

ECON 723: Macroeconomic Theory I

Fall 2019

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Office Hours: M 11:30-12:30pm

Wed. 3:30-4:30pm

Lecture times: Wed. 1:30-3:20pm and Fr. 9-10:20am

Lecture room: TBA

First lecture: September 11th

Last lecture: December 6th

TA: TBA
Office: TBA

Email: TBA
Office Hours: Posted on A2L

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COURSE DESCRIPTION

This course is an introduction to advanced macroeconomic theory. The focus of the course is on models with explicit microeconomic foundations. The broad topics covered this year are asset pricing, economic growth, business cycles and the method of dynamic programming.

COURSE OBJECTIVES

- Introduce students to (or further their knowledge of) foundational models in the areas of asset pricing, economic growth and business cycles.
- Provide analytical tools used in macroeconomics to solve and study dynamic general equilibrium models.
- Develop an understanding of the strengths and weaknesses of the optimizing framework for the analysis of the behaviour of economic agents.
- Develop the student's ability to translate mathematical expressions into intuitive explanations of the actions of economic agents.

CLASS FORMAT

Lectures and tutorials (held during regular lecture times)

COURSE MATERIALS AND TEXTS

- A large share of the material to read will be available electronically.
 - From A2L you can download instructor's lecture notes.
 - Lars Ljungqvist and Thomas J. Sargent, 2004, Recursive macroeconomic theory 2nd edition, MIT Press. Available as an electronic resource from the library's website at <http://library.mcmaster.ca/>. You can print up to 60 pages.
 - Robert G. King and Sergio T. Rebelo, 2000, Resuscitating real business cycles, NBER working paper 7534. <http://www.nber.org/papers/w7534>
 - Gregor W. Smith, MAcroeconomics lecture notes, August 1999 edition. Internet address: <http://qed.econ.queensu.ca/pub/faculty/smithgw/econ815A/>
- You will find the following items on reserve in Mills Library:
 - Dynamic Economics: Quantitative Methods and Applications by Jerome Adda and Russell W. Cooper. MIT Press 2003. Call number HB 135 .A33 2003
 - David Romer, 2006, Advanced macroeconomics third edition, McGraw-Hill Irwin. Call number HB172.5 .R66 2006
 - Thomas J. Sargent, 1987, Dynamic macroeconomic theory, Harvard University Press. Call number HB172.5 .S267 1987

- Michael Wickens, 2012, Macroeconomic Theory: A Dynamic General Equilibrium Approach, Second edition, Princeton University Press Call number HB172.5.W53

AVENUE TO LEARN

The course's web page is on Avenue to Learn at <http://avenue.mcmaster.ca/> You need your MACID (part of your email address preceding @mcmaster.ca) and password to log into avenue to learn.

Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

COURSE EVALUATION – OVERVIEW

1. TBA

COURSE EVALUATION – DETAILS

Test 1-Friday October 4th, 9-10:20am

Material tested: Dynamic Programming and Asset Pricing

Test 2-Wednesday November 6th, 1:30-3:20pm.

Material tested: Exogenous Growth

Test 3- held during the final examination period.

Material tested: Exogenous Growth and RBC

Method of evaluation for tests:

primarily problem-solving questions, short-answer questions, mathematical derivations/proofs, numerical calculations and short essay-type question; secondarily true-false-justify questions.

TUTORIALS

Tutorials will take place at our regular lecture times and in our regular lecture room on the following dates:

Tutorial 1 September 27th

Tutorial 2 November 1st

Tutorial 3 November 22nd

The material to be covered in tutorials will be announced in class and posted on Avenue to Learn (A2L) a week or so in advance.

READINGS

A list of topics and readings is included at the end of this document. Also, a reading list is posted on A2L. Students are expected to have read the relevant material before the lectures. Reading in advance is a great way to prepare for the tests. This way when you walk into class to hear my presentations, you will be able to focus on things that are not in the notes, to ask questions about things that you did not understand and to maximize the efficiency of your preparation. I strongly encourage students to ask clarifying questions during the lectures and office hours.

PRACTICE QUESTIONS

The course A2L site lists many practice questions (most of them with solutions). I strongly encourage students to work out as many exercises as possible and to attempt to solve tutorial questions in advance of the tutorials. Those practice questions are a very good way to learn and to prepare for the tests. Do not expect to be able to do all this in a day or two before the tests.

COURSE POLICIES

Grades

Grades will be based on the McMaster University grading scale:

MARK	GRADE
90-100	A+
85-90	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
0-69	F

Absences, Missed Work, Illness

If you miss a test because of illness, you must bring me a doctor's note as soon as possible and you have to write a **makeup test**. If you do not provide a medical note, then you get a grade of zero on the test you missed.

UNIVERSITY POLICIES

Academic Integrity Statement

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation

reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the [Academic Integrity Policy](#).

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one’s own or for which credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

Academic Accommodation of Students with Disabilities

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements. Academic accommodations must be arranged before classes or academic work begins, and for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University’s Policy for [Academic Accommodation of Students with Disabilities](#).

Academic Accommodation for Religious, Indigenous and Spiritual Observances

Students who require academic accommodation due to an Observance must submit a RISO form to their Faculty office, electronically or in person, normally within ten working days from the beginning of each term in which they are anticipating a need for Accommodation. For further information, consult McMaster University’s [Policy on Academic Accommodation for Religious, Indigenous and Spiritual Observances](#).

Faculty of Social Sciences E-mail Communication Policy

Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student’s own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student’s responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

Course Modification

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

TOPICS OUTLINE AND READINGS

1. Introduction to the course

(a) Economic growth and business cycle facts

- Jones, C.I. (2015) The facts of economic growth. National Bureau of Economic Research. Working Paper 21142. <http://www.nber.org/papers/w21142>
- Jones, C.I. and Romer, P.M. (2010) The new Kaldor facts: ideas, institutions, population, and human capital,” American Economic Journal: Macroeconomics, 2 (1), 224–245.
- Chapter 1 in Schmitt-Grohé, S. and Uribe, M. (2017) Open economy macroeconomics. Princeton University Press. Princeton, NJ. 626 pages.

(b) Evolution of macroeconomic theory over time

- Azariadis, C. (2018) Riddles and models: a review essay on Michel de Vroey’s a history of macroeconomics from Keynes to Lucas and beyond. Journal of Economic Literature 56(4), 1538–1576.

(c) Strengths and weaknesses of micro-founded macroeconomics

- Vines, D. and Wills, S. (2018) The rebuilding macroeconomic theory project: an analytical assessment. Oxford Review of Economic Policy 34 (1–2), pp. 1–42

2. Dynamic Programming

(a) Intro to dynamic optimization: Cake-eating problem

(b) Optimal growth model and its extensions

- Instructor's lecture notes
- Adda and Cooper (2003) chapters 2 and 5
- Ljungqvist and Sargent (2004) chapter 3
- Sargent (1987) chapter 1
- Manuelli and Sargent (1987) chapter 1

3. Asset Pricing

(a) Asset pricing in an endowment economy (Lucas asset pricing model)

(b) Review concept of a competitive equilibrium

(c) Pricing formula for bonds, shares/stocks and contingent claims

(d) Solving for competitive equilibrium prices and allocations

- Instructor's lecture notes
- Ljungqvist and Sargent (2004) chapter 13
- Sargent (1987) chapter 3

4. Economic Growth Models I: Exogenous Growth

- (a) Model and its assumption
- (b) Representative consumer's problem
- (c) Representative firm's problem
- (d) Equilibrium and balanced growth path
- (e) Transitional dynamics
- (f) Investment specific technical progress
- (g) Diamond's OLG model (if time allows)
 - Instructor's lecture notes
 - King and Rebelo (2000)
 - Ljungqvist and Sargent (2004) chapter 14
 - Wickens chapters 1, 2, 3
 - For item (f): Greenwood, Hercowitz and Krusell, 1997, Long-run implications of investment-specific technological change, American Economic Review 87 (3), 342-362
 - For item (g): see chapter 2 in Romer's textbook

5. Economic Growth Models II: Endogenous Growth

- (a) The AK model
- (b) Romer – learning-by-doing model
- (c) Lucas – human capital accumulation model
- (d) Rebelo – growth in spite of non-reproducible factors
 - Instructor's lecture notes
 - Ljungqvist and Sargent (2004) chapter 14
 - Wickens chapter 3

6. Real Business Cycles

- King and Rebelo (2000)
- Chapter 5 in Romer