

**ECON 4225**  
**Micro Perspectives on Macro Outcomes**  
**Spring 2025**

PRELIMINARY SYLLABUS, FINAL VERSION POSTED AT THE START OF TERM

**Instructor:** Lukas Nord (lksnord@sas.upenn.edu, PCPSE 531)

**Lecture Times:** MW 8:30AM-10:00AM

**Office Hours:** TBD

**Teaching Assistant:** TBD

**TA Office Hours:** TBD

**Course Description:** Inequality among economic agents is a defining feature of modern economies: Households at the top of the wealth distribution own billions of dollars, while the bottom half of the population has almost no wealth and lives paycheck to paycheck. Some firms have thousands of employees while others operate only with a handful of workers. And inequality among both households and firms has been on the rise. Which forces shape the distribution of income and wealth across households? Why do some firms hire more employees than others? And how do these differences across households and firms affect aggregate outcomes in the economy?

The objective of the course is to introduce students to micro-data evidence on the rich heterogeneity among economic agents and to provide them with simple theories to understand and analyze this heterogeneity and its interaction with macroeconomic outcomes. The course is loosely structured in two parts, the first focussing on economic differences across households and the second focussing on differences across firms. Topics covered in the first half may include the distribution of income, wealth and spending across households and their determinants, the role of macroeconomic trends and shocks for inequality among households, and the role of the distribution of income and wealth for macroeconomic dynamics. Topics covered in the second half of the course may include the distribution of employment and output across firms, the misallocation of resources and aggregate productivity, as well as firms' price-setting decision, its implications for trends in inflation, market power and profits.

**Prerequisites:** Students must be familiar with the mathematical concepts of functions, derivatives, optimization, and other material covered in one year of calculus, as well as some basic knowledge of statistics and regression analysis. Strict prerequisites are ECON 2100, 2200, 2300; MATH 1400, 1410.

**Course Materials:** There is no required textbook for the course. The main materials are the lecture slides, which will be provided through Canvas. Attendance to all lectures is the best way to study for the course. Some of the material in the first part is treated in *Edward N. Wolff: Poverty and Income Distribution (2nd Edition)*. Additional readings in form of comprehensible research papers will be provided throughout the course. Students who decide to complete homework assignments in R can find a comprehensive introduction to all necessary tools in *Garrett Grolemund and Hadley Wickham: R for Data Science* (digital version available free of charge here: <https://r4ds.hadley.nz>).

**Course Outline:** This is a suggestive outline of the topics that I intend to cover. The list of topics may be revised during the course, depending on students' progress and interests.

PART 0: Introduction

1. Micro Decisions, Micro Data, and Macroeconomic Outcomes (1 lecture)

PART 1: Households (15 lectures)

1. Introduction (3 lectures)
  - Households' decision problem
  - The budget constraint as a measurement device and its relation to national accounts
  - Data Sources and Measurement
  - Introduction to data cleaning with R
2. Income Distribution (3 lectures)
  - Components of income and their distribution
  - Labor earnings: Employment, occupations, human capital, the role of firms
  - Redistribution: Taxes and transfers
  - Trends in income inequality: The decline of the labor share, automation, trade liberalization
3. Wealth Distribution (3 lectures)
  - Wealth inequality and portfolio composition
  - Drivers of wealth inequality: Heterogeneous returns and savings rates
  - Trends in wealth inequality: Distributive effects of asset prices
4. Spending, Prices, and Consumption (3 lectures)
  - Consumption as a measure of welfare
  - The consumption bundle, cost of living indices and inflation
  - Home production and leisure
  - Trends in consumption and leisure
5. Inequality and Macroeconomic Outcomes (3 lectures)
  - Households' response to idiosyncratic shocks
  - MPCs and the role of inequality for aggregate outcomes
  - Distributive effects of aggregate shocks

PART 2: Firms (9 lectures)

1. Introduction (2 lectures)
  - The firm's decision problem
  - Data Sources and Measurement
2. The Distribution of Employment and Output (4 lectures)

- The firm size distribution
  - Misallocation and aggregate productivity
3. Prices, Market Power, and Inflation (3 lectures)
- Price setting when firms have market power
  - The rise in market power and superstar firms
  - Frequency of price changes and inflation dynamics

**Grading:** Three midterm exams will each count for 20% of the final grade. Midterms are generally in person, closed book, and not cumulative. Three homework assignments will each account for 10% of the final grade and will require students to work with data to reproduce some of the results discussed in class. Students may work in groups, but every student must hand in an individual solution. Throughout the term, I will assign short readings (newspaper articles, blog posts, non-technical research papers). In the following lecture, I will ask one or two students to summarize the main points of the reading. Together with in-class participation, this will account for 10% of the final grade. Scores on individual assignments and midterms will be aggregated at the end of the semester and converted into a letter grade, I will not assign intermediate letter grades.

A valid excuse needs to be provided if a student misses one of the midterms or the submission deadline for a homework assignment. The missed examination will be made up in one of two ways, to be decided on a case-by-case basis at the discretion of the instructor: (1) A make up midterm or the extension of a homework deadline. (2) The student will be excused for the missed examination and its weight in the final grade will be reassigned to the completed midterms or homeworks.

To request a **re-grading** of a midterm or homework, a student has to return the graded piece within one week after the grade was received together with a written statement explaining the complaint (i.e. which question was graded wrongly and why it was graded wrongly). I will then re-grade the entire midterm / homework. Note that there is no guarantee that after re-grading the grade will be higher than before and it may be lower. A week after the midterm / homework has been returned the scores cannot be changed anymore and no further complaints will be accepted.

**Course Policies:** The Department of Economics maintains a common set of policies for all courses. All students taking this class must read the policies carefully and agree to adhere to them at all times. All listed policies apply even if not explicitly stated in this syllabus. The policies can be found at: <https://economics.sas.upenn.edu/undergraduate/course-information/course-policies>

**Exam Dates:** Dates for midterms and homework deadlines will be posted before the beginning of the course, taking into account Penn's academic calendar and observed holidays. Completed homework assignments must be submitted through Canvas before class starts on the day of the deadline. Students should review the dates carefully. If a student has a conflict with one of these dates (including additional religious observance), the student should notify me by email at least three days before the first lecture. After this date I cannot accommodate personal requests in scheduling examinations.