University of Gdańsk

Subject card

Subject name and code	Investment and Risk Management Process, PG_00200429		
Field of study	Logistics and Mobility		
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 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	English
Semester of study	1	ECTS credits	3.0
Learning profile	academic	Assessment form	exam
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. Przemysław Borkowski, prof. UG	
	Teachers	dr hab. Przemysław Borkowski, prof. UG dr Magdalena Markiewicz	

Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	15.0	0.0	30.0	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	0.0	15.0	75

Subject objectives	to make student familiar with investment assessment techniques in real sector to understand risk and how it applies to investment projects in real sector to manage and assess risk to be able to manage investment during its lifespan to be able to compare and select preferable investments to be able to assess transport and logistics investments

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[LMMU2_W08] has a knowledge of main and logistics processes occurring in enterprises and economic organisations and with related areas, as well as of processes of change in public institutions; knows methods of research on the regularities governing these changes, taking into account the influence of external stakeholders on them	Understands what is the role of different organizational units within comany during investment process. knows the interactions between public and private entities in transport and logistics investments	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
	[LMMU2_W04] knows different types of economic and social ties and regularities governing them; has knowledge of ties between enterprises which require logistics support or provide logistics services	Knows methods for assessment of economic and financial viability in view of the relations between actors in the investment market. Knows how to apprise value and risks in investment projects.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
	[LMMU2_W06] has an in-depth knowledge of statistical and econometric methods and tools for description and macro- and microeconomic modelling of logistics and mobility processes and systems	Is able to apply selected qualitative and quantitative methods and to build and investment appraisal models. Knows how to calculate ENPV, BCR, EIRR, VaR	[SW2] presentation/project/paper/ report [SW3] text preparation/written work [SW5] implementation of a problem task
	[LMMU2_U02] can use acquired knowledge to describe and analyse the causes and course of logistics and mobility processes and systems, and can formulate his/her own opinions and critically select data and analysis methods based on the achievements of economic and social sciences	Is able to formulate and evaluate assessment critiria for investment acceptance. Is able to select appropriate evaluation method to the investment	[SU2] presentation/project/paper/ report [SU3] text preparation/written work [SU5] implementation of a problem task [SU6] demonstration of practical skills
	[LMMU2_U07] can independently propose solutions to complex logistics and mobility problems, select methods of analysis and conduct conclusive procedures in this respect	Is able to perform comparative analysis of alternative investments	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
	[LMMU2_W03] has a knowledge of relations between economic entities and organisations functioning in the national, international and intercultural spheres; understands importance logistics and mobility for their operation	Understands the investment concept and relation between entities in the investment market.	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[LMMU2_K01] recognises the importance of knowledge in the field of logistics and mobility in the process of identifying and solving work-related problems and of consulting experts when having difficulties in solving them independently	Can analyse problems taking into account multiple factors. Can make decisions refering to methods and selected algorithm. Is able to look for solutions in the appropriate literature	[SK2] presentation/project/paper/ report [SK5] implementation of a problem task
	[LMMU2_U06] can practically apply various forms and range of acquired knowledge in logistics and mobility, supplementing it with an independent critical analysis of its efficiency and usefulness	Can select appropriate method for project assessment. Can select optimal finaning. Can select adequate tools for the investment risk management. In case of doubts, the Student is aware of the possibility of using consultations.	[SU2] presentation/project/paper/ report [SU6] demonstration of practical skills
	[LMMU2_U04] can forecast and model complex economic and social processes, as well as logistics and mobility processes and systems using quantitative and qualitative methods and tools developed by economic sciences (including statistics and econometrics)	Can apply CBA and VaR techniques. Can calculate ENPV of complex investment projects. Can calculate risk and perform sensitivity analysis.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task [SU6] demonstration of practical skills

	Course outcome	Subject outcome	Method of verification
	[LMMU2_K04] is ready to think and act in an entrepreneurial manner; adapts to new situations and conditions; undertakes challenges of creative thinking; acquires resilience to failures; can assess risks and threats and find ways of counteracting their effects	knows how to react to changing socio-economical conditions. knows how to asses risk and propose risk management solutions.	[SK3] text preparation/written work [SK5] implementation of a problem task
	[LMMU2_K03] inspires and organises preparation of projects in the field of logistics and mobility, following the idea of sustainable development, reconciling legal, economic, ecological, political and social requirements	Learns how to reconcile contradictory investment requirments. Understands ipmacts on society and can plan on mitigitaing negative environmental and social aspects of investments	[SK1] oral statement/conversation/ discussion [SK2] presentation/project/paper/ report
	[LMMU2_K02] is aware of the level of his/her knowledge in the field of logistics and mobility; understands the need to extend and update this knowledge throughout his/her life	Understands limitations of methods used. Can search for indicators and data.	[SK2] presentation/project/paper/ report [SK5] implementation of a problem task [SK6] demonstration of practical skills

Subject contents	1. Basics of investment theory: investment in real vs financial sector, investment theories: financial investment equilibrium in Markowitz and CAPM vs real sector investment market equilibrium, investors and investment lifecycles, infrastructure vs company own investments (2h) 2. Financing real sector investments: financial mechanisms for investing in real sector, external and internal capital, cost of capital, innovative financial instruments, green bonds and green financing (4h) 3. Investment decision making process: application of the theory of decision making under condition of risk into real sector investments, investment selection, preliminary investment assessment, alternative investments (2h) 4. Investment financial and economic assessment: financial indicators, rate of return and discounted cash flows, fundamental analysis of the investment project (4h) 5. Cost Benefit Analysis: calculation of costs and benefits, ENPV and BCR for selected T&L investments (5h) 6. Risk identification and assessment in investment projects: risk typology, qualitative and quantitative risk assessment, VaR and sensitivity for investment project assessment (5h); 7. Risk management: risk strategies, internal and external risk instruments, use of real options and derivatives, risk avoidance and risk taking (4h) 8. Case studies in investment assessment in T&L sector (4h) Consultations will be used to clarify more complex issues related to the course topics.
Prerequisites and co-requisites	

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
	Project	51.0%	100.0%

Recommended reading		
	Basic literature	1. P. Borkowski, A framework for risk analysis in infrastructure projects, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocawiu, nr 401, 2015, s. 69-82, DOI:10.15611/pn.2015.401.0 2. P. Borkowski, Applicability of reference-based appraisals in the assessment of real sector investment projects, Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, nr 401, 2015, ss. 58-68. 3. Guide to Cost-Benefit Analysis of Investment Projects, European Commission, Brussels 2014, 4. Blue Books of JASPERS (Niebieskie Księgi 2021-2027 - Centrum Unijnych Projektów Transportowych. (cupt.gov.pl)
	Supplementary literature	4. P. Borkowski, Practice of cost benefit analysis in transport infrastructure projects in the European Union, Zeszyty Naukowe Uniwersytetu Szczecińskiego Problemy Transportu i Logistyki, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, nr 27, 2014, s. 49-63. 5. H.Priemus, B.Flyvbjerg, B.van Wee, Decision-making on mega-projects, Edward Elgar Publishing, Cheltenham 2008. 6. Assessing the true value of infrastructure investments, KPMG, 201
	eResources addresses	

Example issues/ example questions/ tasks being completed	
Work placement	Not applicable

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