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 2024	Academic year of realisation of subject	2024/2025
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_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
	[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

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
test on computational methods	60.0%	50.0%
Exam	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:

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