

# **EC9604: Advanced Macroeconomics**

## **Department of Economics**

### **Western University**

**January 2024**

#### **General Information**

**Instructor:** Sergio Ocampo

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**Office Hours:** By appointment

**Teaching Assistant:** Shuning Li, sli2744@uwo.ca

#### **Class Information**

**Times:** Tuesday/Thursday 10:00am-11:30am

**Location:** FNB 3220

**Course website:** <https://owl.uwo.ca/portal>

**Graduate inquiries:** Room 4074 SSC or econ-gradcoordinator@uwo.ca or 519-661-3505

#### **Enrollment Restrictions:**

Enrollment in this course is restricted to graduate students in economics, as well as any student that has obtained special permission to enroll in this course from the course instructor as well as the Graduate Chair (or equivalent) from the student's home program.

#### **Course Timeline and Format**

The course will be in-person with two weekly lectures, Tuesdays and Thursdays 10:00-11:30am, and a weekly tutorial.

#### **Course Learning Outcomes**

The main objective is learn a variety of models used for applied macroeconomics research. The focus will be in models with heterogeneity on the household and firm side and the aggregate implications of such heterogeneity.

## **Textbook(s):**

There is no textbook for the course but each lecture will follow specific readings from textbooks and academic papers.

## **Topics and Reading List**

### **Week 1: Preliminaries**

- Reading [Hayes \(2017\)](#)
- Tuesday, Jan 16th: Markov Processes and Convergence
  - Math Camp Notes, Sections 20 and 24
  - SLP, Chapters 8, 11 and 12
  - L&S, Sections 2.2 and 2.3
- Thursday, Jan 18th: Recursive Competitive Equilibrium and Stationary Equilibrium
  - The neoclassical growth model and competitive equilibrium
  - The steady state in the neoclassical growth model
  - The stochastic neoclassical growth model and recursive competitive
  - Stationarity in the NGM
  - The Lucas Tree economy

### **Week 2: Heterogeneous Agent Models and the Wealth Distribution**

- Tuesday, Jan 23rd: The Bewley, Imrohoroglu, Hugget, Aiyagari Model
  - [Huggett \(1993\)](#), [Aiyagari \(1994\)](#), [Krusell and Smith \(1998\)](#)
  - [Cherrier, Duarte, and Saïdi \(2023\)](#)
- Thursday, Jan 25th: Wealth Distribution
  - [Stachurski and Akira Toda \(2019\)](#), [Stachurski and Akira Toda \(2020\)](#)
  - [Benhabib and Bisin \(2018\)](#)
  - [Gabaix \(2016\)](#)

### **Week 3: Heterogeneous Returns**

- Tuesday, Jan 30th: Return Heterogeneity and Production Risk
  - [Angeletos \(2007\)](#)

- Thursday, Feb 1st: Return Heterogeneity and Taxation
  - Guvenen, Kambourov, Kuruscu, and Ocampo (2023)

#### **Week 4: [Optional] Continuous Time Models**

- Tuesday, Feb 6th: Stochastic Calculus
  - Stochastic Calculus Notes, Sections 5-9
  - Stokey, Chapters 2 and 3
  - Dixit & Pindyck, Chapters 3 and 4
- Thursday, Feb 8th: Continuous Aiyagari
  - Achdou, Han, Lasry, Lions, and Moll (2022)

#### **Week 5: Imperfect Competition**

- Tuesday, Feb 13th: Monopolistic Competition
  - Dixit and Stiglitz (1977)
  - Dhingra and Morrow (2019)
  - Albrecht, Phelan, and Pretnar (2023)
- Thursday, Feb 15th: Oligopolistic Competition
  - Atkeson and Burstein (2008)
  - Edmond, Midrigan, and Xu (2015)
  - Berger, Herkenhoff, and Mongey (2022)

#### **Week 6: Reading Week**

#### **Week 7: Competition, Productivity and Misallocation**

- Tuesday, Feb 27th: The General Case
  - Herreño, Holguín, Ocampo, Salgado (2024)
  - Arkolakis & Morlacco Notes
- Thursday, Feb 29th: Misallocation
  - Hsieh and Klenow (2009)
  - Edmond, Midrigan, and Xu (2024)
  - Baqaee, Farhi, and Sangani (2023)
  - Hubmer and Restrepo (2023)

**Week 8: Exam Week****Week 9: One Sided Search**

- Tuesday, Mar 12th: McCall Model
  - [McCall \(1970\)](#)
- Thursday, Mar 14th: Ben Porath Model
  - [Ben-Porath \(1967\)](#)
  - Acemoglu (2009), Chapter 10

**Week 10: Two Sided Search**

- Tuesday, Mar 19th: DMP Model
  - [Rogerson, Shimer, and Wright \(2005\)](#)
- Thursday, Mar 21st: Sequential Bargaining
  - [Cahuc, Postel-Vinay, and Robin \(2006\)](#)

**Week 11: Wage Posting Model**

- Tuesday, Mar 26th: Burdett-Mortensen Model
  - [Burdett and Mortensen \(1998\)](#)
- Thursday, Mar 28th: Extensions
  - [Engbom and Moser \(2022\)](#)
  - [Morchio and Moser \(2023\)](#)

**Week 12: [Optional] Task-Based Models**

- Tuesday, Apr 2nd: Models of Wage Inequality
  - [Acemoglu and Autor \(2011\)](#)
- Thursday, Apr 4th: Automation
  - [Acemoglu and Restrepo \(2018\)](#), [Acemoglu and Restrepo \(2022\)](#)
  - [Moll, Rachel, and Restrepo \(2022\)](#)

## Evaluation:

There will be weekly problem sets and two exams.

Each exam will be 35 percent of the final grade and the problem sets will be equally weighted and account for the remaining 30 percent of the course grade.

All problem sets must be typed and can be done in groups of up to 2 people.

## References

- Acemoglu, Daron and David Autor. 2011. "Chapter 12 - Skills, Tasks and Technologies: Implications for Employment and Earnings." In *Handbook of Labor Economics*, vol. 4, edited by David Card and Orley Ashenfelter. Elsevier, 1043–1171. URL [https://doi.org/10.1016/S0169-7218\(11\)02410-5](https://doi.org/10.1016/S0169-7218(11)02410-5).
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- Aiyagari, S. Rao. 1994. "Uninsured Idiosyncratic Risk and Aggregate Saving." *The Quarterly Journal of Economics* 109 (3):659–684. URL <https://doi.org/10.2307/2118417>.
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- Burdett, Kenneth and Dale T. Mortensen. 1998. "Wage Differentials, Employer Size, and Unemployment." *International Economic Review* 39 (2):257–273. URL <https://doi.org/10.2307/2527292>.
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