University of Gdańsk

Subject card

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|---|---|---|---|---|---|---|---|
| Subject name and code | Spreadsheet in Finances and Management, PG_00199062 | | | | | | |
| Field of study | Economics | | | | | | |
| Date of commencement of studies | October 2026 | | Academic year of realisation of subject | | 2028/2029 | | |
| Education level | Bachelor'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 | full-time studies | | Mode of delivery | | at the university | | |
| Year of study | 3 | | Language of instruction | | Polish | | |
| Semester of study | 5 | | ECTS credits | | 2.0 | | |
| Learning profile | academic | | Assessment form | | credit | | |
| Conducting unit | Department of Transport Economics -> Faculty of Economics -> Rector | | | | | | |
| Name and surname of lecturer (lecturers) | Subject supervisor | | dr hab. Przemysław Borkowski, prof. UG | | | | |
| | Teachers | | | | | | |
| Lesson types | Lesson type | Lecture | Tutorial | Laboratory | Project | Seminar | SUM |
| | Number of study hours | 15.0 | 15.0 | 0.0 | 10.0 | 0.0 | 40 |
| | 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 | 40 | | 0.0 | | 10.0 | 50 |
| Subject objectives | Acquisition of skills in using financial and economic functions in Excel. Acquisition of skills in conducting economic analyses using spreadsheets. Acquisition of skills in solving complex economic problems using macros and programmable functions. | | | | | | |

Learning outcomes

| Course outcome | Subject outcome | Method of verification |
|---|---|---|
| [EKONL3_U02] is able to use the knowledge of theory and data to analyse concrete economic and social processes and phenomena and to analyse these phenomena using methods developed in economics, finance and management sciences | He/she can appropriately select spreadsheet tools depending on the theoretical problem to solve. He/she understands the relationship between spreadsheet functions and the economic variables being analyzed through them. | [SU6] demonstration of practical skills<br>[SU8] observation of student's independent or team work |
| [EKONL3_U07] is able to participate in analyses and evaluations of alternative solutions to economic and social problems and to choose the methods and instruments to resolve them rationally | He/she can use a variety of spreadsheet tools: functions, formulas, macros, and analytical packages, selecting the appropriate tools to solve specific problems. | [SU4] test/exam - oral or written<br>[SU5] implementation of a problem task<br>[SU8] observation of student's independent or team work |
| [EKONL3_K05] correctly identifies, diagnoses and resolves professional dilemmas and different options for solutions | He/she can find alternative analytical solutions. He/she can interchangeably use functions, formulas, and macro definitions. | [SK4] test/exam - oral or written<br>[SK5] implementation of a problem task<br>[SK6] demonstration of practical skills |
| [EKONL3_U08] has the ability to observe, understand and analyse economic and social phenomena and processes using appropriate scientific methods | He/she can analyze investment processes using spreadsheets, examine efficiency, liquidity, profitability, and apply spreadsheets in evaluating the financial reporting of companies. | [SU4] test/exam - oral or written<br>[SU5] implementation of a problem task<br>[SU8] observation of student's independent or team work |
| [EKONL3_W06] has an advanced knowledge of selected methods and tools, including statistical and econometric techniques, for describing economic agents and structures as well as social institutions and the processes taking place in them | He/she uses spreadsheets for collecting and analyzing economic data. He/she can utilize statistical and analytical functions of spreadsheet software. | [SW4] test/exam - oral or written<br>[SW5] implementation of a problem task |
| [EKONL3_U06] uses the knowledge acquired in economics, finance and management to solve economic and social dilemmas arising in the professional context | Using spreadsheets, he/she can analyze financial reports and sets of economic data. | [SU4] test/exam - oral or written<br>[SU5] implementation of a problem task<br>[SU6] demonstration of practical skills |
| [EKONL3_U03] is able to analyse the causes and course of specific economic and social processes and phenomena, and accurately analyse these phenomena using adequate methods and tools economic and social | He/she can conduct cause-and-effect analyses using spreadsheet tools. | [SU4] test/exam - oral or written<br>[SU5] implementation of a problem task |
| [EKONL3_W11] knows the general principles for the creation and development of forms of individual entrepreneurship, using knowledge of economics, finance and management sciences | Knows which functions and spreadsheet formulas can be used to analyze economic phenomena and which can support management processes in the company. Able to use consultations as a method to improve the selection of tools. | [SW1] oral statement/ conversation/discussion<br>[SW2] presentation/project/paper/ report<br>[SW5] implementation of a problem task |
| [EKONL3_K04] is willing to think and act in an entrepreneurial manner; adapts to new situations and conditions, takes on the challenges of creative thinking, is resilient in the face of failure, is able to identify risks and assess the risks of failure | He/she can creatively combine spreadsheet tools to solve complex economic problems. | [SK4] test/exam - oral or written<br>[SK5] implementation of a problem task<br>[SK6] demonstration of practical skills |
| [EKONL3_K03] participates in the preparation of economic and social projects, being able to reconcile legal, economic, ecological, political and social requirements | The student is able to complete a project assignment involving financial analysis and consults on its premises and progress with the instructor during consultation hours and scheduled project sessions. Project sessions are included in the class schedule, while consultation times and locations are published on the UG website.He/she can effectively utilize spreadsheet software tools and apply them to optimize economic processes with regard to ESG (Environmental, Social, and Governance) factors. Participates in consultations. | [SK4] test/exam - oral or written<br>[SK5] implementation of a problem task<br>[SK8] observation of student's independent or team work |

<table>
<tr><td>Subject contents</td><td>1. Financial Analysis Using Spreadsheets: Credit analysis using built-in spreadsheet functions, methods like equal installment and equal repayment; NPV and IRR analysis; examination of corporate cash flows; balance sheet creation using spreadsheets; exploring solution variants, utilizing Solver for multi-variant analysis.<br><br>2. Graphical Data Presentation: Utilizing graphs; creating various types of charts for economic data presentation; advanced techniques for constructing layered charts.<br><br>3. Scenario Analysis: Creating and saving scenarios, variant analysis, forecasting methods in scenario analysis.<br><br>4. Programming Complex User Functions: Financial and statistical functions in the Analysis Tool Pack add-in, principles of creating complex functions, defining user-defined functions, nested function methods, using array functions.<br><br>5. Pivot Table Creation and Analysis: Adjusting data for use in pivot tables, constructing pivot tables from various data sources, using external data sources in pivot table creation (+ MS Query add-in), pivot charts.<br><br>6. Unconventional and Advanced Excel Formulas: Utilizing array formulas, counting arrays using formulas, comparative analysis of data sets.<br><br>7. Solver Utilization: Solver tool application scope and limitations - analysis using practical economic examples.<br><br>8. Macro Definition: Macro recording principles, methods and VBA objects, macro storage.<br><br>9. Macro Definition Analysis and Customization: Macro structure analysis, macro editing, loops, conditions, and variations.<br><br>10. User Form Utilization: Creating data entry forms, informational forms, linking forms with macros.<br><br>Any doubts regarding the issues discussed during classes can be discussed during consultations.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>Basic ability to use spreadsheets</td></tr>
<tr><td>Assessment methods and criteria</td><td>
<table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Oral exam</td><td>51.0%</td><td>50.0%</td></tr>
<tr><td>Written exam - problems to solve, project</td><td>51.0%</td><td>50.0%</td></tr>
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<tr><td>Recommended reading</td><td>
<table>
<tr><td>Basic literature</td><td>1. P.Borkowski: Excel w zarządzaniu, materiały ODITK 2021. 2. Portale internetowe Mr Excel 3. W. Treichel: Ćwiczenia z języka Visual Basic, Mikom 2001. 4.Steven Roman: Excel. Makrodefinicje, Helion, 2000</td></tr>
<tr><td>Supplementary literature</td><td>Jane Calabria, Dorothy Burke: Excel - przewodnik egzaminacyjny C.Conrad, Excel 2007. Analizy biznesowe, Helion, Gliwice 2009 S.Flanczewski, Excel z elementami VBA w firmie, Helion, Gliwice 2008.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
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<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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