Department of Economics  University of Maryland

Economics 325 (Section 0101)
Intermediate Macroeconomic Analysis
Syllabus

Professor: Orhan Torul
Summer I, 2013

Lectures: Monday and Wednesday, 6:00pm-9:25pm, Tydings Hall (TYD) 0102

E-mail address: torul@econ.umd.edu

Course website: Canvas (https://myelms.umd.edu/)

Office Hours: Monday and Wednesday 5:00pm-6:00pm and by appointment in Tydings Hall TYD 4118B

Course Objectives: The main objective of the course is to study the foundations of modern macroeconomic theory by invoking the principles of microeconomic theory, and analyze a variety of macroeconomic issues within the framework we develop. Our key focus will be on understanding optimal decision-making at individual, firm and government levels. Throughout the course, the emphasis will be on theoretical and logical rigor and policy applications.

Prerequisite: Economics 300 (*Methods and Tools for Economic Analysis*) with a final grade of "C" or higher. **Economics 325 is for economics majors only; the parallel course for non-majors is Economics 305.**

Textbooks: The primary texts for the course will be a set of lecture notes by Sanjay Chugh (*A Short Course in Representative-Agent Macroeconomics)*, which I will provide via Canvas website. I will also provide you with a set of notes that review basic concepts from introductory macroeconomics.

Some students may find a useful supplement to the text, *Macroeconomics* (4th edition, February 2010; the 5th, 2nd or 3rd editions are also fine) by Stephen Williamson. This textbook covers material at a similar level, but does not cover all of the topics that we will cover in this course. For interested students, I can offer some guidance as to what sections of this text are the most appropriate for exploring in more depth the topics we cover. Note that this latter text is ***not required*** reading, yet strongly ***recommended***.

Grading: The final grade will be based on **four problem sets (each worth 5% of your final course grade), quizzes (worth 10% of your final grade), a midterm exam (worth 30% of your final course grade) and a cumulative final exam (worth 40% of your final course grade).**

Problem Sets: Problem sets will be given on Wednesday of each week, and are to be turned in at the *beginning* of class next Monday. Late problem sets will ***not be accepted***. Outside help for assignments and projects are ***acceptable only with proper citation***.

Quizzes: Quiz dates will ***not be announced in advance***, and regular attendance and effort on problem sets will be sufficient to do well in quizzes.

Bonus Project:
Due by Monday, July 1, 2013

For extra credit, I will assign you a bonus project to be handed in by the beginning of the last week of classes. The bonus project is not compulsory, and accounts up to ***5%*** of your overall grade.

Midterm Exam:
Monday, June 17, 2013 (during regular lecture time):

The midterm will be based on subjects covered up to June 18. It will be an in-class exam, and it is imperative to be in class on time since extra time will ***not*** be given for late arrivals.

Final Exam:
Wednesday, July 3, 2013 (during regular lecture time):

The final will be comprehensive and will be an in-class exam. Again, timeliness is required since extra time will ***not*** be given for late arrivals.

Make-up Exam Policy: All students are ***required*** to attend both the midterm and final exams. Make-up exams will be granted ***only*** to those students whose excuse complies with University policy. If you believe you are eligible to take a make-up exam, please inform the professor and provide the appropriate documentation as soon as possible. The four valid excuses according to University policy are medical conditions, religious observances, participation in University events at the request of University authorities, and compelling circumstances beyond your control. ***Religious observances and participation in University events should be documented well in advance.*** Make-up exam requests should be directed to the professor.

Exam Re-grade Policy: If, after going over your exam and the exam solutions, you believe some of your solutions were more correct than originally judged to be, you may submit, ***in writing***, an exam re-grade request. Your re-grade request must specify which solutions(s)

you believe were not graded appropriately and a ***substantive explanation*** for why you believe your solutions is more correct than originally judged (thus, re-grade requests than consist of essentially nothing more than "I think I should have received more points on this question" will not be considered). Your entire exam is subject to re-grade. ***Exam re-grade requests are due no later than one week (7 calendar days) after exams are returned*** – this deadline applies even if you are not present in class the day graded exams are returned (it is your responsibility to pick up your graded exams in a timely manner).

Communication: Virtually all course material will be posted on the course website. The University has adopted email as the primary means of communication outside the classroom, and I will use it, if need be, to inform you of updates to the course. Students are responsible for updating their current email address via the appropriate link on http://www.testudo.umd.edu/Registrar.html and checking the course website (on Blackboard) regularly for new information.

Accommodations: Students who require special accommodations for exams must get in touch with the professor within the ***first two weeks*** of class.

Academic Integrity: The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards applicable to all undergraduate students, and you are responsible for upholding these standards as you complete assignments and take exams in this course. Please make yourself aware of the consequences of cheating, fabrication, and plagiarism. For more information see www.studenthonorcouncil.umd.edu
Outside help for assignments and projects without of proper citation is unacceptable and is subject to punitive consequences.

Copyrights: Course materials are copyrighted. Hence, selling or distributing copies or modified copies of instructors' course materials or assisting another person or entity in selling or distributing those materials may be considered in violation of the University Code of Student Conduct, Part 9(k).

Outline of topics: The following is a sketch of topics we will cover this semester – it may be modified as the course progresses.

Week of May 29, 2013

Basic Math Review
Required Reading: *Short Course*, Chapter -1

Representative Agent Macroeconomics
Required Reading: *Short Course*, Chapter 0

Microeconomics of Consumer Theory

- Utility Theory
- Budget Constraints
- Optimal Choice
- Lagrangian Optimization

Required Reading: *Short Course*, Chapter 1

Recommended Reading: Macroeconomics Fourth Edition by S. D. Williamson, Chapter 1&4

Week of June 3, 2013

Static Consumption-Leisure Model

- The Two "Goods": Consumption and Leisure
- Real Wages
- Aggregate Labor Supply Function
- Consumption Demand Function
- Lagrangian Analysis

Required Reading: *Short Course*, Chapter 2

The Consumption-Savings Model

- A Simple Intertemporal Utility Function
- Budget Constraints
- Optimal Intertemporal Choice – Consumption and Savings

Required Reading: *Short Course*, Chapter 3

Inflation and Interest Rates in the Consumption-Savings Model

- The Fisher Equation
- Real Interest Rate
- Consumption-Savings Model Revisited
- Aggregate Private Savings Function
- Lagrangian Analysis: Lifetime Lagrangian vs. Sequential Lagrangian

Required Reading: *Short Course*, Chapter 4

Recommended Reading: Williamson, Chapter 4, 5 and 8

Week of June 10, 2013

Intertemporal Consumption-Leisure Model

- Individual's Preferences
- Lifetime Budget Constraint
- Extension of Consumption-Leisure and Consumption-Savings Optimality Conditions Concepts to Infinite-Horizon

Required Reading: *Short Course*, Chapter 5

Infinite-Horizon Consumer Problem and Asset Pricing

- Basic Formulation

- Subjective Discount Factor
- Flow Budget Constraint
- Basic Asset Pricing Model
- Consumption-Savings Optimality in Infinite-Horizon Form
- Steady-State Real Interest Rate

Required Reading: *Short Course*, Chapter 8

Recommended Reading: Williamson, Chapter 4, 5 and 8

MIDTERM EXAM: Monday, June 17, 2013 (regular lecture time and location)

Week of June 17, 2013

Firms: Labor Demand, Investment Demand, and Aggregate Supply

- Aggregate Production Function
- Labor Demand
- Investment Demand
- Cobb-Douglas Production Function
- Production Function Shocks

Required Reading: *Short Course*, Chapter 6

Economic Growth and Solow Model

- Kaldor's Stylized Facts
- Discrete-Time Solow Model

Required Reading: *Lecture Notes on Solow Model*

History of Macroeconomics

- The Rise of Macroeconomics
- Keynesianism
- The Macro-econometric Models
- The Phillips Curve
- The Breakdown of Macroeconomic Theory and Policy in the 1970's
- The Lucas Critique
- The Real Business Cycle Revolution

Required Reading: Nobel Lectures by Edward Prescott, Finn Kydland, Robert Lucas, and Robert Solow; essays by N. Greg Mankiw and George Akerlof

Real Business Cycle Theory

- The RBC Technology Shock
- Cobb-Douglas Production Function
- Technology Accounting
- Technology Shocks and Aggregate Fluctuations – An Overview
- Technology, Factor Prices, and Output

- Effects on Consumption-Leisure Margin
- Effects on Consumption-Savings Margin
- Putting it Together – Business Cycle Fluctuations

Required Reading: *Short Course*, Chapter 13

Recommended Reading: Williamson, Chapter 12, 13, (optional) 18, and Appendix (pages 664-687)

The Following Contents Subject to Change based on the Timing of the Earlier Parts of the Class

The Phillips Curve

- Nominal Rigidities and the Short-Run Phillips Curve
- The Long-Run Phillips Curve
- The Great Breakdown of Macroeconomic Theory

Optional Reading: *Short Course*, Chapter 11

New Keynesian Economics

- Differentiated Goods and the Consumption Aggregator
- Monopolistically Competitive Firms
- The Aggregate Price Level and Aggregate Consumption Demand
- Staggered Price-Setting
- Critique of New Keynesian Theory
- Appendix: Theories of Price Stickiness

Optional Reading: *Short Course*, Chapter 12 (including "Menu Cost" topic in Appendix)

Week of June 24, 2013

Money in the Intertemporal Model

- Money-in-the-Utility-Function Model
- Linkage between Money Markets and Bond Markets
- Consumption-Money Optimality Condition
- Money Demand Function
- Neutrality and the RBC vs. New Keynesian Debate
- Monetarism: the Link Between Money Growth and Inflation

Required Reading: *Short Course*, Chapter 14

(Time Permitting)

Financial Markets Imperfections and Interactions with the Macroeconomy

- Informational Asymmetries in Financial Transactions
- "Financial Accelerator" Model

- Role of Collateral and Net Worth
- Risk Premium
- Shocks to Asset Prices and the "Adverse Feedback Loop"
- Policy Implications and Applications

Required Reading: Supplemental Notes and Readings

Recommended Reading: Williamson, Chapter 11&13

Week of July 1, 2013

Review of the Course

- Preparations for the Final Exam

FINAL EXAM: July 3, 2013 (regular lecture time and location)