# UC Santa Barbara Economics PhD Program

# First Year Core Courses

# Suggested Schedule

#### **Fall Quarter**

- Economics 204A: "Macroeconomic Theory"
- Economics 210A: "Theory of Consumption and Production"
- Economics 241A: "Econometrics"

#### **Winter Quarter**

- Economics 204B: "Macroeconomic Theory"
- Economics 210B: "Introduction to Game Theory"
- Economics 241B: "Econometrics"

## **Spring Quarter**

- Economics 204C: "Macroeconomic Theory"
- Economics 210C: "Markets and Incentives"
- Economics 241C: "Econometrics"

In addition, all first-year PhD students are required to enroll in Economics 297: "Seminar on the Teaching of Economics."

# **Course Descriptions**

## Economics 204 A-C: "Macroeconomic Theory"

**Prerequisites:** Economics 210A; 1st Year PhD standing; Economics 204 course series must be taken in order starting with 204A

Macroeconomic Theory A-C form the three core Macroeconomic courses that all first year PhD students must complete to advance in the Economics graduate program at UCSB.

**Economics 204A:** Introduction to modern Macroeconomic Theory. It introduces students to the study of Economic Growth and Dynamic Optimization. Topics include the Solow growth model, the Neo-Classical growth model, and basic Overlapping Generations models.

**Economics 204B**: Emphasizes dynamic programming and introduces students to Arrow-Debreu Equilibria, Sequences of Markets Equilibria, Recursive Competitive Equilibria, and Real Business Cycle models. The First and Second Welfare theorems are also covered.

**Economics 204C:** Completes the sequence and emphasizes frictional markets. Incomplete markets, private/asymmetric information, and search and matching are all covered extensively.

Economics 210A: "Theory of Consumption and Production"

**Prerequisites:** Math 3A-C; Economics 104A-B; 1st year PhD standing

Focuses on Constrained Optimization, Consumer Theory and Theory of the Firm. Uncertainty, Risk and Expected Utility are also covered.

Economics 210B: "Introduction to Game Theory"

Prerequisites: Math 3A-C; Economics 104A-B; Economics 210A; 1st year PhD standing

Focuses on Non-Cooperative and Cooperative Game Theory, Bargaining and Auctions. Topics in Asymmetric Information are covered, including Adverse Selection, Signaling and Screening.

Economics 210C: "Markets and Incentives"

Prerequisites: Economics 210A; Economics 210B; 1st year PhD standing

Emphasizes Partial and General Equilibrium of competitive and non-competitive markets. Topics include Uncertainty, Welfare Theorems for Competitive Markets, Imperfect Competition, Externalities and Public Goods.

# Economics 241A-C: "Econometrics"

**Prerequisites:** Math 3A-C or equivalent; 1st year PhD standing; Economics 241 course series must be taken in order starting with 241A

**Economics 241A:** The Elements of Probability and Statistics for Econometrics are covered.

**Economics 241B:** Focuses on the intuition and theory underpinning estimation of single and multiple equation regression models. Students will also cover conducting original empirical research.

**Economics 241C:** Extension of the general linear model, dynamic model structure and limited dependent variable estimation.