

## Subject card

|                                             |                                                                                                                                                                                                                                                                                                                                 |                                                          |                                         |                                     |                                                                                                                                                |            |     |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------------------------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|
| Subject name and code                       | Business Data Analysis in Socially Responsible Enterprise, PG_00200114                                                                                                                                                                                                                                                          |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Field of study                              | International Economic Relations                                                                                                                                                                                                                                                                                                |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Date of commencement of studies             | October 2026                                                                                                                                                                                                                                                                                                                    |                                                          | Academic year of realisation of subject |                                     | 2027/2028                                                                                                                                      |            |     |
| Education level                             | Master's studies                                                                                                                                                                                                                                                                                                                |                                                          | Subject group                           |                                     | Obligatory subject group in the field of study<br>Optional subject group<br>Subject group related to scientific research in the field of study |            |     |
| Mode of study                               | part-time studies                                                                                                                                                                                                                                                                                                               |                                                          | Mode of delivery                        |                                     | at the university                                                                                                                              |            |     |
| Year of study                               | 2                                                                                                                                                                                                                                                                                                                               |                                                          | Language of instruction                 |                                     | Polish                                                                                                                                         |            |     |
| Semester of study                           | 4                                                                                                                                                                                                                                                                                                                               |                                                          | ECTS credits                            |                                     | 3.0                                                                                                                                            |            |     |
| Learning profile                            | academic                                                                                                                                                                                                                                                                                                                        |                                                          | Assessment form                         |                                     | credit                                                                                                                                         |            |     |
| Conducting unit                             |                                                                                                                                                                                                                                                                                                                                 |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Name and surname of lecturer (lecturers)    | Subject supervisor                                                                                                                                                                                                                                                                                                              |                                                          | dr Urszula Mrzygłód                     |                                     |                                                                                                                                                |            |     |
|                                             | Teachers                                                                                                                                                                                                                                                                                                                        |                                                          |                                         |                                     |                                                                                                                                                |            |     |
| Lesson types                                | Lesson type                                                                                                                                                                                                                                                                                                                     | Lecture                                                  | Tutorial                                | Laboratory                          | Project                                                                                                                                        | Seminar    | SUM |
|                                             | Number of study hours                                                                                                                                                                                                                                                                                                           | 0.0                                                      | 18.0                                    | 0.0                                 | 14.0                                                                                                                                           | 0.0        | 32  |
|                                             | 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                                                                                                                                                                                                                                                                                                           | 32                                                       |                                         | 0.0                                 |                                                                                                                                                | 43.0       | 75  |
| Subject objectives                          | In modern businesses, the ability to analyse, interpret and understand data is a highly sought-after skill. The aim of the course is to equip students with the necessary data analysis skills to enable them to solve analytical problems independently in companies, particularly those preparing to introduce CSR reporting. |                                                          |                                         |                                     |                                                                                                                                                |            |     |

| Learning outcomes | Course outcome                                                                                                                                                                                                                                                                                                                                                            | Subject outcome                                                                                                                                                                                                                        | Method of verification                                                                             |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                   | [MSGMU2_K02] is ready to critically assess the level of acquired knowledge, skills and professional competence in the area of international economic relations                                                                                                                                                                                                            | The student is ready to critically evaluate the level of their knowledge and skills in data analysis.                                                                                                                                  | [SK8] observation of student's independent or team work                                            |
|                   | [MSGMU2_U10] can accurately select and use sources of information on international economic relations, evaluate, critically analyse and creatively interpret them, and can present them in an innovative way, using advanced information and communication techniques                                                                                                     | Students will be able to correctly select company data sources and analyse and interpret them.                                                                                                                                         | [SU2] presentation/project/paper/report<br>[SU8] observation of student's independent or team work |
|                   | [MSGMU2_U11] independently formulates and tests hypotheses related to simple research problems, appropriately selects and applies methods and tools, including statistical tools and data acquisition techniques in order to verify hypotheses and diagnose economic processes, and on this basis to take appropriate economic decisions                                  | The student appropriately selects methods and tools of analysis for selected types of data in the company, tests simple hypotheses also in the area of CSR                                                                             | [SU2] presentation/project/paper/report<br>[SU8] observation of student's independent or team work |
|                   | [MSGMU2_K08] prepares responsibly for his/her work; is able to set priorities and to plan work appropriately considering changing social needs                                                                                                                                                                                                                            | The student prepares responsibly for the assigned tasks, skilfully determines priorities and has planning skills for the prepared data analysis project.                                                                               | [SK8] observation of student's independent or team work                                            |
|                   | [MSGMU2_W07] has a knowledge of selected (legal, organisational, ethical) rules and norms conditioning the functioning of economic structures and institutions on the international market; understands the regularities governing them, changes occurring in them and their sources, and their impact on the functioning of economic entities                            | The student has an in-depth knowledge of selected areas required by external institutions in the field of CSR that affect the operation of the company; the scope of the project, structure and detailed feedback during consultations | [SW2] presentation/project/paper/report<br>[SW5] implementation of a problem task                  |
|                   | [MSGMU2_W13] has an in-depth knowledge of methods and tools for describing economic phenomena, including data acquisition techniques, which make it possible to describe and analyse economic entities functioning on the international market as well as processes and phenomena occurring in them and between them, and also those supporting decision-making processes | Students will understand and distinguish between data analysis and visualisation tools and data extraction methods                                                                                                                     | [SW2] presentation/project/paper/report<br>[SW5] implementation of a problem task                  |

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| Subject contents                                         | <ul style="list-style-type: none"><li>Identifying areas of data application in businesses and defining the objectives of data analysis in the context of corporate social responsibility. Analyzing errors in the presentation of analysis results.</li><li>Using descriptive statistical tools to analyze and interpret business data.</li><li>Designing and evaluating methods of data visualization for the purpose of communicating analysis results.</li><li>Selecting and interpreting statistical inference methods in corporate data analysis.</li><li>Applying selected quantitative methods to solve business problems and assess relationships between variables.</li><li>Collection, preparation, and analysis of ESG data from companies listed on stock exchanges using the LSEG Workspace platform.</li><li>Analysis of CSR and ESG reports, assessment of the quality of the information presented, and identification of challenges related to the reporting and data management processes.</li></ul> <p>In this course, students work on a project in small teams: "ESG Analysis of an Economic Sector," using ESG data and companies' CSR/ESG reports.</p> <p>Phase I – Quantitative Analysis of ESG Data - Conducting a statistical analysis of ESG indicators for companies in a selected sector, including a statistical description of the data, an analysis of relationships between variables, and visualization of the results. Formulating 7–10 research questions, selecting methods, presenting results, and interpreting them.</p> <p>Phase II – Qualitative Analysis of CSR/ESG Reports - Analysis of CSR/ESG reports from selected companies to identify corporate social responsibility initiatives, assess the quality of reporting, and compare declared actions with quantitative results.</p> <p>Phase III – Synthesis of Results and Presentation - Combining the results of quantitative and qualitative analyses, formulating conclusions, and preparing a research poster to be presented during the poster session.</p> <p>The project evaluation takes into account: the appropriateness of the selection and application of data analysis methods; the quality of the interpretation of results; the ability to integrate the results of quantitative and qualitative analyses; the quality of the prepared poster; the quality of the poster presentation; and the timely completion of each stage of the project.</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Prerequisites and co-requisites                          | Basic knowledge of spreadsheet.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Assessment methods and criteria                          | Subject passing criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Passing threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Percentage of the final grade |
|                                                          | In class active participation, solving tasks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 30.0%                         |
|                                                          | Project - ESG analysis of economic sector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 51.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 70.0%                         |
| Recommended reading                                      | Basic literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Rabiej M., <i>Analizy statystyczne z programami Statistica i Excel</i> , Helion, Gliwice 2018.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                               |
|                                                          | Supplementary literature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1. Cypriński J., Borawska A., Komorowski T.M., <i>Excel dla menadżera, Casebook</i> , PWN, Warszawa 2016.<br>2. Zientara, P., Adamska - Mieruszevska, J., Bąk, M., <i>Hotel employees views on fairness, well - being and collective representation in times of the coronavirus crisis: evidence from Poland</i> , "Industrial Relations Journal", 2021, no 52(5), 458-475.<br>3. Mrzygłód, U., Nowak, S., <i>Market reactions to dividends announcements and payouts. Empirical evidence from the Warsaw Stock Exchange</i> , "Contemporary Economics", 2017, no 11(2), 187-205. |                               |
|                                                          | eResources addresses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Example issues/ example questions/ tasks being completed | For the ESG data collected for selected companies belonging to the same sector, evaluate the changes in the level of ESG assessment and identify the most important factors determining these changes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |
| Work placement                                           | Not applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                               |

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