GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	ECONOMIC GROWTH AND CONVERGENCE THEORIES, PG_00060800		
Field of study	Economic Analytics		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2023/2024
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study Subject group related to scientific research in the field of study
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	1	Language of instruction	English
Semester of study	2	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	exam
Conducting unit	Katedra Ekonomii -> Faculty of Management and Economics		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Aleksandra Parteka	
	Teachers	dr hab. inż. Aleksandra Parteka	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	30.0	0.0	0.0	45

E-learning hours included: 0.0

Learning activity and number of study hours

Learning activity	Participation in didactic classes included in study plan	Participation in consultation hours	Self-study	SUM
Number of study hours	45	6.0	24.0	75

Subject objectives

Explains the most important theoretical models of economic growth and convergence as well as computational (analytical) methods used in their empirical verification.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W01] identifies in-depth the phenomena related to the field of study and the theories describing them and possible analytical methods	identifies phenomena related to the theory of growth and convergence based on known theories and possible analytical methods	[SW1] Assessment of factual knowledge
[K7_U04] prepares and presents convincing, professional presentations of analysis results, with their in-depth interpretation	prepares and presents the results of analyzes in a convincing manner, along with their in-depth interpretation	[SU5] Assessment of ability to present the results of task

Subject contents

Lectures:

1. Introduction. Stylised facts about economic growth.
2. How to measure growth and convergence. Types of convergence.
3. Polarisation of development in the world
4. History of economic growth and convergence process - part I
5. History of economic growth and convergence process - part II
6. Models of economic growth - introduction
7. Production function and its properties.
8. Solow growth model - part I (C-D production function, Solow diagram)
9. Solow growth model - part II (growth accounting, Solow decomposition)
10. Solow growth model - part III (extensions)
11. Growth models - extensions (model MRW, AK)
12. Endogenous growth models - human capital, technology, public spending, trade, institutions.
13. Empirical studies on real convergence - part I
14. Empirical studies on real convergence - part II.
15. Test

Computer labs: practical analysis of topics discussed during the lectures, the use of real statistical data.

1. Introduction - key data sources and growth facts.
2. Databases - part I
3. Databases - part II
4. Analytical dataset construction
5. Analysis of growth trends and polarisation of development around the world.
6. Alternative measures of growth.
7. Mathematical and statistical measures of convergence.
8. Solow model analysis - part I
9. Solow model analysis - part II
10. Real convergence - empirical analysis part I
11. Real convergence - empirical analysis part II
12. Growth models - empirical evidence
13. Endogeneous factors of growth - empirical tests
14. Nominal convergence analysis.
15. Test

Prerequisites and co-requisites

Knowledge of macroeconomics and basic statistics/econometrics.

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Exam	60.0%	50.0%
test on computational methods	60.0%	50.0%

Recommended reading

Basic literature	Charles I Jones , Dietrich Vollrath (2024). Introduction to Economic Growth, 4th ed. WWNorton.Weil D. (2014). Economic Growth . Routledge. D. Acemoglu, Introduction to Modern Economic Growth, Princeton University Press, 2009Jones, C. I. (2016). The facts of economic growth. In Handbook of macroeconomics (Vol. 2, pp. 3-69). Elsevier.
Supplementary literature	R.E. Lucas Jr., Wykłady z teorii wzrostu gospodarczego, C.H.Beck, 2010
eResources addresses	Adresy na platformie eNauczanie: ECONOMIC GROWTH AND CONVERGENCE THEORIES _AP - Moodle ID: 36305 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=36305

Example issues/ example questions/ tasks being completed

Describe the properties of the Cobb-Douglas production function.
Explain the Solow diagram.
Define the differences between absolute and conditional convergence.
Get the data on output and growth factors. Conduct an empirical convergence analysis of a selected group of economies.

Work placement

Not applicable