

## Intermediate Economics II: Macroeconomics

Economics 512: ONLINE

Spring 2015

**Purdue University**  
**Krannert School of Management**  
**Department of Economics**

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### **Prerequisites**

Working knowledge of the following fields of Mathematics (the course opens with a brief review of mathematics):

- **Multivariate calculus**  
Free online material for this course can be found at  
<http://www.saylor.org/courses/ma103/>
- **Matrix algebra**  
Free online material for this course can be found at  
<http://www.saylor.org/courses/ma211/>

### **Course description**

The course will introduce the major economic models and analytical tools used by macroeconomists and policymakers to assess and implement macroeconomic policies. The goals of policymakers are twofold: efficiency and growth. In order to achieve these goals, policymakers must understand how the policies, combined with other institutional features present in the economy, affect the macroeconomic variables. This requires a theory about how the decisions of consumers and firms are affected by prices and policy, and how market prices respond to shocks.

For this reason, the course focuses on macroeconomic models that are micro-founded, meaning that decisions are made at the household and firm level by households and firms that solve constrained optimization problems.

Different than traditional courses in macroeconomics, this course introduces the important concepts in financial economics in order to be able to understand the relationship between financial markets and the real economy. Only with these connections is it possible to assess the recent global financial crisis of 2007-2008.

## **Learning outcomes**

- Analyze economic data and synthesize the findings into coherent policy recommendations.
- Develop the necessary tools of economic modeling and apply the theoretical concepts to applications from the real world.
- Design policy to be able to confront an economic friction (or combination of economic frictions) and understand how policy can mitigate the effects of economic crises.

## **Course website**

All of the course material can be found on the Sharepoint site created for the course:

<https://intra.krannert.purdue.edu/programs/ms-econ/2014/ECON-51200/Pages/Home.aspx>

The website contains the following course materials:

- **Video lectures**  
The video lectures contain all macroeconomic models and data analysis techniques for the class, organized into brief 10-minute snippets.
- **Course text**  
The course text is a complement to the video lectures
- **Homework problems**  
For each topic, I will assign a set of problems for students to complete at home. Student submissions must be in pdf format and uploaded onto the course Sharepoint site.
- **Case studies**  
For most topics, students are required to complete a case study. The case study assignments will be posted on the course Sharepoint site.
- **Quizzes**  
For the first two topics, students must complete a multiple-choice online quiz. The quizzes can be accessed on the course Sharepoint site.

## **Course structure (5 topics)**

The course will contain 5 topics.

### **Topic 1: Macroeconomic Accounting (Weeks 1-3)**

Chapter 1 in the course text

Watch videos in Mathematical Preliminaries and Chapter 1: Macroeconomic Accounting

Plan to host online office hours (on Google hangout):

Wednesday, January 21      7-10 pm (EST)

Thursday, January 22      7-10 pm (EST)

Thursday, January 22      8-9 am (EST)  
Friday, January 23      8-9 am (EST)

Friday, January 23 (5 pm)    **Homework 1 due**  
Case study sign-up e-mail goes out

Students will sign up for one of the following case study presentation sessions:

Wednesday, January 28      7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EST)  
Thursday, January 29      7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EST)

Thursday, January 29      8:00-8:45 am (EST)  
Friday, January 30      8:00-8:45 am (EST)

Friday, January 30 (9 pm)    **Deadline to complete Quiz 1 (online)**

### **Topic 2: Microfoundations (Week 4)<sup>1</sup>**

Chapter 2 in the course text

Watch videos in Chapter 2: Microfoundations

Plan to host online office hours (on Google hangout):

Wednesday, February 4      7-10 pm (EST)  
Thursday, February 5      7-10 pm (EST)

Thursday, February 5      8-9 am (EST)  
Friday, February 6      8-9 am (EST)

Friday, February 6 (9 pm)    **Deadline to complete Quiz 2 (online)**

### **Topic 3: Growth Theory (Weeks 5-7)**

Chapter 3 in the course text

Watch videos in Chapter 3: Growth Theory

Plan to host online office hours (on Google hangout):

Wednesday, February 18      7-10 pm (EST)  
Thursday, February 19      7-10 pm (EST)

Thursday, February 19      8-9 am (EST)  
Friday, February 20      8-9 am (EST)

Friday, February 20 (5 pm)    **Homework 3 due**  
Case study sign-up e-mail goes out

Students will sign up for one of the following case study presentation sessions:

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<sup>1</sup> There is no Homework 2.

Wednesday, February 25 7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EST)  
Thursday, February 26 7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EST)

Thursday, February 26 8:00-8:45 am (EST)  
Friday, February 27 8:00-8:45 am (EST)

#### **Topic 4: Monetary Theory (Weeks 8-10)**

Chapter 4 in the course text

Watch videos in Chapter 4: Monetary Theory

Plan to host online office hours (on Google hangout):

Wednesday, March 11 7-10 pm (EDT)  
Thursday, March 12 7-10 pm (EDT)

Thursday, March 12 8-9 am (EDT)  
Friday, March 13 8-9 am (EDT)

Friday, March 13 (5 pm) **Homework 4 due**  
Case study sign-up e-mail goes out

March 14-22 SPRING BREAK

Students will sign up for one of the following case study presentation sessions:

Wednesday, March 25 7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EDT)  
Thursday, March 26 7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EDT)

Thursday, March 26 8:00-8:45 am (EDT)  
Friday, March 27 8:00-8:45 am (EDT)

#### **Topic 5: Financial Crisis (Weeks 11-15)**

Chapters 5-7 in the course text

Watch videos in Chapter 5: Real Business Cycle Model, Chapter 6: New Keynesian Model, and Chapter 7: Leverage Cycle Model

Plan to host online office hours (on Google hangout):

Sunday, April 12 7-10 pm (EDT)  
Monday, April 13 7-10 pm (EDT)

Monday, April 13 8-9 am (EDT)  
Tuesday, April 14 8-9 am (EDT)

Tuesday, April 14 (5 pm) **Homework 5 due**  
Case study sign-up e-mail goes out

Students will sign up for one of the following case study presentation sessions:

Wednesday, April 22 7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EDT)

Thursday, April 23 7:00-7:45 pm, 8:00-8:45 pm, 9:00-9:45 pm (EDT)

Thursday, April 23 8:00-8:45 am (EDT)

Friday, April 24 8:00-8:45 am (EDT)

Friday, May 1 (9 pm) Deadline to submit Financial Crisis Paper

### **Final Exam**

TBA: between Monday, May 4 and Saturday, May 9

### **Methodology**

The course will be based on a series of online lectures and supported by the course text.

The course material is reinforced by:

#### *1) Homework*

Homework problems are assigned for Topics 1, 3, 4, and 5.

Homework problems must be submitted as a pdf and uploaded on the course Sharepoint site.

Homework problems must be submitted by 5 pm Eastern Time (United States) on the due date.

Each exercise is graded on a 5-point scale based on correctness, with partial credit given as a strictly increasing function of effort.

Solutions to selected homework problems will be made available as videos on the course website.

#### *2) Quizzes*

For Topics 1 and 2, students will complete an online quiz. The quiz can be accessed on the course Sharepoint site.

The quiz is automatically timed and will close when the time runs out. Students will have 30 minutes to complete a quiz.

All quiz questions are multiple-choice. Each quiz question is worth 1-point, with correct responses receiving full credit and incorrect responses receiving 0 points.

For the quizzes, students are free to use any course materials, but are forbidden from using assistance from another human being.

The quiz questions are identical for all students, but the numbers in the questions are randomly selected.

### 3) *Financial Crisis Paper*

The course paper on the Financial Crisis is due by 9 pm on Friday, May 1. The paper must be submitted as a pdf on the course Sharepoint site.

The paper is a written report of the Topic 5 case study presentation. The paper must address all questions asked in the case study assignment.

The paper must satisfy the following requirements:

- 3-5 pages in length
- 1" margins on all sides
- 1.5 line spacing
- Figures, charts, and tables contained in an Appendix (which does not count toward the page limit)
- As with the presentation, the total number of figures, charts, and tables cannot exceed 3

### 4) *Case Studies*

For Topics 1, 3, 4, and 5, students will work individually to complete a case study.

During the Case Study Selection Process, students will indicate which case study they wish to work on. Students will also sign up for a time/date 45-minute slot.

Each 45-minute slot will consist of 3 students, each completing a different case study topic. Each student will deliver a 10-minute oral policy assessment, followed by 5 minutes of question and answer.

The total time for all 3 presentations is 45 minutes. All students must be present (on the video chat) for this entire period.

The students not presenting are responsible for posing questions to the presenter during the question and answer session.

Students are not allowed to use slides, but are permitted to provide the audience (the instructor plus the two classmates) with figures, charts, and tables (whose total number cannot exceed 3).

Further details about the requirements for the case studies can be found in the document "Grading Rubric":

[https://intra.krannert.purdue.edu/programs/ms-econ/2014/ECON-51200/Files/Case\\_Study\\_Presentation.pdf](https://intra.krannert.purdue.edu/programs/ms-econ/2014/ECON-51200/Files/Case_Study_Presentation.pdf)

5) *Final Exam*

Exam week at Purdue extends from Monday, May 4 through Saturday, May 9.

The exam is closed notes and closed books. The exam will be cumulative, but will focus on material in Topics 3, 4, and 5. Students are permitted 120 minutes to complete the exam. A make-up exam will not be given.

**Assessment**

Homework	15%
Quizzes	10%
Paper	10%
Case Studies	40%
Final Exam	25%