

ECON 425 Economic Growth

FALL 2024 SYLLABUS

Class Schedule:	Mon Wed 4:00–5:15pm, XXX
Professor:	Dr. Emir Malikov
Office:	GUA 2202
Phone:	x2792 but do not call/leave voicemail; email instead
Email:	emir.malikov@unlv.edu
Office Hours:	Tue 4:00–5:30pm over Zoom, or by appointment

Cross-listed with ECO 625.

COURSE DESCRIPTION

The fundamental question of economic growth can be succinctly summarized in a title that the renowned economic historian David S. Landes chose for his address at the annual meeting of the American Economic Association in 1989: “Why Are We So Rich and They So Poor?” This age-old question has preoccupied economists for centuries; and we are to investigate this question.

The goal of this course is to study the modern theories of economic growth that were developed to explain the real-world phenomenon of income divergence across nations, as well as to explore whether the implications of these theories can be reconciled with empirical evidence (data). Throughout the semester, we will encounter several ideas that have already earned Nobel Prizes and several more with Nobel potential.

The course is split into three parts. We will first focus on explaining economic growth from the perspective of “factor accumulation,” including physical and human capital accumulation and the population growth. Then, we will move onto the analysis of productivity and technological change. Having studied these immediate determinants of a country's income, we will then look at deeper, underlying factors of growth, the so-called “fundamentals:” openness and globalization, government policy and institutions, inequality, geography and climate, culture, and others.

LEARNING OUTCOMES

- Understand factors of production and their relationship with economic output.
- Be familiar with formal growth models and their predictions.
- Understand the role of non-input factors, such as efficiency and productivity, in determining country's average income.
- Understand how and why technology changes both at the technological frontier and in “follower countries,” and more broadly, understand technology's role in sustaining persistent income growth.
- Understand the role of fundamentals in economic development and be able to apply this knowledge to positively analyze case studies and stylized facts derived from data.

COURSE PREREQUISITE(S)

A minimum C grade in (a) ECON 261 or HON 125 or equivalent and (b) ECON 302 or ECON 303.

READINGS

Assigned readings will come from the textbook and/or articles published in academic journals. The required textbook is *Economic Growth* (3rd ed.) by David N. Weil of Brown University. I also recommend *Introduction to Economic Growth* (3rd ed.) by Charles I. Jones of Stanford University as a supplementary text.

PREREQUISITE KNOWLEDGE

While we will not be using any calculus in this course, however, the solid **knowledge of algebra is expected. You must be comfortable with the letter/symbol-based representation of equations and the algebraic manipulations thereof.** Throughout the semester, we will also be using **exponents** and **logarithms**, and you should be comfortable doing that. It is your responsibility to brush up your algebra outside the classroom, should there be such a need.

TIPS FOR SUCCESS

To do well in the course, you **MUST** study outside the classroom and do so on a regular basis. Learning economics requires practice and thinking—not memorization—so it will be practically impossible for you to do well in this class by “pulling an all-nighter” right before the exam. **Be prepared to be intellectually challenged on a continuous basis and put in hard work.**

- **Studying on a regular basis** is important because mastering each subsequent chapter requires a proper understanding of the previously covered material. The course material, by design, has a staggered structure that not only continuously builds on itself but also gradually gets more and more complex. Therefore, it is crucial that you study from day one and do so continually.
- You must **study outside the classroom**. The recommended norm is that students spend approximately 2–3 hours of study time for each hour that they spend in class. So you should be expecting to devote at least 5–7.5 hours per week for uninterrupted studying besides attending the lectures.
- **Read the textbook, read the textbook, read the textbook** (and any supplementary handouts posted on *Canvas*): the lecture materials alone are not sufficient to do well in this course. You will also be occasionally responsible for learning material not covered in class on your own by reading assigned parts of the textbook. To maximize understanding and retention, **take notes for each chapter** you read. Remember, you shouldn't read a book without a pen in your hand – otherwise, you're just wasting your own time.
- Practice by working through the **end-of-chapter problems**.
- If something is unclear, never hesitate to bring it up and/or ask a question in class. If you have a question, it is very likely that someone else has the same question too.

GRADING

Your course grade consists of the following components:

GRADE COMPONENTS

Component	Weight
Homework/Problem Sets	20%
Exams	30% each
Country Analysis Report	20%

At the end of the course, your score on each of the above components will be converted to a 100-point based scale. Your final score in the class will be a weighted average of these points. I will then map your final score (also on a 100-point based scale) to the grade you will receive in the course using the following table.

GRADE SCALE

Grade	Final Score
A	≥ 94
A–	≥ 90 but < 94
B+	≥ 86 but < 90
B	≥ 80 but < 86
B–	≥ 75 but < 80
C+	≥ 71 but < 75
C	≥ 65 but < 71
C–	≥ 60 but < 65
D	≥ 50 but < 60
F	< 50

When computing the final score, I **round it up** to the nearest whole number. That is, 85.56 is rounded up to 86, and so is 85.01.

Though unlikely, depending on performance of the class, I may adjust this table which you will be notified about. No adjustment will make a student worse off.

Requests to revise grades on exams and/or assignments are accepted in WRITING only. Please compose a brief letter argumentatively explaining (point by point) why you think your grade should be changed, then turn in this letter along with the original assignment back to me. You may contest your grade within one week from the date your graded assignment was returned to you.

All grades will be recorded and continually updated in the *Canvas* gradebook. If you think that one of your grades is missing, you must bring it to my attention within a week of the assignment's due date. Therefore, I suggest you check on your grades on a regular basis.

How to understand the “Total” score in the Canvas gradebook

You can monitor your performance in the course throughout the semester by looking at your “Total” score in the *Canvas* gradebook. Although, it is crucial that you understand how it is being computed and why and how it changes over the course of the semester. Here are its key features.

The “Total” score in the *Canvas* gradebook is your “as-of-now” course grade that the platform continually computes for you. This as-of-now grade is “dynamic” and it constantly gets updated as more graded deliverables are assigned and completed with time.

This tentative course grade might go up or down every time you complete an assignment or take a test because, when computing the “Total” score, the *Canvas* gradebook assumes that all incomplete and/or un-attempted assignments/exams do not exist and effectively reassigns their weights to the past assignments/exams you have already completed. This means that your past assignments/exams will always be given a larger weight than they will be eventually when your truly final total score is computed at the end of the semester.

Every time you complete a new deliverable, by construction, your updated “Total” score will be higher than it was previously *only if* your score on the latest assignment is greater than the weighted average of your scores on previous assignments. For concreteness, consider the

following example. There is a total of three assignments in the course: test A, test B and test C with the corresponding weights being 25%, 35% and 40%, respectively. Say, you have only taken the first two tests so far and scored 62/100 on test A and 80/100 on test B. The *Canvas* gradebook will compute your as-of-now “Total” score to be $62\left(\frac{25}{25+35}\right) + 80\left(\frac{35}{25+35}\right) = 72.5$. If you score exactly 72.5 on test C, then your final “Total” score will remain what it had been before: $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 72.5\left(\frac{40}{25+35+40}\right) = 72.5$. If you score more/less than 72.5 on test C, then your new “Total” score will also become greater/less than 72.5. For example, if you get 75 on test C, then $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 75\left(\frac{40}{25+35+40}\right) = 73.5 > 72.5$; or if you get 70 on test C, then $62\left(\frac{25}{25+35+40}\right) + 80\left(\frac{35}{25+35+40}\right) + 70\left(\frac{40}{25+35+40}\right) = 71.5 < 72.5$.

DELIVERABLES

Homework/Problem Sets

You should expect about 6–8 problem sets over the course of the semester. The exact due dates will be determined by the flow of the course and will be announced on *Canvas*. Any missed assignment will be scored as zero.

In these assignments, you will be asked to work on analytical/quantitative problems as well as to answer short essay-like questions. Each question (or a sub-question within a problem) will be graded on a scale of 4 (all correct), 3 (mostly correct), 2 (mostly incorrect), 1 (all incorrect but a reasonable attempt) and 0 (un-attempted).

The assignment should be completed neatly. **Write legibly**, or alternatively, you may choose to type-set your answers. All of your answers must be written as complete thoughts in well-composed sentences. “Yes” or “no” answers with no explanation are not acceptable and will be given a grade of zero. Whenever sensible, the use of graphs/equations in answering questions is encouraged, but graphs/equations do not stand alone without discussion.

Problem sets are designed to make you think analytically and truly engage with the material. They are intentionally challenging and will require a significant amount of time to complete, so plan accordingly and start working on them sooner than later. These assignments are a great way to practice and master the material.

Exams

The final exam is not cumulative. Exact exam dates are to be determined depending on the flow of the class. I will announce the exact date of the midterm at least a week in advance. For the final exam date, see the Registrar’s website or MyUNLV.

There will be NO MAKE-UPS for any exam except for a documented medical or university-sanctioned reason. If an exam date coincides with your religious holiday or an away game for athletes, you must contact me as soon as this conflict becomes apparent.

Country Analysis Report

This is a group project. Students are expected to form groups of 4 to work together on a country analysis project and writing up a summary report based on it due at the end of the semester. You should organize into groups **by November 1**.

In your report, you and your fellow groupmates will compare the growth performance of a country of your choice with the growth performance of another country of similar income and size. For

example, you may compare the growth performance of Columbia over the years 1970 to 2006 (before the global financial crisis) with that of Chile or Peru during the same period.

The goal of the paper is to *explain the growth performance of the country* in question drawing on the concepts covered in class (from the perspectives of factor accumulation, productivity and fundamentals), while demonstrating your competence in quantitative methods and qualitative interpretation. Besides the quality of writing and overall organization/structure of the paper, the latter is the primary criterion that your paper will be graded based upon.

This project is meant to be an independent self-guided work by students, intellectually challenging them to *integrate the course material into an empirical analysis* and do the necessary data collection. Thus, you have a lot of leeway in how you do the analysis and how you write it up. Obviously, the quality of your work will depend on the quality and depth of your understanding of the material. It is therefore imperative that you put effort in studying throughout the semester.

The group should prepare a brief preliminary outline in the form of bullet points (no longer than a page) detailing a road map for your analysis as well as documenting availability of data. The outline is to be turned in **by November 20**. If necessary, I will schedule an individual meeting with your group soon after to provide corrective feedback, or I might just do it via email.

The final draft of the report is due **9:00am Thursday, December 12**. The paper should be emailed to me in the PDF format by one member on behalf of the entire group. No extensions. The paper should be at least 8 pages long, 1.15-spaced, with 1-inch margins, in an 11-point font, excluding title page, references, tables and figures.

CLASS PARTICIPATION & ATTENDANCE

Participation is important for this class, and ***you should attend class unless you are ill***, in which case please stay home. The success of the course depends heavily upon the contributions of each student. It is you who makes the class more fun! I expect you to come to class prepared and willing to contribute to the class discussion. Hence, please make sure to do the readings on time. ***If you must miss class, please get class notes from a fellow student***; if any questions remain, please attend office hours.

POP QUIZZES (for extra credit)

I do not allow individual students to do any additional work for extra credit. All students are advised to consult with me throughout the semester to avoid end-of-the-semester “surprises.”

The only “extra” opportunity to boost your grade that you will have are the occasional **pop quizzes**. They will typically be administered within the first 5 minutes of the class. I will NOT be announcing the dates of these quizzes in advance. To take advantage of this extra credit opportunity, make sure to regularly attend the class, to not be late to class, as well as to keep up with the material.

PRESENTATIONS (graduate students only)

As additional work required for earning graduate credits for this course, graduate students will present one of the assigned journal articles in class, with the assessment counting for 1/3 of their analysis report grade. The goal of these presentations is to help the whole class understand and critically assess the paper and the arguments made therein. Individual article assignments will be determined within the first few weeks of the class, but all presentations will take place near the end of the semester. I will let each graduate student know the exact date of their presentation at

least one week in advance. Additional relevant information about these presentations will be provided to graduate students directly.

OFFICE HOURS

Since access to the economics department floor in BEH is restricted, I will hold weekly office hours virtually over Zoom every Tuesday between 4:00 and 5:30pm except for the school break and observed holidays. If you cannot make it to see me during my regular hours, please email for an appointment. If you'd rather meet in person and have a quick question or two, try also talking to me before or after class.

[Link to my Personal Zoom Meeting Room](#)

Meeting ID: 407 620 4618

Passcode: prof.emir

EMAILS

I should be able to reply to your emails within one business day. At the same time, please keep in mind that it is nearly impossible to meaningfully answer conceptual questions via email. In such instances, I will ask you to see me during my next office hours instead. Also, in case this needs to be reminded: keep your email correspondence professional.

CLASSROOM ETIQUETTE

We are all adults, so please be considerate to me and your fellow classmates:

- Please do not be late for class.
- Please no chatter amongst yourselves. It is distracting, and I will call you out on it.
- Put your cellphones on silent and put them away before the class starts. This also implies no texting, being on social media or surfing web for unrelated stuff on your laptops/tablets during the lecture. If I see an inappropriate use of technology during class, I will call you out.
- The use of laptops/tablets is permitted for course-related purposes only.
- Please wait until the class ends before gathering your belongings.
- If you need to leave early, please sit near the door.

The bottom line is, if you do not want to participate and pay attention in class, then do not come to class.

ANNOUNCEMENTS

All announcements (including those about assignments), supplementary course materials and other relevant information will be posted on the *Canvas* course page. ***It is your responsibility to check for announcements on Canvas daily.*** Your scores for homework assignments and exams will also be posted on *Canvas*.

UNLV ACADEMIC POLICIES



COURSE OUTLINE

This course outline is *tentative* and subject to change as the semester progresses.

INTRODUCTION

- **Stylized Facts about Economic Growth** (Chapter 1)
- **Methodological Framework** (Chapter 2)
- **Aggregate Production Function** (class notes)

FACTOR ACCUMULATION

- **Physical Capital** (Chapter 3, class notes)
- **Population** (Chapter 4, class notes)
- **Human Capital** (Chapter 6)

MIDTERM EXAM

PRODUCTIVITY

- **Measuring Productivity** (Chapter 7)
- **Technology: Exogenous and Endogenous Growth** (Chapter 8, class notes)
- **Efficiency** (Chapter 10)

Gordon, R. (2015). *Secular Stagnation on the Supply Side: U.S. Productivity Growth in the Long Run*. Digiworld Economic Journal 100: 19-45

Brynjolfsson, E., Rock, D., and Syverson, C. (2019). *Artificial Intelligence and the Modern Productivity Paradox: A Class of Expectations and Statistics*. In "The Economics of Artificial Intelligence: An Agenda," Agrawal, Gans, Goldfarb (eds). University Chicago Press

Restuccia, D. and Rogerson, R. (2017). *The Causes and Costs of Misallocation*. Journal of Economic Perspectives 31(3): 151-174

FUNDAMENTALS

- **Openness, Globalization and Trade** (Chapter 11)
- **Government and Institutions** (Chapter 12)
- **Income Inequality** (Chapter 13)
- **Geography, Climate and Natural Resources** (Chapter 15)
- **Geography vs. Institutions?** (class discussion)

Svensson, J. (2005). *Eight Questions about Corruption*. Journal of Economic Perspectives 19(3): 19-42

Collier, P. and Gunning, W. (1999). *Why has Africa Grown Slowly?* Journal of Economic Perspectives 13(3): 3-22

Acemoglu, D., Johnson, S., and Robinson, J. (2006). *Understanding Prosperity and Poverty: Geography, Institutions and the Reversal of Fortune*. In "Understanding Poverty," Vinayak, Benabou, Mookherjee (eds). Oxford University Press

FINAL EXAM

COUNTY ANALYSIS REPORT