- Ha, Joonkyung, and Peter Howitt. "Accounting for Trends in Productivity and R&D: A Schumpeterian Critique of Semi-Endogenous Growth Theory." *Journal of Money, Credit and Banking* 39 (2006): 733-74.
- Lucas, Robert E. Jr. "Ideas and Growth." *Economica* 76 (2009): 1-19.
- Aghion, Philippe, Christopher Harris, Peter Howitt and John Vickers. "Competition, Imitation and Growth with Step-by-Step Innovation." *Review of Economic Studies* 68 (July 2001): 467-92.
- Aghion, Philippe, Nick Bloom, Richard Blundell, Rachel Griffith and Peter Howitt. "Competition and Innovation: An Inverted-U Relationship." *Quarterly Journal of Economics* 120 (May 2005): 701-28.
- Klette, Tor Jakob and Kortum, Sam. "Innovating Firms and Aggregate Innovation." *Journal of Political Economy* 112 (October 2004): 986-1018.
- Aghion, Philippe, Ufuk Akcigit and Peter Howitt. "What Do We Learn from Schumpeterian Growth Theory?" In *Handbook of Economic Growth*, vol 2, edited by Philippe Aghion and Steven N. Durlauf. Amsterdam, North-Holland, 2014, 515-563.
- Howitt, Peter. "Endogenous Growth and Cross-Country Income Differences." *American Economic Review* 90 (September 2000): 829-846.
- Aghion, Philippe, Peter Howitt and David Mayer-Foulkes. "The Effect of Financial Development on Convergence: Theory and Evidence." *QJE* 120 (February 2005): 173-222.