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# Economic Growth, ECON 4794

## Spring 2025

T/Th 2:00-3:15 p.m. GUGG 205

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Professor: Carol H. Shiue

Office: Economics 206B

Office Hours: Tuesday & Thursday 3:20-4:50 pm

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### Objectives of the Course

The aim of this course is to synthesize recent ideas and approaches in economic growth and to survey leading explanations for the causes of growth. This course is organized into three substantive sections. The first examines the degree to which income variations across countries can be attributed to variations in factor accumulation, and the determinants of factor accumulation. In the second part of the course, we study the role of productivity and technology in explaining income differences. The third section explores the deeper or fundamental characteristics of countries that may underlie differences in factor accumulation and productivity among countries. We will supplement textbook material with articles about the economic history of country experiences and contemporary topics of interest.

### Prerequisites

Econ 1088 Math Tools for Economists II or equivalent.

Econ 3070 Intermediate Micro or Econ 3080 Intermediate Macro.

**Where to Find Course Materials** Electronic materials will be posted on Canvas in the Syllabus menu tab and Modules. Class notes are linked in the Canvas in the Class Notebook menu tab.

**Communication** Communication about classes and group projects will be through your university email account. Also, turn on Canvas notifications or check Canvas announcements regularly to make sure you receive all updates.

### Textbook

Economic Growth, 4<sup>rd</sup> edition, by Quamrul H. Ashraf and David N. Weil. Routledge.

## Course Requirements

This course emphasizes quantitative reasoning in application to questions of economic growth. We will focus on understanding economic modeling, the analysis of data, and applications to global events. Therefore, the format of classes will consist of lectures, in-class problem solving, and student presentation of articles and in-class discussion.

Your course grade will have the following components:

2 Midterms (20% each)	40 %
Student Presentation of an Article on the Syllabus	10 %
Country Analysis Paper	25 %
Final Exam	25 %

In summary, proctored exams will count for 65% of your grade and 35% will consist of projects and presentations.

**Midterms** There are two closed-book in-class midterms. These will be a combination of short-answer multiple choice and longer-answer questions. There are no makeup dates for missed midterms. If you miss a midterm due to a documented personal emergency, your grade will be reweighed by the final exam.

**Student Presentation of an Article on the Syllabus** Teams will be responsible for a presentation (about 30 minutes) of one article on the syllabus, plus discussion (about 10 minutes). You will be informed of the date of your assigned presentation a week in advance. The discussion will be based on each presenter crafting at least one question directed to the class to initiate a discussion about the article. The questions can be open-ended and can relate to anything mentioned in the paper that you think the class might be interested to discuss further, whether in the context of the paper or in the context of your own perspective(s). The goal is to generate further thoughts and class participation. Please email me your presentation slides in PDF or Powerpoint at least an hour before the start of class.

**Country Analysis Paper** This is a longer project that allows you to explore the economic growth of countries that interest you within the space of a 10-15 page written research paper. Students should work in groups of 3. Your paper will compare the growth performance of a country of your choice with the performance of any two other countries. Your goal is to assess the causal factors behind the performance of the country in question. For example, you may compare the growth performance of Columbia over the years 1970 to 2016 with that of two other countries in Latin America. Details about the project plus the scoring rubric will be given in the first weeks of the semester. In preparation for the project, you will need to do the following: 1) by **February 13**, research 3 countries that would be suitable for the project, 2) by **March 13**, turn in a 5-page preliminary draft in class. I will be meeting with students to discuss the draft and provide feedback. The paper is due on Canvas at **12 NOON on Thursday, May 1**. Students will give a brief and informal summary of their findings to the class.

**Final Exam** The Final Exam will be comprehensive, with a larger share of questions on material from the last third of the course. All students must take the final exam to pass the course. A total of 100 minutes has been allotted for the final exam, which has been scheduled by the registrar on **Sunday, May 4, 4:00-5:40 pm**.

Attendance will be taken frequently. Everyone will automatically get 3 excused absences, no questions asked. Beyond 3 classes, each recorded absence will negatively impact your final grade by 2-percentage points. If you miss a class, you are strongly encouraged to make an appointment with me to discuss specific questions about the material after you have obtained the class notes. Keep me informed of difficulties you are facing and be proactive by suggesting possible solutions.

**Policy on Late Work** Course policy on work turned in after posted deadlines is as follows. Late work will see a deduction of 15% per day late, for up to three days. E.g., an assignment that would have received 100% had it been handed in on time will receive instead an 85% if it is handed in at any time in the 24-hour period after the deadline, and a 70% if it is late by another 48-hours. After three days, the maximum achievable score is a 55%. There are no extra credit provisions.

**Policy on Electronic Devices** Unless we are actively using laptops as part of a class activity, electronic devices (cellphones, tablets, and laptops) should be stowed away for use until after class.

### **Institutional Policies: Classroom Behavior**

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, political affiliation, or political philosophy.

For more information, see the [classroom behavior policy](#), the [Student Code of Conduct](#), and the [Office of Institutional Equity and Compliance](#).

### **Requirements for Infectious Diseases**

Members of the CU Boulder community and visitors to campus must follow university, department, and building health and safety requirements and all public health orders to reduce the risk of spreading infectious diseases.

The CU Boulder campus is currently mask optional. However, if masks are again required in classrooms, students who fail to adhere to masking requirements will be asked to leave class. Students who do not leave class when asked or who refuse to comply with these requirements will be referred to Student Conduct & Conflict Resolution. Students who require accommodation because a disability prevents them from fulfilling safety measures related to infectious disease will be asked to follow the steps in the “Accommodation for Disabilities” statement on this syllabus.

For those who feel ill and think you might have COVID-19 or if you have tested positive for COVID-19, please stay home and follow the [further guidance of the Public Health Office](#). For those who have been in close contact with someone who has COVID-19 but do not have any symptoms and have not tested positive for COVID-19, you do not need to stay home.

## **Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation**

[Disability Services](#) determines accommodations based on documented disabilities in the academic environment. If you qualify for accommodations because of a disability, submit your accommodation letter from Disability Services to your faculty member in a timely manner so your needs can be addressed. Contact Disability Services at 303-492-8671 or [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu) for further assistance.

If you have a temporary medical condition or required medical isolation for which you require accommodation, notify the instructor immediately. Also see [Temporary Medical Conditions](#) on the Disability Services website.

## **Preferred Student Names and Pronouns**

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name.

## **Honor Code**

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the [Honor Code](#). Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: [honor@colorado.edu](mailto:honor@colorado.edu), 303-492-5550. Students found responsible for violating the [Honor Code](#) will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Visit [Honor Code](#) for more information on the academic integrity policy.

## **Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation**

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits [protected-class](#) discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner violence (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. These behaviors harm individuals and our community. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who believe they have been subjected to misconduct can contact OIEC at 303-492-2127 or email [cureport@colorado.edu](mailto:cureport@colorado.edu). Information about university policies, [reporting options](#), and support resources can be found on the [OIEC website](#).

Please know that faculty and graduate instructors have a responsibility to inform OIEC when they are made aware of incidents related to these policies regardless of when or where something occurred. This is to ensure that individuals impacted receive an outreach from OIEC about their options for addressing a concern and the support resources available. To learn more about reporting and support resources for a variety of issues, visit [Don't Ignore It](#).

### **Religious Holidays**

Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, students should notify me as soon as possible about conflicts due to religious observance.

See the [campus policy regarding religious observances](#) for full details.

## Topic Outline and Readings

The schedule below is an outline of the topics covered this semester and is subject to change based on class progress. All *Journal of Economic Perspectives* articles can be accessed at <https://www.aeaweb.org/journals/jep>. Other materials will be made available on Canvas.

### **I. Introduction and Preliminaries**

Chapter 1 and 2: Differences in the level and rate of income growth among countries. Chapter 13, pp. 413-423.

Theory: Working with growth rates; review of the logarithm function; inequality.

Readings:

- Ray, *Development Economics*, Ch 2.
- Lant Pritchett. 1997. "Divergence, Big Time," *Journal of Economic Perspectives*, 11(3).

**Student Presentation A:** Banerjee, Abhijit, V., and Esther Duflo. 2007. "The Economic Lives of the Poor." *Journal of Economic Perspectives*, 21 (1): 141–168.

**Student Presentation B:** Banerjee, Abhijit, V., and Esther Duflo. 2008. "What Is Middle Class about the Middle Classes around the World?" *Journal of Economic Perspectives*, 22 (2): 3–28.

**Student Presentation C:** Alvaredo, Facundo, Anthony B. Atkinson, Thomas Piketty, and Emmanuel Saez. 2013. "The Top 1 Percent in International and Historical Perspective." *Journal of Economic Perspectives*, 27 (3): 3-20.

### **II. Factor Accumulation**

Chapter 3: Capital's Role in Production

Theory: Harrod-Domar Model; the Solow Model.

Reading:

- Ray, pp. 47-57.

Chapter 4: The Role of Population in Economic Growth (skip appendix).

Theory: The Malthusian Model; Fertility Transition.

Readings:

- Tiloka de Silva and Silvana Tenreyro. 2017. "Population Control Policies and Fertility Convergence," *Journal of Economic Perspectives*, 31(4): 205-228.

**Student Presentation D:** Karen N. Eggleston and Victor R. Fuchs. 2012. "The New Demographic Transition: Most Gains in Life Expectancy Now Realized Late in Life," *Journal of Economic Perspectives*, 26(3).

### Review & Midterm 1. Date TBA.

Chapter 6: The Effect of Human Capital on Growth

Theory: Returns to Education.

**Student Presentation E:** Deming, David J. 2022. "Four Facts about Human Capital." *Journal of Economic Perspectives*, 36 (3): 75-102.

### III. Productivity

Chapter 7: How much does productivity growth differ among countries?

Theory: Growth Accounting, Total Factor Productivity

Reading:

- Barry Bosworth and Susan M. Collins. 2008. "Accounting for Growth: Comparing China and India," *Journal of Economic Perspectives*, 22(1).

**Student Presentation F:** Corrado, Carol, Jonathan Haskel, Cecilia Jona-Lasinio, and Massimiliano Iommi. 2022. "Intangible Capital and Modern Economies." *Journal of Economic Perspectives*, 36 (3): 3-28.

Review & Midterm 2. Date TBA.

Chapters 8 and 9: Can technological gaps explain differences in productivity?

Theory: Model of Technological Change

Reading:

**Student Presentation G:** Kerr, William R., and Frederic Robert-Nicoud. 2020. "Tech Clusters." *Journal of Economic Perspectives*, 34 (3): 50-76.

**Student Presentation H:** Bloom, Nicholas, John Van Reenen, and Heidi Williams. 2019. "A Toolkit of Policies to Promote Innovation." *Journal of Economic Perspectives*, 33 (3): 163–84.

**Student Presentation I:** Lissoni, Francesco, and Ernest Miguelez. 2024. "Migration and Innovation: Learning from Patent and Inventor Data." *Journal of Economic Perspectives*, 38 (1): 27–54.

Chapter 10: How much of the productivity differences across countries come from inefficiency?

Theory: Decomposing productivity into technology and efficiency

Reading:

**Student Presentation J:** Sergei Guriev, Daniel Treisman. 2019. "Informational Autocrats." *Journal of Economic Perspectives*, 33(4).

### IV. Fundamental Factors of Growth

If time, selected topics from Part IV

Reading:

- Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2014. World Values Survey.

Papers Due. May 1, Country Analysis Presentations (prepare 5-6 minutes summary)