



**Department of Economics  
Hong Kong University of Science and Technology**

**Economics 5140  
Macroeconomic Analysis  
Fall 2022**

**Lecture: Jenny Xu**

**Office Number: LSK 6071**

**Phone: 2358-7604**

**Time and Venue: Tuesday/Thursday 1:00-2:50 pm, LSK1010**

**Please go to Canvas to find course related material.**

**Office Hours:**

**Mondays, 3:00-4:00 pm**

**or by appointment**

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*Office Hour: TBA.*

*Office Number: TBA*

***Course Description:***

This course gives an examination of macroeconomic theory, which provides the foundations for the analysis and the design of macroeconomic policies. The course aims to make students familiar with formal analytical tools in macroeconomics, including overlapping-generation models, infinite-horizon models with representative agents, dynamic general equilibrium approach. During the coursework, we apply these frameworks to explore quantitatively and empirically a broad set of economic questions regarding economic growth/development and business cycles.

The course starts with the introduction of some tools, including the general equilibrium and simple dynamic models. Then it proceeds with the theory of economic growth, with a particular emphasis on the Solow growth model, Ramsey model and models with endogenous technical progress. Macroeconomic fluctuations, especially the real-business-cycles theory, are taken up next. A treatment of the microeconomic foundations of nominal rigidities, consumption and investment prepares the ground for a detailed analysis of macroeconomic policies. Then we will focus on the monetary theory and policy, its short-run and long-run effects, the transmission

mechanism and the case for policy rules. The main focus in the final part of the course is on open economy macroeconomics, including the determination of exchange rate, the current account adjustment and the discussion of exchange rate regimes.

### ***Learning Outcomes***

**Upon successful completion of this course, you should be able to:**

1. Have a general knowledge of macroeconomics. Describe the main questions in macroeconomics and the main components of standard Macroeconomic theories. Explain the impact of each key component and the consequence of including them; and critique the applicability of models; (SILO #1)
2. Use theories and knowledge from macroeconomics to understand and explain economic and monetary policies, trade, and economic growth. (SILO #2)
3. Grasp mathematical methods related to static optimization, and dynamic optimization. (SILO #3)
4. Locate, gather, organize and use appropriate information for macroeconomic studies. (SILO #4)

### ***Teaching Approach***

**This course is primarily delivered through lectures and class discussion.**

<b>Teaching and Learning Activities</b>	<b>Roles in the Course</b>	<b>Course Learning Outcome addressed</b>
Lectures with in class discussions	Explain key concepts and models to students	1, 2, 3, 4
Homework assignments	Practice problem solving, apply models, and locate and analyze data to solve economic issues	2,3, 4

### ***Required Textbook:***

Our **required textbook** is David Romer, *Advanced Macroeconomics* 4<sup>th</sup> Edition. McGraw-Hill, 2012.

For open economy part,

Schmitt-Grohe, Stephanie, Martin Uribe and Michael Woodford, *International Macroeconomics*, (here after, SUW)

textbook and slides are available at

[www.columbia.edu/~mu2166/UIM/](http://www.columbia.edu/~mu2166/UIM/)

**Lecture Notes:** I will post power point slides for each chapter. However, during the lecture I will give more detailed explanation. Each student is responsible for lectures missed due to absences. Thus, it is suggested that each student secure notes from a student who attended the class. **Use the lecture notes as your main reference for assignments and preparation of exams.**

### ***Course Outline:***

Part I: Outline of the course and Review of basic tools:

1. Issues, Models and Techniques (Lecture Notes)
2. Simple Dynamic Stochastic General Equilibrium Models (Lecture Notes)

Part II: Growth

1. Solow Growth Model (Lecture Notes, Romer, Chapter 1)
2. Ramsey Model (Romer, Chapter 2)
3. Endogenous Growth (Romer, Chapter 3)

Part III: Fluctuations

1. Real business cycle models (Romer, Chapter 4)
2. Money, Nominal Rigidity and New Keynesian models of Fluctuations (Lecture Notes)

Part V: Monetary Policies

1. Goals of Monetary Policy and Zero Lower Bound (Lecture Notes)
2. Yield Curve and Monetary Policy (Lecture Notes)

Part V: Open Economy Macroeconomics

1. Mundell-Fleming Model (Lecture Notes)
2. Current account sustainability and an intertemporal theory of Current Account (Slides, SUW, Chapter 2 and 3)

*Remark: The above outline is highly ambitious; it is very likely not all topics will be covered.*

**Grading Policy:**

<b>Assignments</b> -----	<b>20%</b>
<b>Midterm Exam</b> -----	<b>35%</b>
<b>Final Exam</b> -----	<b>45%</b>

1. There will be four Problem Sets, each worth 5% of your final grade. They will be posted in the Canvas course website. Problem sets should be handed in on or before the due date. In order to ensure the timely posting of the answer keys, **no late problem sets will be accepted.**
2. Midterm is scheduled in class on **Thursday, October 13rd, 2022.** There will be no make-up midterm exams. If for any reason, you cannot write the exam, please let me know in advance and the weight for the midterm will be shifted to the final.
3. Exams are closed book and closed notes. You can request a review of the grade within two weeks after the exam is returned to you. After that period grades can NOT be revised.