



## Subject card

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|---|---|--|--|-------------------------------------|--|------------|-----|
| Subject name and code                       | THEORIES OF ECONOMIC GROWTH AND CONVERGENCE, PG_00067637  |  |  |                                     |  |            |     |
| Field of study                              | Economic Analytics  |  |  |                                     |  |            |     |
| Date of commencement of studies             | October 2025  |  | Academic year of realisation of subject  |                                     | 2025/2026  |            |     |
| Education level                             | second-cycle studies  |  | Subject group  |                                     | Obligatory subject group in the field of study<br>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  |                                     | Polish   |            |     |
| Semester of study                           | 2   |  | ECTS credits   |                                     | 3.0  |            |     |
| Learning profile                            | general academic profile  |  | Assessment form  |                                     | assessment   |            |     |
| Conducting unit                             | Department Of Economic -> Faculty Of Management And Economics -> Wydziały Politechniki Gdańskiej  |  |  |                                     |  |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor  |  |  |                                     |  |            |     |
|   | Teachers  |  |  |                                     |  |            |     |
| 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   |  | 5.0                                 |  | 25.0       | 75  |
| Subject objectives                          | Explains the most important models of economic growth and convergence as well as analytical methods used in their empirical verification.   |  |  |                                     |  |            |     |
| Learning outcomes                           | Course outcome  |  | Subject outcome  |                                     | Method of verification   |            |     |
|   | [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 growth and convergence phenomena and selects analytical methods, taking into account their interrelations. |                                     | [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.                                       |  | prepares and convincingly presents analysis results with in-depth interpretation tailored to diverse audiences                   |                                     | [SU5] Assessment of ability to present the results of task   |            |     |

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| Subject contents   | <p>Lectures:</p> <ol style="list-style-type: none"><li>1. Introduction. Stylised facts about economic growth.</li><li>2. How to measure growth and convergence. Types of convergence.</li><li>3. Polarisation of development in the world</li><li>4. History of economic growth and convergence process - part I</li><li>5. History of economic growth and convergence process - part II</li><li>6. Models of economic growth - introduction</li><li>7. Production function and its properties.</li><li>8. Solow growth model - part I (C-D production function, Solow diagram)</li><li>9. Solow growth model - part II (growth accounting, Solow decomposition)</li><li>10. Solow growth model - part III (extensions)</li><li>11. Growth models - extensions (model MRW, AK)</li><li>12. Endogenous growth models - human capital, technology, public spending, trade, institutions.</li><li>13. Empirical studies on real convergence - part I</li><li>14. Empirical studies on real convergence - part II.</li><li>15. Test</li></ol> <p>Computer labs: practical analysis of topics discussed during the lectures, the use of real statistical data.</p> <ol style="list-style-type: none"><li>1. Introduction - key data sources and growth facts.</li><li>2. Databases - part I</li><li>3. Databases - part II</li><li>4. Analytical dataset construction</li><li>5. Analysis of growth trends and polarisation of development around the world.</li><li>6. Alternative measures of growth.</li><li>7. Mathematical and statistical measures of convergence.</li><li>8. Solow model analysis - part I</li><li>9. Solow model analysis - part II</li><li>10. Real convergence - empirical analysis part I</li><li>11. Real convergence - empirical analysis part II</li><li>12. Growth models - empirical evidence</li><li>13. Endogeneous factors of growth - empirical tests</li><li>14. Nominal convergence analysis.</li><li>15. Test</li></ol> |  |                               |
| Prerequisites and co-requisites                                | Knowledge of macroeconomics and basic statistics/econometrics. Basic excel knowledge.   |  |                               |
| 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.<br>Weil D. (2014). Economic Growth . Routledge.<br>D. Acemoglu, Introduction to Modern Economic Growth, Princeton University Press, 2009<br>Jones, C. I. (2016). The facts of economic growth. In Handbook of macroeconomics (Vol. 2, pp. 3-69). Elsevier.    |                               |
|  | Supplementary literature  | World Development Reports , World Bank <a href="https://www.worldbank.org/en/publication/wdr/wdr-archive">https://www.worldbank.org/en/publication/wdr/wdr-archive</a><br><br>UNCTAD Trade and Development Reports <a href="https://unctad.org/publications-search?f%5B0%5D=product%3A394">https://unctad.org/publications-search?f%5B0%5D=product%3A394</a> |                               |
|  | eResources addresses  | Adresy na platformie eNauczanie:   |                               |
| Example issues/<br>example questions/<br>tasks being completed | <ul style="list-style-type: none"><li>• Explain how the Cobb-Douglas production function can be used to analyze the economic growth process.</li><li>• Define the differences between absolute and conditional convergence, providing real examples of these processes.</li><li>• Obtain macroeconomic data on output and economic growth factors. Conduct an empirical panel-data analysis of economic beta convergence for a selected group of countries.</li></ul>   |  |                               |

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| Work placement | Not applicable |
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