

Subject card

Subject name and code	Application of IT in Finance and Controlling, PG_00178837						
Field of study	Finance and Accounting						
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 Optional subject group 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	3	ECTS credits			5.0		
Learning profile	academic	Assessment form			credit		
Conducting unit	Department of Corporate Finance -> Faculty of Management -> Rector						
Name and surname of lecturer (lecturers)	Subject supervisor		dr Dawid Szramowski				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	8.0	0.0	24.0	0.0	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		2.0		91.0	125
Subject objectives	Developing skills and knowledge related to information technology tools applied in finance and controlling.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FiRMU2_U04] From a finance and accounting perspective, students are able to select and effectively use, adapt, or develop new methods and tools from the fields of management, quality sciences, and economics. They can analyze and forecast economic processes as well as evaluate economic phenomena.	The student is able – from the perspective of finance and accounting – to accurately select and correctly apply appropriate methods and tools derived from management and quality sciences, as well as economics and finance, in order to analyze and forecast economic processes and to assess economic phenomena occurring in the business environment.	[SU2] presentation/project/paper/report [SU4] test/exam - oral or written
	[FiRMU2_U12] The student can use technologies and IT systems (including advanced ones) to support their professional work in finance and accounting.	The student is able to use technologies and IT systems that support the performance of professional tasks in the field of finance and accounting, including for data analysis, reporting, and managerial decision-making.	[SU2] presentation/project/paper/report
	[FiRMU2_W05] The student possesses a comprehensive understanding of advanced and innovative methods, tools, and techniques for obtaining, utilizing, and analyzing data needed to assess the financial situation of various entities in management, quality sciences, economics, and finance.	The student has an in-depth understanding of advanced, including innovative, methods and tools for acquiring, analyzing, and utilizing data to assess the financial situation of entities in the areas of management, economics, and finance.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[FiRMU2_W06] The student possesses a comprehensive understanding of the objectives, essence, nature, and interrelationships of financial processes. They are knowledgeable about how these processes are recorded and the principles of rational decision-making, particularly in terms of strategic decisions and the implementation of changes in this area.	The student has an in-depth knowledge and understanding of the objectives, essence, and interrelations of financial processes and their recording, as well as the principles of rational decision-making – including strategic decisions – and the implementation of changes in this area.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report
	[FiRMU2_U02] The student is able to propose or design suitable solutions, including innovative ones, to complex problems in finance and accounting.	The student is able to design and propose adequate, including innovative, solutions to complex problems in the field of finance and controlling using information technologies. In particular, they are capable of selecting appropriate IT tools (such as ERP systems, BI solutions, spreadsheets, or analytical applications), integrating data from various sources, and implementing solutions that automate reporting and analytical processes. The student is also able to assess the usefulness and effectiveness of digital solutions in increasing data transparency, supporting managerial decision-making, and enhancing the efficiency of financial management within an organization.	[SU2] presentation/project/paper/report

Subject contents	<p>1. The Role of Information Technology in Finance and Controlling Presentation of the importance of IT systems as tools supporting decision-making, reporting, and analytical processes in enterprises.</p> <p>2. Characteristics of ERP, BI (Business Intelligence) Software, Spreadsheets, and Specialized Financial-Analytical Applications Overview of various types of software used in finance and controlling.</p> <p>3. Integration, Automation, and Data Transparency in Controlling and Financial Management</p> <p>a) Integration of financial and controlling data sources within the organization. b) Automation of reporting and data analysis processes. c) Enhancing data transparency to support managerial decision-making. d) Ensuring consistency and real-time availability of financial information.</p> <p>4. Developing Skills in Financial Data Analysis and Interpretation Using IT Tools</p> <p>a) Learning to use IT tools for data analysis (e.g., Excel, Power BI, ERP systems). b) Developing the ability to identify key information in large datasets. c) Improving the ability to interpret financial results in a management context. d) Strengthening competencies in transforming data into actionable managerial insights.</p> <p>5. Preparing for Work in a Digital Environment</p> <p>a) Introducing students to current digitization trends in finance. b) Discussing practical applications of business process automation. c) Presenting the possibilities of using artificial intelligence in financial analysis. d) Introduction to cloud technologies and their role in modern financial management. e) Building awareness of competency requirements for employees in modern organizations.</p> <p>6. The Role of AI and Machine Learning in the Work of Finance and Controlling Departments Discussion of how AI and machine learning support the efficiency and effectiveness of financial and controlling operations.</p>		
Prerequisites and co-requisites	Basic knowledge in accounting, financial analysis, and management, as well as the ability to use spreadsheets (e.g., Microsoft Excel or Google Sheets).		
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written test	51.0%	50.0%
	Written project and its presentation	51.0%	50.0%
Recommended reading	Basic literature	<p>1. W. Próchnicki, Zastosowanie Excela w pracy analityka finansowego, specjalisty ds. controllingu i analityka sprzedaży. Helion, Gliwice 2020.</p> <p>2. A. Januszewski, Funkcjonalność informatycznych systemów zarządzania, t. 2. Wydawnictwo Politechniki Koszalińskiej, Koszalin 2021.</p> <p>3. J. Kisielnicki, MIS Systemy Informatyczne Zarządzania. Wydawnictwo Placet, Warszawa 2021.</p> <p>4. I. Chomiak-Orsa, Zastosowanie Business Intelligence w controllingu. Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław 2022.</p> <p>5. K. Rybicka, Wykorzystanie systemu informatycznego w controllingu logistycznym. Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2020.</p>	
	Supplementary literature	<p>1. Comarch, Controlling oraz narzędzia klasy BI do controllingu. Comarch, Kraków 2023.</p> <p>2. A. Bhimani, Accounting Disrupted: How Digitalization is Changing Finance. Wiley, Hoboken 2021.</p>	
	eResources addresses		
Example issues/ example questions/ tasks being completed			
Work placement	Not applicable		

Document generated electronically. Does not require a seal or signature.