Course Description
The course presents basic dynamic macroeconomic models in several specific fields of macroeconomics: consumption and investment theory, growth theory and labour economics. The aim is to provide key methodological tools for the dynamic analysis of a broad range of macroeconomic issues, mainly based on dynamic optimization techniques. Lecture note handouts and problem sets will be provided throughout the course. All necessary material will be made available on the web page of the course.

Exam
There will be a two-hour, closed-book, written exam at the end of the course.

Course outline and material
The course will cover the following topics:

1. Dynamic consumption theory
   - Permanent income theory with rational expectations
   - Empirical issues and puzzles
   - The role of uncertainty: precautionary savings
   - Intertemporal consumption and portfolio allocation

   General references
   Romer (2012) Advanced Macroeconomics, fourth edition, ch. 8

   Specific references
   Deaton A. (1992) Understanding consumption, especially ch. 3, 4
   Attanasio O. (1999) "Consumption demand", in Handbook of Macroeconomics, vol. 1B, ch. 11
   Carroll C. (2001) "A theory of the consumption function, with and without liquidity constraints", Journal of Economic Perspectives ("graduate students version" NBER wp 8387)

2. Dynamic investment models
   - Dynamic optimization in continuous time
   - Adjustment costs and Tobin's forward-looking "q"
   - Investment dynamics, interest rates, productivity and wages in partial equilibrium
3. Economic growth in dynamic general equilibrium
- Balanced growth, steady state and optimal convergence
- Decentralization of production and investment decisions
- Endogenous growth and market imperfections.

General references

Specific references
Barro-Sala-i-Martin (1995) *Economic Growth*, ch. 1, 2, 4

4. Flow dynamics in the labour market
- Participation externalities in the labour market
- Features of search models of the labour market
- Job matching and unemployment dynamics

General references:
Romer (2012) *Advanced Macroeconomics*, fourth edition, ch. 10
Bagliano-Bertola (2007) *Models for dynamic macroeconomics*, ch. 5, sections 5.2-5.4

Specific references:
Petrongolo-Pissarides (2001) "Looking into the black box: a survey of the matching function", Journal of Economic Literature
Nickell S., Nunziata L., Ochel W., Quintini G. (2002) "The Beveridge curve, unemployment and wages in the OECD from the 1960s to the 1990s", Centre for Economic Performance, LSE