ECON 815
Advanced Macroeconomics
Winter Term 2012/13

Instructor:

Prof. Marco Cozzi, Dunning Hall 306, Department of Economics
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Website: http://www.econ.queensu.ca/pub/faculty/cozzi/

Time and Location:

Tuesday 1.00pm - 2.30pm
Thursday 11.30am - 1:00pm
Location DUN 213.

The tutorials will be held on Monday's 10:00 am - 11.30am, DUN 213.

Office Hours:

Thursday 4:00 - 5.30pm.

TA's:

Jonathan Lee (leejf @ econ.queensu.ca, DH 315, OH: Friday 10:30-11:30, for the first 8 weeks), Kamin Peyrow (*peyrowk @ econ.queensu.ca, MC A423, OH: Friday 10:30-11:30 for the last 4 weeks*).

Readings:

There is one required text for the course (available at the campus bookstore).

- (BS): Barro, R. and X. Sala-i-Martin, *Economic Growth (2nd edition)*, MIT Press, 2004.

For various sections, the following books could be a useful reference:

- (P): Pissarides, C., *Equilibrium Unemployment Theory (2nd Edition)*, MIT Press, 2000.
- (A): Acemoglu, D., *Modern Economic Growth*, Princeton University Press, 2008.

At the beginning of the course it will be assumed that every student masters basic calculus, constrained optimization, undergraduate microeconomics (at the level of, for example, Varian's *Intermediate Microeconomics*) and macroeconomics (at the level of Abel and Bernanke's *Macroeconomics*). A set of math tutorials will cover dynamic optimization methods.

Prior knowledge of some econometric software (preferably E-Views or STATA) and a spreadsheet is going to be helpful for at least one of the assignments.

Grading:

There will be at least five assignments (which will count toward the final grade), a mid-term examination and a final exam. The exams will be closed book. The grading scheme will be as follows:

Assignments	40%
Midterm Exam	20%
Final Exam	40%

The official policy of this course is that no makeup exams will be offered because the first exam is going to be held in class and the second exam will be during finals (the date and time of the final are known several weeks in advance).

Course Requirements:

Students are encouraged to work together on the assignments (usually groups of 2/3 people are quite efficient) but MUST submit their own answers, clearly indicating the group they worked in.

Late problem sets will not be accepted except with my PRIOR consent (not the TA's) or in very unusual circumstances.

If needed, the datasets for the assignments will be made available on the course website.

The course TA's will solve in class the problem sets and, possibly, some of the old exams as well. More details will be provided at the beginning of the course.

COURSE DESCRIPTION

The course has two main goals: 1) provide the students with a set of "math" tools (mainly dynamic optimization techniques) useful to study dynamic economies, 2) present and discuss in some detail selected topics in the field of macroeconomics.

The first half of this course discusses the computation of aggregate variables and introduces students to dynamic models of long-run growth. The Solow model, the neoclassical growth model, the overlapping generations model, and models of endogenous growth are presented in detail. These are used to study long-run policy issues and the determinants of cross-country differences in per capita income and growth.

The second half of the course introduces the student to macroeconomic models of the labor market and their micro-foundations. Search and Matching models are studied in depth, analyzing the effect of public policies on the determination of the unemployment rate and the distribution of wages.

LIST OF TOOLS COVERED IN THE COURSE

- General Equilibrium Theory
- Elements of Dynamic Economies in Continuous Time
- Elements of Dynamic Optimization
- Elements of Stochastic Processes

A TENTATIVE LIST OF TOPICS AND RELATED READINGS:

(The list is likely to change)

- **Mathematical Preliminaries**

Mathematical Appendix in BS. Lecture notes posted on the website. For additional and more complete treatments on Dynamic Optimization, please refer to: Intriligator, M. (1971). "Mathematical Optimization and Economic Theory." Prentice-Hall; Chiang, A. (2000). "Elements of Dynamic Optimization." Waveland Press Inc.

- **Economic Growth: the Basics**

BS Chapter 1.

- **Neoclassical Growth Theory**

BS Chapter 2 and 3 (No 2.7, 2.9, 3.4, 3.5, and 3.6).

- **The OLG Growth Model**

BS Appendix to Chapter 3.

- **Endogenous Growth Theory**

BS Chapter 4 (No 4.5), 5 (TBC), 6 and 7.

- **The Empirics of Economic Growth**

BS Chapter 10 and 12.

- **Labor Markets: the Basics**

Rogerson, R., R. Shimer and R. Wright. (2005). "Search Theoretic Models of Labor Markets: A Survey," *Journal of Economic Literature* 43, 959-988.
P Chapter 1.

- **Equilibrium Unemployment: Search and Matching**

Rogerson, R., R. Shimer and R. Wright. (2005). "Search Theoretic Models of Labor Markets: A Survey," *Journal of Economic Literature* 43, 959-988.
P Chapter 2 and 3.

- **Theory of Fluctuations (only if time allows)**

Lecture Notes

Statement on Academic Integrity

Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility (see www.academicintegrity.org). These values are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University (see the Senate Report on Principles and Priorities). Students are responsible for familiarizing themselves with the regulations concerning academic integrity and for ensuring that their assignments conform to the principles of academic integrity. Information on academic integrity is available in the Arts and Science Calendar (see Academic Regulation 1), on the Arts and Science website (see http://www.queensu.ca/calendars/artsci/pg532.html), and from the instructor of this course. Departures from academic integrity include plagiarism, use of unauthorizedmaterials, facilitation, forgery and falsification, and are antithetical to the development of an academic community at Queen's. Given the seriousness of these matters, actions which contravene the regulation on academic integrity carry sanctions that can range from a warning or the loss of grades on an assignment to the failure of a course to a requirement to withdraw from the university.
