

**Subject card**

|  |   |  |  |                                     |         |  |     |
|--|---|--|--|-------------------------------------|---------|--|-----|
| <b>Subject name and code</b>                       | Decision Making on Financial Market, PG_00178107  |  |  |                                     |         |  |     |
| <b>Field of study</b>                              | Informatics and Econometrics  |  |  |                                     |         |  |     |
| <b>Date of commencement of studies</b>             | October 2026  | <b>Academic year of realisation of subject</b>           |  |                                     |         | 2027/2028  |     |
| <b>Education level</b>                             | Bachelor's studies  | <b>Subject group</b>                                     |  |                                     |         | Optional subject group<br>Subject group related to scientific research in the field of study |     |
| <b>Mode of study</b>                               | full-time studies   | <b>Mode of delivery</b>                                  |  |                                     |         | at the university  |     |
| <b>Year of study</b>                               | 2   | <b>Language of instruction</b>                           |  |                                     |         | Polish   |     |
| <b>Semester of study</b>                           | 4   | <b>ECTS credits</b>                                      |  |                                     |         | 7.0  |     |
| <b>Learning profile</b>                            | academic  | <b>Assessment form</b>                                   |  |                                     |         | exam   |     |
| <b>Conducting unit</b>                             | Department of Econometrics -> Faculty of Management -> Rector   |  |  |                                     |         |  |     |
| <b>Name and surname of lecturer (lecturers)</b>    | <b>Subject supervisor</b>   |  | dr Marta Chylińska   |                                     |         |  |     |
|  | <b>Teachers</b>   |  |  |                                     |         |  |     |
| <b>Lesson types</b>                                | <b>Lesson type</b>  | Lecture  | Tutorial   | Laboratory                          | Project | Seminar  | SUM |
|  | <b>Number of study hours</b>  | 30.0   | 30.0   | 15.0                                | 0.0     | 0.0  | 75  |
|  | E-learning hours included: 0.0  |  |  |                                     |         |  |     |
| <b>Learning activity and number of study hours</b> | <b>Learning activity</b>  | Participation in didactic classes included in study plan |  | Participation in consultation hours |         | Self-study   | SUM |
|  | <b>Number of study hours</b>  | 75   |  | 4.0                                 |         | 96.0   | 175 |
| <b>Subject objectives</b>                          | Awareness that decision-making processes require planners and implementers to possess knowledge from various scientific disciplines, including mathematics, statistics, economics, management, computer science, psychology, sociology, and medicine. Identification of scientific fields essential for planning and implementing decisions, as well as recognition of tools that support the execution of decision-making processes. |  |  |                                     |         |  |     |
| <b>Learning outcomes</b>                           | <b>Course outcome</b>   |  | <b>Subject outcome</b>   |                                     |         | <b>Method of verification</b>  |     |
|  | [[iiEL3_U02] Students can select or construct econometrics, informatics or statistics tools and apply them to describe and solve economic and social problems.  |  | The student selects an appropriate econometric model to solve selected issues in economics and finance, as well as in management and quality sciences. |                                     |         | [SU2] presentation/project/paper/report<br>[SU4] test/exam - oral or written                 |     |
|  | [[iiEL3_W02] To an advanced degree, the student knows and understands selected theoretical and practical issues in informatics, statistics or econometrics necessary for understanding economic and social phenomena.   |  | The student recognizes different types of financial data, classifies econometric models, and selects methods for their estimation and verification.    |                                     |         | [SW4] test/exam - oral or written  |     |
|  | [[iiEL3_U04] Students can build and interpret models of economic and social phenomena and processes for decision-making processes.  |  | The student selects and constructs appropriate models supporting decision-making processes   |                                     |         | [SU1] oral statement/conversation/discussion<br>[SU2] presentation/project/paper/report      |     |
|  | [[iiEL3_U06] The student can use and integrate knowledge of management and quality sciences, economics, and finance to resolve dilemmas and complex problems that arise in professional work.   |  | The student selects and constructs appropriate models supporting decision-making processes   |                                     |         | [SU2] presentation/project/paper/report<br>[SU4] test/exam - oral or written                 |     |

| Subject contents   | <ol style="list-style-type: none"> <li>1. The concept of risk and uncertainty. Classification and risk factors. Risk measures. Discussion of dispersion measures.</li> <li>2. Technical analysis concept and potential applications. Dow Theory. Types of charts.</li> <li>3. Trend analysis. Trend reversal and continuation patterns. The significance of moving averages. Moving average charts. Bollinger Bands, oscillators interpretation principles.</li> <li>4. Fundamental analysis key concepts and its relation to portfolio and technical analysis. Stages of fundamental analysis: macroeconomic, sectoral, and company-specific analysis.</li> <li>5. Financial analysis and company valuation. Application of selected methods for valuing publicly traded companies.</li> <li>6. Portfolio analysis: basic concepts within the framework of Markowitz theory. Construction and purpose of creating a stock portfolio.</li> <li>7. Risk diversification. Selected valuation models and performance indicators. Value at Risk (VaR) and Conditional Value at Risk (CVaR). Stress testing.</li> </ol> |  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
|--|--|--|--|--------------------------|-------------------|-------------------------------|---------|-------|-------|---------------------|-------|-------|--------------|-------|-------|
| Prerequisites and co-requisites                          | Familiarity with basic macroeconomic knowledge and tools of statistical and econometric analysis.  |  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| Assessment methods and criteria                          | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;">Subject passing criteria</th> <th style="width: 30%;">Passing threshold</th> <th style="width: 30%;">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td>project</td> <td>51.0%</td> <td>60.0%</td> </tr> <tr> <td>class participation</td> <td>51.0%</td> <td>10.0%</td> </tr> <tr> <td>written exam</td> <td>51.0%</td> <td>30.0%</td> </tr> </tbody> </table>  |  |  | Subject passing criteria | Passing threshold | Percentage of the final grade | project | 51.0% | 60.0% | class participation | 51.0% | 10.0% | written exam | 51.0% | 30.0% |
| Subject passing criteria                                 | Passing threshold  | Percentage of the final grade  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| project  | 51.0%  | 60.0%  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| class participation                                      | 51.0%  | 10.0%  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| written exam   | 51.0%  | 30.0%  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| Recommended reading                                      | Basic literature   | <p>Best, P. (2000). Wartość narażona na ryzyko: obliczanie i wdrażanie modelu VaR. Oficyna Ekonomiczna.</p> <p>Borowski, K. (2014). Analiza fundamentalna. Metody wyceny przedsiębiorstwa. Difin SA.</p> <p>Murphy, J. (1999) Analiza techniczna rynków finansowych, WIG-PRESS</p> |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
|  | Supplementary literature   | <p>Dębski, W. (2014). Rynek finansowy i jego mechanizmy: podstawy teorii i praktyki, PWN</p> <p>Mayo H. (1997), Wstęp do inwestowania, LIBER</p>   |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
|  | eResources addresses   |  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| Example issues/ example questions/ tasks being completed |  |  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |
| Work placement   | Not applicable   |  |  |                          |                   |                               |         |       |       |                     |       |       |              |       |       |

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