



Subject card

Subject name and code	ECONOMIC GROWTH AND CONVERGENCE ANALYSIS, PG_00071072						
Field of study	Economic Analytics						
Date of commencement of studies	October 2026		Academic year of realisation of subject		2026/2027		
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	Department of Economic -> Faculty of Management and Economics -> Faculties of Gdańsk University of Technology						
Name and surname of lecturer (lecturers)	Subject supervisor		dr hab. Joanna Wolszczak-Derlacz				
	Teachers						
Lesson types	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		3.0		27.0	75
Subject objectives	Preparing students to apply the key models of economic growth theory and convergence, as well as computational methods used in their empirical verification, and to shape attitudes related to critical analysis and professional presentation of research results in the context of academic debates and solving economic problems.						
Learning outcomes	Course outcome		Subject outcome		Method of verification		
	[K7_K03] responsibly fulfills professional roles, demonstrating the ability to identify ethical dilemmas and recognize and evaluate alternative courses of action.		is ready to responsibly analyze processes of economic growth and convergence, recognizing related ethical dilemmas and considering possible courses of action.		[SK2] Assessment of progress of work [SK5] Assessment of ability to solve problems that arise in practice		
	[K7_W01] "demonstrates in-depth knowledge and understanding of economic problems, and selects methods for resolving them while taking into account the complex interrelationships among the phenomena being analyzed.		Knows and understands economic problems in depth and selects appropriate methods for solving them, taking into account the complex interdependencies between the analyzed phenomena in the context of growth and convergence theories.		[SW1] Assessment of factual knowledge		
	[K7_U04] is able to prepare and convincingly present the results of specialized analyses, providing in-depth interpretation during debates and meetings with various audiences.		can develop and convincingly present the results of specialized analyses of economic growth and convergence, providing in-depth interpretation during debates and discussions with various audiences.		[SU3] Assessment of ability to use knowledge gained from the subject		

Subject contents	Course content – lecture 1. Stylized facts about economic growth 2. Production function and its properties 3. Solow growth model 4. Convergence in the Solow model 5. Endogenous growth models 6. The role of human capital 7. The role of technology 8. Openness and growth 9. Real and nominal convergence		
	Course content – laboratory 1. Introduction to databases 2. Growth measures 3. Mathematical and statistical measures of convergence 4. The Solow growth model examining saving rates 5. Determinants of population growth 6. The role of endogenous factors: human Capital 7. The role of endogenous factors: technology 8. Openness and convergence 9. Inequality and convergence 10. Absolute and conditional convergence		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written assessment.	60.0%	50.0%
	A test with tasks solved using a computer.	60.0%	50.0%
Recommended reading	Basic literature	1. Jones Ch.I., Vollrath D. (2024). Introduction to Economic Growth, 4th ed. WWNorton. 2. Weil D. (2014). Economic Growth . Routledge. 3. Jones, C. I. (2016). The facts of economic growth. In Handbook of macroeconomics (Vol. 2, pp. 3-69). Elsevier. 4. World Bank Reports, UNCTAD	
	Supplementary literature	1. Barro, R. J. (2012). Convergence and modernization revisited (No. w18295). National Bureau of Economic Research 2. Dobrinsky, R., & Havlik, P. (2014). Economic convergence and structural change: The role of transition and EU accession. WIIW Research Report 395 3. Mankiw, Romer, Weil (1992) A Contribution to the Emirics of Economic Growth, The Quarterly Journal of Economics, vol 107 (2): 407-437 4. Próchniak, M. (2011), Determinants of Economic Growth in Central and Eastern Europe: the Global Crisis Perspective, Post-Communist Economies, Vol. 23, No. 4, pp. 449-468. 5. Rapacki R. & Próchniak M. (2009) Real beta and sigma convergence in 27 transition countries, 19902005, Post-Communist Economies, 21:3, 307-326 6. Sala-i-Martin X. (1997) I Just Ran Two Million Regressions, American Economic Review, Vol. 87, No. 2, pp. 178-183. 7. Wolszczak-Derlacz, J. (2008). Price convergence in the EUan aggregate and disaggregate approach. International Economics and Economic Policy, 5(1-2), 25-47	
	eResources addresses		
Example issues/ example questions/ tasks being completed	- State the properties of the Cobb-Douglas production function - Explain the Solow diagram - Define the differences between absolute and conditional convergence - Download data on production in economies and on growth factors. On their basis, conduct a convergence analysis of a group of economies		
Practical activites within the subject	Not applicable		

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