

Subject card

Subject name and code	Digital Finance and Security of International Markets, PG_00177675						
Field of study	Finance and Accounting						
Date of commencement of studies	October 2026	Academic year of realisation of subject			2026/2027		
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	full-time studies	Mode of delivery			at the university		
Year of study	1	Language of instruction			Polish		
Semester of study	2	ECTS credits			6.0		
Learning profile	academic	Assessment form			exam		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Sławomir Kujawa				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	30.0	30.0	0.0	0.0	0.0	60
	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	60		4.0		86.0	150
Subject objectives	The goal of the course Digital Finance and Security in International Markets is to familiarize students with key issues related to the digital transformation of the financial sector, with a focus on innovative financial technologies (FinTech), digital financial instruments, and the challenges and risks of cyber security in a global context.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[FiRMU2_W02] The student possesses a comprehensive understanding of the complexities and functions of both domestic and international financial markets, as well as financial instruments and institutions.	The student recognizes and describes in depth the specificity, complexity and principles of the domestic and international financial market, as well as key financial instruments and institutions.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report [SW5] implementation of a problem task
	[FiRMU2_U12] The student can use technologies and IT systems (including advanced ones) to support their professional work in finance and accounting.	The student identifies and searches for technologies and applies information systems, including advanced digital tools, to support professional work in the field of finance and accounting.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[FiRMU2_U05] From a finance and accounting perspective, the student can identify and correctly apply legal, professional, and ethical norms within the realms of management, quality sciences, economics, and finance.	The student identifies and searches for complex internal and external relationships of institutions and organizations from the perspective of finance and accounting, and then applies the mechanisms of financial security systems taking into account the global context.	[SU2] presentation/project/paper/report [SU5] implementation of a problem task
	[FiRMU2_W03] The student possesses a comprehensive understanding of finance and accounting, particularly regarding the intricate internal and external relationships of institutions and organizations. This analysis emphasizes financial security systems within a global context.	The student recognizes and describes in depth from the perspective of finance and accounting the complex internal and external relationships of institutions and organizations, with a particular focus on financial security systems in a global context.	[SW4] test/exam - oral or written [SW2] presentation/project/paper/report [SW5] implementation of a problem task

Subject contents	<p>Digital transformation of the financial sector</p> <p>Analysis of the impact of digitization on financial institutions, changes in business models and adaptation to new technologies.</p> <p>FinTech and innovation in finance</p> <p>An overview of modern technological solutions in finance, such as mobile payments, robo-advice and peer-to-peer platforms.</p> <p>Crowdfunding</p> <p>Blockchain technologies and cryptocurrencies</p> <p>Principles of blockchain technology, applications in finance and analysis of the cryptocurrency market.</p> <p>Digital financial markets and financial instruments</p> <p>Characteristics of digital financial instruments, tokenization of assets and operation of digital exchanges.</p> <p>Legal regulations in digital finance</p> <p>Discussion of domestic and international regulations in digital finance, including RODO, PSD2, MiCA and DORA, AI act.</p> <p>Cyber security in the financial sector</p> <p>Identification of cyber threats and how to minimize them.</p> <p>Risk management in the digital environment</p> <p>Methods for identifying, assessing and minimizing digital risks in finance.</p> <p>International financial markets financial institutions</p> <p>Data analysis and big data in finance</p> <p>Using big data sets for financial decision-making, predictive models and trend analysis.</p> <p>Artificial intelligence and machine learning in financial services</p> <p>AI applications in credit analysis, investment portfolio management and customer service.</p> <p>Security of electronic transactions</p> <p>Security mechanisms for online transactions, including encryption, authentication and biometric technologies.</p> <p>Countering money laundering and terrorist financing in the digital environment</p> <p>Strategies and tools used to detect and prevent illegal transactions in digital financial channels.</p> <p>Ethics and social responsibility in digital finance</p> <p>Reflections on the ethical aspects of implementing technology in finance, including issues of privacy and inclusivity.</p> <p>The future of digital finance and innovation on the horizon</p> <p>Forecasts for the development of financial technology, potential regulatory changes and new business models.</p>		
Prerequisites and co-requisites			
Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Written exam	51.0%	50.0%
	Project	51.0%	50.0%
Recommended reading	<p>Basic literature</p> <p>Zawadzki K., Finanse cyfrowe. Nowe technologie w sektorze finansowym. Wydawnictwo: CeDeWu, Warszawa 2020 ISBN: 978-83-8102-519-0</p> <p>Nowacki A., Cyberbezpieczeństwo w bankowości i finansach Wydawnictwo: PWN, Warszawa 2021 ISBN: 978-83-01-21663-1</p> <p>Ostrowska E., Sztuczna inteligencja i etyka w sektorze finansowym. Wydawnictwo: Uniwersytet Gdański, Gdańsk 2024</p>		

	Supplementary literature	<p>Kujawa S., Robodoradztwo. Profesjonalna budowa i zarządzanie portfelem inwestycyjnym. Studia Prawno-Ekonomiczne. Vol. 121. Wydawnictwo: Łódzkie Towarzystwo Naukowe, Łódź 2021.</p> <p>Monkiewicz J., Gąsioriewicz L. (red.), Finanse cyfrowe: nowe tendencje i możliwości. Wydawnictwo: Politechnika Warszawska, Warszawa 2023</p>
	eResources addresses	
Example issues/ example questions/ tasks being completed		
Work placement	Not applicable	

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