Economics 401A: Advanced Macroeconomics
Winter 2021

Instructor: Yu-chin Chen
Class Time and Location: MW 8:30-10:20AM, via Zoom
Course Office Hours: W 10:30-11:30 or by appointment
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Website: UW Canvas

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Course Description

This course explores modern theories of macroeconomic fluctuations. The goal is to introduce students to the seminal frameworks of contemporary macroeconomics and equip them with relevant analytical and empirical techniques for understanding advanced macroeconomic analyses. The course will cover topics from the monetary theory of business cycles, monopolistic competition, dynamics of price adjustments, financial frictions, labor market imperfections, consumption theories, and through group projects, provide students opportunities to explore additional topics such as optimal monetary policy, dynamic stochastic general equilibrium (DSGE) analyses, COVID-19, and so on.

Prerequisites

The course will cover a sequence of mathematical models. This will require familiarity with multivariate calculus and constrained optimization. Techniques such as using the chain rule, setting up a Lagrangian, taking logarithms of functions of multiple variables and differentiating must be familiar to you. If you have forgotten how to do these things, you should review these concepts as soon as possible. The only other prerequisite is Intermediate Macroeconomics (ECON 301), with a minimum grade of 2.0.

Group Work

Working in groups is <u>highly encouraged</u>. Study groups are encouraged for assignments and for exam preparation. However, you must submit your own individual write-up for all assignments. All exams/quizzes will be based on individual evaluations; no collaborations are allowed.

Course Textbook

- (Required) Romer, Advanced Macroeconomics, 5ed., McGraw Hill
- Additional supplementary material will be posted on Canvas

Assessments

- 4 Problem Sets (35%) – due via Canvas

There are four homework assignments to help you review and apply the material learned in lectures.

To facilitate student interactions during online learning, you will be assigned a study group for each homework. You are strongly encouraged to discuss answers with your group mates, but **you must submit individual write-ups, in your own words, as well as the names of your group-mates**. Assignment grades will be based on a 10-point scale. Six points will be awarded for completion; the remaining four will be assigned based on the quality of your answers. **In addition,** groups may be called on in class to explain certain problems.

- In-Class Group Discussion and Presentation (15%)

There will be occasional group discussion sessions to go over assigned readings and questions, as well as **a final group presentation, which will take place during the last week of class**. During the group discussions, you will get to discuss and work through problems collectively, so participation is important.

- Quizzes and Exams (50%)

There are **three quizzes** during the quarter and a final exam during final exam week; all are open book. Each quiz will take ~30 minutes to complete and counts towards 10% of your grade. They are designed to make sure you stay up-to-date on the material. The final exam (20%) is cumulative and on **Tue, Mar 16, from 8:30 – 10:20AM**. You will typically be allowed 5-10 extra minutes to turn in your work online.

If you cannot make an exam date, the following policy applies: major exceptions are only allowed in case of medical emergencies that concern either you or your family. In this case, please provide a certification by a doctor on the exam date (see Academic Conduct policies). If it is a quiz that you have to miss, its weight will be added to the final exam. If it is the final exam that you miss, you will need to take a make-up exam next quarter. This exam will be significantly harder than the exam at the end of this term, reflecting the fact that you have more time for preparation.

- Extra Credit (5%)

Students can receive 5% full credit for turning in their own answers to **seven** of the "Key Questions" from each lecture before the next class meeting. This is an easy way to get credits and also help you review the class material regularly. Under this option, the scores from the rest of the contributions will be rescaled to 95% total.

Academic Conduct Policy

The Economics Department supports the University policies regarding academic honesty and classroom behavior. Students of the course are expected to adhere to the University of Washington's Policy on Academic Honesty that can be found at https://depts.washington.edu/grading/pdf/AcademicResponsibility.pdf.

Course Topics

I. REVIEW AND INTRODUCTION
- Business Cycle Empirics
- Aggregate Demand, Aggregate Supply
- Expectations and Micro-Foundations

II. MONETARY THEORIES OF THE BUSINESS CYCLE
- Information Friction Models
- Nominal Rigidity Models & Dynamic Modeling of Price Adjustment
- Real Rigidity - Efficiency Wage Theory

III. DYNAMIC OPTIMIZATION AND AGGREGATE DEMAND
- Modern Consumption Models
- Credit Channel and Financial Friction

IV. INTRODUCTION TO DYNAMIC STOCHASTIC GENERAL EQUILIBRIUM MODELS
- Real Business Cycle Models
- New Keynesian Models
- Policy Applications