



Yeshiva University

M.Q.E.

Macroeconomics I

ECON 5103

Fall 2015

Syllabus

Course description

This is the first course in the macroeconomics sequence for the Master's in Quantitative Economics. Research in quantitative macroeconomics over the last 70 years has brought us important progress in understanding why countries' economies grow, why they experience booms and recessions, and how different countries' economies are linked. Practicing macroeconomists, both in research, in government, in multinational organizations, and in business firms use these models to organize their thinking about these topics. However, there is still plenty of room for work since these models are highly imperfect in many ways. Therefore, the focus of this course will be to learn the basic models of growth and business cycles well enough to understand how to work with them and to understand what they explain convincingly and in what dimensions they fail.

Textbooks

1. Required: David Romer, *Advanced Macroeconomics*, McGraw-Hill/Irwin, fourth edition (2011). This book will also be the textbook for the second macroeconomics course. I will supplement the textbook with readings from the original papers and from other texts. We will cover the material in chapters 1-5 from the Romer text; if time, we will also cover chapter 10. You should purchase this book. Please make sure to purchase the fourth edition.
2. Recommended: Daron Acemoglu, *Introduction to Modern Economic Growth*, Princeton University Press (2009). This book will be used as a reference but you probably do not need to purchase it since we will only use it occasionally and since it is available at the library.

Both these books will be on reserve at the library on the Beren campus, and are available for overnight loan. I will also make extensive lecture notes available.

Grading

Assessment will be based on four components: frequent homework assignments, in-class participation, two midterm exams, and a final exam.

Homework is worth	20% of the course grade,
In-class participation	20%
Each exam	20%

Exams

- The *midterm exams* will be held in class on Monday October 12 and Wednesday November 11.
- The *final exam* will be held during the final exam week (final date to be confirmed).

The exams are not cumulative except to the extent that this is unavoidable. That is, the final exam will not directly cover material from the midterm (but it is unavoidable to have some overlap because we continue to build on the material from the first half of the semester in the second half of the semester).

Each exam will consist of both algebraic questions requiring you to show your ability to manipulate the models we study, as well as of interpretative questions asking you to place the issues studied in the course in a bigger picture. (For example, I might ask why a particular paper's contribution is important or interesting.) Success on a quantitative or algebraic question requires you to be able to set up a model mathematically or to complete an algebraic derivation, and grading reflects the extent to which you can do this. On the more interpretative questions, success requires you to be able to explain intuition (in which case the clearer and more informative, the better) place in context the issues we study, and so a better answer is one which is both broader (and so answers the question in greater generality) or deeper (and so highlights features of the economic situation that go above and beyond the most obvious responses).

A minimum passing standard is that you should successfully solve the majority of the quantitative questions as well as be able to explain the intuition.

Note that memorizing homework or past exam questions and answers has not proved to be a successful strategy for doing well in my exams (although doing old exam questions as practice certainly doesn't hurt). I almost never repeat homework exercises or old exam questions in future exams, and I try to test understanding much more than the ability to repeat derivations from in class. The past exams from the 2012, 2013 and 2014 versions of the course are available on the course website to assist you in your learning. There was only one midterm exam in each of those years.

Homework

Homework will consist of a mixture of algebraic problems, numerical exercises requiring some programming, and more interpretative questions. You are encouraged to work together with other students on solving the problems, but you need to submit individual work; please write on your homework the names of any students you worked with on any assignment. For the more interpretative questions, I expect that you will write your own individual answers, perhaps after group discussion.

Class participation

I expect and require you to participate actively in class.

In advance of each day's class, I will tell you the precise material that we will cover. I will expect you to study that material on your own, or in groups, however you like, before the time of the class. If there are questions, I will be happy to answer them before the class.

When each class begins, I will start by asking whether there are any questions on the material that you have studied. After I have answered your questions, I will call the name of a randomly chosen student. I will ask that student to explain some of the material that you have studied for that class to me and to the rest of the class. I will grade this on a scale of 5 each time you do this. I will choose one, two, or more students to explain material each class.

After this is completed, we will use any additional class time to discuss the class material in more depth, or to work through example questions similar to homework and exam questions.

If you are absent when your name is called, you will get a score of 0 for that participation grade.

Administrative details

Instructor: Dr. William Hawkins

Classroom: 215 Lexington Ave., Room TBA

Class Time: Mondays and Wednesdays, 10:25 am -11:40 am

Email: whawkins@yu.edu

Office: 215 Lex. Room 711

Office Hours: Class days 2-3:15pm, and at other times by appointment.

Angel

The course website can be accessed via Angel at <https://yu.elearning.yu.edu/default.asp>. I will post course materials, including homework assignments, here. The reading list will be available as a separate document which will be updated in Angel as we continue through the class. Additional required and recommended readings from the research literature will be indicated during the semester. You will be expected to read the required papers; the recommended readings will add to your understanding, but will not be examined directly.

Topics to be covered

The first half of the course (roughly 15 classes) focuses on long-run growth. Chicago economist and Nobel laureate Robert E. Lucas, Jr. famously wrote in his 1988 paper "On the Mechanics of Economic Development":

"Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia's or Egypt's? If so, what, exactly? If not, what is it about the 'nature of India' that makes it so? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else."

The goal of this part of the course is to cover the models that macroeconomists use to organize their thinking about long-run growth. We begin with the classic Solow-Swan model which helps us set up the tools for analyzing dynamic macro models in continuous time, but which makes an important simplification of assuming that the saving rate is exogenous.

We move on to the Ramsey-Cass-Koopmans model of optimal growth which endogenizes saving, and we find that in some ways the results are similar; in other ways, interestingly different, deeper, and more revealing.

We then discuss the Diamond overlapping generations model, introducing the realistic feature that agents have finite lives; this is the basic framework now used for thinking about issues like the macroeconomic effects of social security.

Finally, we move on to studying models of endogenous growth. We will relate the models that we study to evidence throughout this section of the course, thinking about what the models are good at explaining and what they are less successful at.

The second main part of the course (roughly 10 classes) focuses on business cycle fluctuations. After an introductory lecture looking at the empirical properties of U.S. business cycles, we focus on the real business cycle (RBC) model that has become for many economists the benchmark against which all other models of business cycles are to be judged. We see that the model succeeds in some dimensions remarkably well, and in others fails in very interesting ways. We will study not just the most basic real business cycle model, but will also consider generalizations that allow the model to account for more facts (so, if there is time, we will study the benchmark international real business cycle model of Backus, Kehoe, and Kydland).