

Thematic Course
PhD in "Scienze Economiche e Statistiche"
SEAS Department
University of Palermo

Academic Year	2021-2022
Subject	Technology, Economic Growth and Inequality
Instructor	Antonio Francesco Gravina
Course description	Understanding the process of economic development is crucial to most research in economics and the social sciences more broadly. It is associated with deep transformations in the fundamental structures of society. The rate of growth and development diverges substantially between different economies. This course is aimed at investigating the main drivers that influence how societies grow and develop, with special attention devoted to the role of technological progress. In particular, the focus will be placed on how automation and robotization affect economic growth and inequality, including the analysis of technology-skill complementarity. The course will also provide a Stata lab session to train and guide students on the assessment of some empirical exercises.
Learning Objectives	<p>On successful completion of the course, the students should be able to:</p> <ul style="list-style-type: none"> • Understand the effects of technological progress on economic growth and inequality; • Acquire the key concepts on the underlying mechanisms that characterize the process of economic development; • Deal with the policy concerns raised by the new waves of automation and robotization; • Apply some of the models to real-world data.
Suggested readings	<ul style="list-style-type: none"> • Acemoglu, D., & Autor, D. (2011). Skills, tasks and technologies: Implications for employment and earnings. In Handbook of labor economics (Vol. 4, pp. 1043-1171). Elsevier. • Graetz, G., & Michaels, G. (2018). Robots at work. Review of Economics and Statistics, 100(5), 753-768. • Autor D.H. (2015), Why are there still so many jobs? The history and the future of workplace automation, Journal of education and work, pp 163-191. • Autor D.H., Levy F. and Murnane R.J. (2003), The skill content of recent technological change: An empirical investigation, Quarterly journal of economics, Vol. 118, November, pp. 1279–1333. • Caselli, F. (2005), Accounting for Cross-Country Income Differences, in S.N. Durlauf and P. Aghion (Eds.) Handbook of Economic Growth, Elsevier. • Hall, R.E. & Jones, C.I. (1999), “Why Do Some Countries Produce So Much More Output Per Worker Than Others? Quarterly Journal of Economics, 114(1), 83-116. • Katz, L.F. & Murphy, K.M. (1992) Changes in Relative Wages, 1963-1987: Supply and Demand Factors, Quarterly Journal of Economics, 107(1), 35-78. • Krusell, P. & Ohanian, L.E. & Ros-Rull J.-V. & Violante, G.L. (2000) Capital-Skill Complementarity and Inequality: A Macroeconomic Analysis, Econometrica, 68(5), 1029-1053. • A complete list of references will be available during the course
Course Activity (hrs)	15h
Credits	3
Assessment Method	A written report or a presentation on a scientific paper as agreed with the instructor.

Teaching Methods	Each section utilizes a combination of lecturing, computer lab (learning by doing), and class discussion.
Calendar	May/June 2022
Contacts	antoniofrancesco.gravina@unipa.it ; antoniofrancesco.gravina@gmail.com

Calendar of Classes

Lecture	Date	Topic	Duration
1	TBA	Technology and Growth: a) From growth to development accounting; b) Actual perspectives of development accounting	3h
2	TBA	Technology and inequality: a) Skill-biased technical change b) Routine-biased technical change c) Polarization	3h
3	TBA	Technology and workers' type complementarity	3h
4	TBA	New wave of works on automation and robotization	3h
5	TBA	Stata lab session	3h