

**Subject card**

<b>Subject name and code</b>	Spreadsheet in Finances and Management, PG_00119204						
<b>Field of study</b>	Economics						
<b>Date of commencement of studies</b>	October 2023	<b>Academic year of realisation of subject</b>				2025/2026	
<b>Education level</b>	Bachelor's studies	<b>Subject group</b>					
<b>Mode of study</b>	full-time studies	<b>Mode of delivery</b>				at the university	
<b>Year of study</b>	3	<b>Language of instruction</b>				Polish	
<b>Semester of study</b>	5	<b>ECTS credits</b>				1.0	
<b>Learning profile</b>	academic	<b>Assessment form</b>				credit	
<b>Conducting unit</b>	Department of Transport Economics -> Faculty of Economics -> Rector						
<b>Name and surname of lecturer (lecturers)</b>	<b>Subject supervisor</b>		dr hab. Przemysław Borkowski				
	<b>Teachers</b>		dr hab. Przemysław Borkowski				
<b>Lesson types</b>	<b>Lesson type</b>	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	<b>Number of study hours</b>	15.0	0.0	0.0	0.0	0.0	15
	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>	15		0.0		0.0	15
<b>Subject objectives</b>	Acquiring the ability to use financial and economic functions of Excel Acquiring the ability to conduct economic analyses using a spreadsheet Acquiring the ability to solve complex economic problems using macros and programmable functions						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[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 how to analyze economic and financial problems of the company using a spreadsheet	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[EKONL3_W06] have 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	Knows statistics and econometrics functions in the spreadsheet	[SW5] implementation of a problem task
	[EKONL3_K05] correctly identifies, diagnoses and resolves professional dilemmas and different options for solutions	Is able to make decisions based on the assessments made in the spreadsheet	[SK6] demonstration of practical skills
	[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	Is able to find alternative ways to solve a problem using various spreadsheet tools	[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	Can design complex analytical spreadsheets, including those using macro definitions	[SK5] implementation of a problem task
	[EKONL3_U08] has the ability to observe, understand and analyse economic and social phenomena and processes using appropriate scientific methods	Understands the relationship between spreadsheet tools and business processes	[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	Is able to select the appropriate spreadsheet tools in the assessment of the analyzed economic problem	[SU6] demonstration of practical skills
	[EKONL3_U06] uses the knowledge acquired in economics, finance and management to solve economic and social dilemmas arising in the professional context	Is able to evaluate options and make an economic decision based on spreadsheet analysis	[SU6] demonstration of practical skills [SU8] observation of student's independent or team work
	[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	Is able to analyze financial statements in a spreadsheet and use it to solve credit and investment issues	[SU5] implementation of a problem task [SU8] observation of student's independent or team work
	[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	Knows how to import external data into a spreadsheet and how to analyze it using the built-in spreadsheet functions	[SU5] implementation of a problem task [SU6] demonstration of practical skills

Subject contents	<p><b>Financial Analysis Using Spreadsheets</b> Analysis of loans using built-in spreadsheet functions, equal installment and equal repayment methods; NPV and IRR analysis; examination of financial flows of enterprises; creating balance sheets using spreadsheets; exploring solution variants; using Solver in multi-scenario analysis.</p> <p><b>Graphical Data Presentation</b> Using graphs; creating various types of charts for presenting economic data; advanced functions for creating multilayered charts.</p> <p><b>Scenario Analysis</b> Creating and saving scenarios, variant analysis, forecasting methods in scenario analysis.</p> <p><b>Programming Complex User Functions</b> Financial and statistical functions in the Analysis Tool Pack add-in, principles of creating complex functions, defining user-defined functions, methods of nesting functions, using array functions.</p> <p><b>Creating and Analyzing Pivot Tables</b> Adapting data for use in pivot tables, constructing pivot tables from various data sources, using external data sources in creating tables (with MS Query add-in), pivot charts.</p> <p><b>Uncommon and Advanced Excel Formulas</b> Using array formulas, counting arrays with formulas, comparative analysis of data sets.</p> <p><b>Using Solvers</b> Solver tool, scope of application and limitations - analysis on practical economic examples.</p> <p><b>Defining Macros</b> Principles of recording macros, VBA methods and objects, storing macros.</p> <p><b>Macro Definition Analysis and Customization</b> Analysis of macro structure, macro editing, loops, conditions, and variants.</p> <p><b>Using User Forms</b> Creating data entry forms, informational forms, linking forms with macro</p>											
Prerequisites and co-requisites	<p>Basic familiarity with electronic spreadsheet.</p> <p>Basic knowlegde of economic-financial terminology</p>											
Assessment methods and criteria	<table border="1"> <thead> <tr> <th data-bbox="453 1285 794 1317">Subject passing criteria</th> <th data-bbox="794 1285 1139 1317">Passing threshold</th> <th data-bbox="1139 1285 1473 1317">Percentage of the final grade</th> </tr> </thead> <tbody> <tr> <td data-bbox="453 1317 794 1348">Exam</td> <td data-bbox="794 1317 1139 1348">50.0%</td> <td data-bbox="1139 1317 1473 1348">100.0%</td> </tr> <tr> <td data-bbox="453 1348 794 1379"></td> <td data-bbox="794 1348 1139 1379">0.0%</td> <td data-bbox="1139 1348 1473 1379">0.0%</td> </tr> </tbody> </table>			Subject passing criteria	Passing threshold	Percentage of the final grade	Exam	50.0%	100.0%		0.0%	0.0%
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Recommended reading	<p>Basic literature</p>	<p>P.Borkowski: Excel w zarządzaniu, materiały ODITK 2021.</p> <p>Portale internetowe Mr Excel</p> <p>W. Treichel: Ćwiczenia z języka Visual Basic, Mikom 2001.</p> <p>Steven Roman: Excel. Makrodefinicje, Helion, 2000.</p>										
	<p>Supplementary literature</p>	<p>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.</p>										
	<p>eResources addresses</p>											
Example issues/ example questions/ tasks being completed												
Work placement	Not applicable											

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