ECON 202A: Macroeconomics (Second Half)

Fall, 2024

Section Syllabus

GSI: Kiyea Jin (She/Her)
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Office Hours: Friday 11am- 1pm (in-person), Evans 546

Time and Location

- Section 101: Wednesday 8am-10am, Hearst Field Annex B1
- Section 102: Friday 2pm-4pm, Stanley 179

Attendance

Attendance is encouraged but not mandatory. If you are enrolled in one section, you may attend the other if space is available. All section notes will be posted on bCourses before each section, allowing you to follow along even if you miss a class.

Section Overview

In the sections, we will discuss *numerical solutions using a finite-difference method for continuous-time heterogeneous agent models.* The following are useful references:

1. Benjamin Moll's website
2. Online Appendix for Achdou et al. (2022)
3. LeVeque, 2007, *"Finite Difference Methods for Ordinary and Partial Differential Equations: Steady-State and Time-dependent Problems."*
4. Candler, 1999, *"Finite Difference Methods for Continuous Time Dynamic Programming."*

Schedule (Subject to Change)

- **October 23, 25**: Discrete and Continuous-Time Dynamics & Introduction to Finite Difference Method

- **October 30, November 1**: Neoclassical Growth Model
- **November 6, 8**: Huggett Model (Partial Equilibrium)
- **November 13, 15**: Huggett Model (Kolmogorov Forward Equation and General Equilibrium)
- **November 20, 22**: Coding: Huggett Model
- **November 27, 29**: **No Section: Thanksgiving Break**
- **December 4, 6**: TBD

Communication and Office Hours

Feel free to email me with any questions. Please include [ECON 202A] at the beginning of the subject line. Please allow up to two business days for a response.

Office hours are held on Fridays from 11am to 1pm in Evans 546. If this time doesn't work for you, please email me to arrange an alternative meeting. I would appreciate it if you could email your questions in advance (especially if they involve coding—please attach the relevant code) so that I can review them beforehand.

Problem Sets

Problem sets will be distributed weekly and are due every Tuesday by 2 p.m. Submissions should be made via Gradescope or in person before class. Ensure that each question is properly tagged when submitting. Late submissions will not be accepted. For coding problems, do not upload the program file directly. Instead, you have two options for submitting your code: either copy the code into a text file (e.g., .txt, LaTeX, Word, etc.) or submit a PDF version. If using LaTeX, I recommend the "listings" package for formatting your code.

All in-class coding demonstrations will be conducted using MATLAB, and some assignments may require you to adapt pre-written MATLAB code that will not be available in other languages. Berkeley offers free access to MATLAB through a campus license.[1] While you are welcome to use other programming languages, I will only be able to provide support for MATLAB.

Disability-Related Accommodations

If you are registered with the Disabled Students' Program (DSP) and need disability-related accommodations, please let me know as soon as possible so I can make appropriate arrangements. If you need accommodations but are not registered with DSP, please contact DSP by phone at (510) 642-0518 (voice), (510) 642-6376 (TTY), or e-mail dsp@berkelely.edu. For more information, please visit the DSP website at https://dsp.berkeley.edu/.

[1] Please refer to `https://software.berkeley.edu/matlab`.

UC Berkeley Honor Code

The student community at UC Berkeley has adopted the following Honor Code: "As a member of the UC Berkeley community, I act with honesty, integrity, and respect for others." The hope and expectation is that you will adhere to this code. For more information about the UC Berkeley Honor Code, please go to https://teaching.berkeley.edu/berkeley-honor-code.

Academic Integrity

University policies on academic integrity will be strictly enforced. You may also wish to read the Berkeley Campus Code of Student Conduct available at https://studentaffairs.berkeley.edu/student-affairs-policies/. If you have any questions or concerns, please do not hesitate to speak with me.

References

Achdou, Y., J. Han, J.-M. Lasry, P.-L. Lions, and B. Moll (2022). Income and wealth distribution in macroeconomics: A continuous-time approach. *The review of economic studies 89*(1), 45–86.

Candler, G. V. (1999). Finite-difference methods for dynamic programming problems. *Computational Methods for the Study of Dynamic Economies*.

LeVeque, R. J. (2007). *Finite Difference Methods for Ordinary and Partial Differential Equations: Steady-State and Time-dependent Problems*. Philadelphia, PA: Society for Industrial and Applied Mathematics.