OHIO UNIVERSITY
Department of Economics
Econ 6041 Advanced Macroeconomic Theory II
Spring 2023

Professor: Roberto Duncan

Contact information: duncanr1@ohio.edu. Office: 349 Bentley Hall Annex.

Course meetings: Mo, We 4:35 PM to 5:55 PM, Bentley Hall 210.

Class number: 9081

Office hours: Mo, We 1:00 to 2:00 PM, or by appointment. We meet via Teams.

Description and learning objectives: The course provides students with a background in macroeconometrics at graduate level. After completing this course, the student will be able to: (1) understand endogeneity and instrumental variable in panel data estimation; (2) estimate and apply dynamic panel data models and the synthetic control method; (3) use and estimate time series models to forecast economic variables and do forecast evaluation; (4) solve dynamic equilibrium models for macroeconomic analysis and policy evaluation; (5) formulate a well-organized economic argument and hypothesis, and communicate them effectively in written and spoken form.

Course webpage: I will upload lecture notes/slides, syllabus, homeworks, and solutions on Blackboard. The lectures, classroom activities, and all materials associated with this class and developed by the instructor are copyrighted in the name of Roberto E. Duncan on this date (1/10/2023).

Reading materials: The lecture notes will be the base of our classes so you can print them off and bring them to class. Students are expected to have completed the readings prior to lecture. Lectures notes will be based on

- Acemoglu, D. 2007. Introduction to Modern Economic Growth. MIT. (Chapters 1-3, 5, 11). [AD]

- Barro, R. J. & Sala-i-Martin, X. 2003. Economic Growth. Second edition. Cambridge: MIT Press. [B]

- Diebold, F. 2007. Elements of Forecasting. Fourth Edition, South-Western College Publishing. [DF]

- Duncan, R. 2020. Lecture Notes on Economic Growth, Ohio University. [DR]

- Gali, J. 2008. Monetary Policy, Inflation, and the Business Cycle. Princeton University Press. [GJ]

- Greene, W. 2011. Econometric Analysis, 7th Edition. Prentice Hall (ISBN-10: 0131395386). [G]

- Hansen, B. 2021. Econometrics. University of Wisconsin-Madison (manuscript). [Bruce]

  (www.ssc.wisc.edu/~bhansen/econometrics)

- Heijdra, Ben J. 2009. Foundations of Modern Macroeconomics (2nd ed.). Oxford University Press. [H]

- Romer, David. 2005. Advanced macroeconomics (3rd edition). McGraw-Hill/Irwin. [R]

- Wickens, Mike. 2008. Macroeconomic Theory: A Dynamic General Equilibrium Approach. Princeton University Press. [W]

Exams and project: There will be one midterm and one final exam. Make-up exams will only be given under exceptional circumstances. Notice must be given before the date of the exam (as early as possible). If there is a make-up, this might be a cumulative oral exam. The final exam is on Monday, May 1st, at 4:40 p.m. The research project will be an empirical application of the techniques discussed in class in the form of a short paper.

Homeworks: Homeworks will be posted on Bb. There is a late-homework policy. Late homeworks will be accepted for partial credit, but only up to two days after the due date. Every day the discount will be 15%.

If, for example, you turn it in a few minutes later or up to 24 hours later than the due date and time, then your maximum score will be computed over 85% of the original total points. If you plan to turn in a late homework you must coordinate with me by email to give it to me in person (do not use any mailbox). The late homework policy does not apply for partial answers. You are encouraged to discuss homeworks with other students. However, you, *not* your group, must turn in *your own* solution to each homework problem. If you solve a homework with a classmate or group, you must cite that on the front of your homework. It is a mandatory honor code. Handwritten solutions are accepted. Just make sure that they are legible, neat, and organized, otherwise you might lose points.

Grading: The course grade is based on the exams, a project, and homeworks. The final score is computed as FS=0.30(Project)+0.25(Midterm Exam)+0.25(Final Exam)+0.20(Average of Homeworks). Grades will depend on the overall performance of the whole class. There is not a fixed scale to assign grades. The median grade of my previous courses has been some type of B and students required at least 50% of the score of the student with the maximum score in the course to get a passing grade (that is, C- at least). You have one week for any regrading request starting from the day that I give exams or homeworks back in class. If you were absent such a day you will need to visit me during office hours or set an appointment to get your exam or homework. To optimize time, regrading requests will be only written.

Attendance: Attendance at the lectures is not mandatory but highly recommendable. You are responsible for any announcement or material mentioned or assigned in class. If you miss a class, it is your responsibility to get notes and other relevant information from your classmates. **No classes nor office hours from March 13 to 17 (spring break)**.

Course outline: We will discuss about the following topics (not necessarily in this order):

- Growth models (Solow, Ramsey-Cass-Koopmans, endogenous growth models) [7 sessions]

- Time series econometrics [3s]

- Generalized method of moments and dynamic panel data models [4s]

- The synthetic control method [6s]

- Forecasting techniques and forecast evaluation [3s]

- Dynamic stochastic general equilibrium (DSGE) models (the New Keynesian model, the RBC model; if time allows) [3s]

Accommodations for students with a disability: Any student who suspects s/he may need an accommodation based on the impact of a disability should contact the class instructor privately to discuss the student's specific needs and provide written documentation from the Office of Student Accessibility Services. If the student is not yet registered as a student with a disability, s/he should contact the Office of Student Accessibility Services. Please contact me as soon as possible during the first week of class.

Preferred name policy: Students may provide a preferred name (or nickname) and pronoun in "My OHIO Student Center". You can also send me an email to let me know.

Academic misconduct: It is expected that students follow the OU Honor Code (`www.ohio.edu/students/honor_code`). Academic misconduct is a violation of the Ohio University Student Code of Conduct: "Dishonesty or deception in fulfilling academic requirements. It includes, but is not limited to cheating, plagiarism, un-permitted collaboration, forged attendance (when attendance is required), fabrication (e.g., use of invented information or falsification of research or other findings), using advantages not approved by the instructor (e.g., unauthorized review of a copy of an exam ahead of time), knowingly permitting another student to plagiarize or cheat from one's work, or submitting the same assignment in different courses without consent of the instructor. Note: An instructor may impose a grade penalty for academic misconduct and/or file a judicial referral." Types of academic misconduct will be discussed in lecture 1 and can be found at `www.ohio.edu/communitystandards/academic/students.cfm`.

COVID-19 Protocol [To be updated]

Based on Centers for Disease Control and Prevention COVID-19 Community Levels, the Athens Campus is currently at a medium COVID-19 community level. **Effective immediately, masks are recommended during scheduled class and class-related activities in classrooms**, laboratories, studios, clinical settings, other learning spaces, and the Child Development Center.

At low and medium COVID-19 community levels, masks may still be required in some settings:

—Clinical healthcare facilities including Campus Care
—COVID-19 testing facilities
—Where masks are not required, students, faculty, and staff who test positive or are exposed to COVID-19 must follow masking guidelines outlined in the OHIO COVID-19 Protocol.

Face covering exceptions on campuses where masks are required based on COVID-19 community level:

—Children under 2 years old.
—Any person while actively eating or drinking.
—In settings where it is not practicable or feasible to wear a face covering such as when receiving dental treatments or while swimming. Where working with equipment or in a process where wearing face coverings are impractical or dangerous, as determined by instructors or supervisors.
—Individuals who, due to extraordinary circumstances, claim and receive a written exemption from the University's face covering requirement through the appropriate university process.
—Employees, students, and visitors with a disability who are unable to wear a face covering and do not receive an approved exemption may request reasonable accommodations through the Office for University Accessibility.

Visit https://www.ohio.edu/coronavirus/safety-protocols-ppe/mask-policy for additional information.