GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Fundamentals of Economics I, PG_00069943
Field of study	Real Estate 5.0

Date of commencement of studies	February 2026	Academic year of realisation of subject	2025/2026
Education level	second-cycle studies	Subject group	Obligatory subject group in the field of study
			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	1	ECTS credits	3.0
Learning profile	general academic profile	Assessment form	assessment

Conducting unit	Department of Geodesy -> Faculty of Civil and Environmental Engineering -> Faculties of Gdańsk University of Technology

Name and surname of lecturer (lecturers)	Subject supervisor	dr Aniela Mikulska
	Teachers	dr hab. inż. Stanisław Mazurek
		dr Aniela Mikulska
		dr inż. Ewa Mazurek-Krasodomska
		dr Katarzyna Kubiszewska

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						
	eNauczanie source addresses: Moodle ID: 4355 Podstawy wiedzy ekonomicznej I https://enauczanie.pg.edu.pl/2025/course/view.php?id=4355						

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	2.0	13.0	75

Subject objectives	preparing students to interpret phenomena occurring in the real estate market, in the economic and financial environment of this market, and to apply financial mathematics methods in decision-making processes, based on in-depth knowledge of the economic foundations of the real estate market.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[K7_W02] possesses advanced knowledge and understanding of selected issues concerning the economic foundations of the real estate market, has general basic knowledge in the field of consultancy and methods for assessing the effectiveness of real estate market investments, and is familiar with the practical applications of accounting, financial mathematics, statistics, and econometrics in property valuation, real estate management, real estate brokerage, and other areas of activity within the real estate sector.	knows and understands the economic foundations of the real estate market and the relationships between economic categories (price, value, cost, income) in the context of market mechanisms and models of real estate market functioning; knows and understands the principles of mathematical description of the time value of money, with particular emphasis on various interest rate models, discount methods, and annuity calculations	[SW1] Assessment of factual knowledge
	[K7_U02] is able to interpret changes occurring in the economic and financial environment that affect the functioning of the real estate market, accurately analyze and interpret detailed financial statements, and apply methods of statistical analysis, econometric modeling, and financial mathematics in real estate valuation, property management, real estate transactions, and other processes characteristic of the operation of the real estate market	is able to analyze and interpret microeconomic phenomena in the market economy and changes taking place in the economic and financial environment of the real estate market; is able to perform calculations related to the valuation of financial instruments using appropriate mathematical models (interest rate, discount, capitalization, annuity account) and analyze their impact on the future and present value of cash flows	[SU1] Assessment of task fulfilment [SU2] Assessment of ability to analyse information [SU4] Assessment of ability to use methods and tools

Subject contents	Course content – lecture 1. Basics of Economics 1.1. Introduction to Economics 1.2. The Concept and Elements of the Market 1.3. Price, Value, Income, and Cost 1.4. Economic Principles of Valuation 1.5. Consumer and Producer Decisions 1.6. Factors of Production Labor, Land, and Capital 2. Basics of Financial Mathematics 2.1. Basics of the Theory of the Time Value of Money 2.2. Sources of Change in the Value of Money 2.3. Future Value of Money 2.4. Present Value of Money 3. Economic Foundations of the Real Estate Market 3.1. Real Estate as an Economic Good 3.2. The Real Estate Market 3.3. Factors Influencing the Functioning of the Real Estate Market 3.4. Models of Real Estate Market Operations 3.5. State Intervention in the Real Estate Market 3.6. Functioning of Real Estate Markets in Poland and Selected EU Countries. Course content – exercises 1. Basics of Economics 1.1. Introduction to Economics 1.2. The Concept and Elements of the Market 1.3. Price, Value, Income, and Cost 1.4. Economic Principles of Valuation 1.5. Consumer and Producer Decisions 1.6. Factors of Production Labor, Land, and Capital 2. Basics of Financial Mathematics 2.1. Basics of the Theory of the Time Value of Money 2.2. Sources of Change in the Value of Money 2.3. Future Value of Money 2.4. Present Value of Money 3. Economic Foundations of the Real Estate Market 3.1. Real Estate as an Economic Good 3.2. The Real Estate Market 3.3. Factors Influencing the Functioning of the Real Estate Market 3.4. Models of Real Estate Market Operations 3.5. State Intervention in the Real Estate Market 3.6. Functioning of Real Estate Markets in Poland and Selected EU Countries.
Prerequisites and co-requisites	

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	test with open questions and computational tasks	60.0%	100.0%

Recommended reading	Basic literature	Mankiw N.G., Taylor M.P, (2015). Mikroekonomia, Warszawa: PWE Krugman,P., Wells, R. (2020). Mikroekonomia, Warszawa: PWN Podgórska, M., Klimkowska, J. (2022). Matematyka finansowa. Warszawa: Wydawnictwo Naukowe PWN. Kellison, S. G. (2008). Theory of interest. New York: McGraw-Hill.
	Supplementary literature	Piotr Bucki (2022), Sapiens na zakupach. O tym, jak i dlaczego wybieramy, oceniamy, kupujemy. Wydawnictwo Naukowe PWN Sobczyk, M. (2011). Matematyka finansowa: podstawy teoretyczne, przykłady, zadania. Warszawa: Agencja Wydawnicza Placet. Redo, M., Prewysz-Kwinto, P. (2021). Matematyka finansowa. Warszawa: Wydawnictwo Naukowe PWN.

	eResources addresses	Basic
		https://openstax.pl/szczegoly-ksiazki?book=Mikroekonomia%E2%80%93Podstawy-podręcznikmikroekonomii - online microeconomics textbook
		Supplementary
		https://pl.khanacademy.org/economics-finance-domain/microeconomics-KhanAcademy - Khan Academy
Example issues/ example questions/ tasks being completed	Describe the non-price factors that determine supply and demand in the real estate market. What type of market is the housing market in Poland? Calculate the time value of money. Calculate the future value of investments. Calculate the future value of N monthly installments at interest rate "i" and monthly compounding.	
Practical activites within the subject	Not applicable	

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