# Finance 924: Intertemporal Macroeconomics and Finance Spring 2008

## **Syllabus**

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# **Course Description**

This is a doctoral level course on macroeconomics, with special emphasis on intertemporal choice under uncertainty and topics related to finance. Topics include: optimal consumption and saving, including the permanent income theory, the stochastic growth model, q-theory of investment, (incomplete) risk sharing and asset pricing. The course will cover and apply techniques, including dynamic programming, to solve dynamic optimization problems under uncertainty. Numerical solution methods are also discussed.

#### **Time and Place**

Class will meet Fridays, 3.00 - 6.00 pm, SH-DH 211.

[Should it be necessary to make any changes in time or location, or to reschedule a particular class, then this will be announced in a prior class or via email.]

#### **Recommended Textbooks**

Ljunqvist, Lars, and Thomas J. Sargent. <u>Recursive Macroeconomic Theory</u>, 2<sup>nd</sup> edition, MIT Press.

Blanchard, Olivier Jean, and Stanley Fisher. <u>Lectures on Macroeconomics</u>, MIT Press.

Stokey, Nancy L., and Robert E. Lucas. <u>Recursive Methods in Economic Dynamics</u>, Harvard.

On Numerical Methods:

Judd, Kenneth L. Numerical Methods in Economics, MIT Press, Cambridge MA.

Also recommended:

Cooley, Thomas F., <u>Frontiers of Business Cycle Research</u>, Princeton University Press, Princeton NJ.

Adda, Jerome, and Russell Cooper. Dynamic Economics, MIT Press.

### **Articles**

These will be assigned as the course progresses. Links will be posted on the course website:

### **Course Website**

Go to <a href="http://finance.wharton.upenn.edu/~vdheuvel/">http://finance.wharton.upenn.edu/~vdheuvel/</a> and follow the link to Teaching and Finance 924.

**Course Requirements:** There will be a final exam (80%). In addition, there will be a number of problem sets (20%).

Office hours: by appointment or anytime.

# **Preliminary Course Outline**

This is subject to change. It is merely intended to be indicative of the kind of topics covered. Some topics may not be covered, others may be added.

Intertemporal choice under uncertainty: 'Stochastic Lagrange multipliers'

Consumption

The stochastic growth model (and calibration)

Intertemporal choice under uncertainty: Dynamic programming

The q-theory of Investment

Risk Sharing in complete and incomplete markets and consumption based asset pricing

Extra topics may be added.