

Subject card

Subject name and code	Selected Aspects of Low Emission Economy - Renewable Energy and Green Buildings, PG_00167148						
Field of study	Finance and Accounting, Information Science and Econometrics, Management, , Sport Management						
Date of commencement of studies	October 2023		Academic year of realisation of subject		2024/2025		
Education level	undergraduate studies		Subject group		Optional subject group		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	2		Language of instruction		English english		
Semester of study	4		ECTS credits		2.0		
Learning profile	academic		Assessment form				
Conducting unit	Katedra Inwestycji i Nieruchomości -> Faculty of Management -> Rektor						
Name and surname of lecturer (lecturers)	Subject supervisor		dr inż. Aleksandra Koszarek-Cyra				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	15.0	0.0	0.0	0.0	0.0	15
	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	15		0.0		0.0	15
Subject objectives	The aim of the lecture is to provide advanced knowledge on the business environment in the context of a low-emission economy, with a particular focus on renewable energy sources and green building practices. The course aims to foster an understanding of the factors influencing the functioning of businesses, the changes occurring in their environment, and the relationships and importance of stakeholders in the processes of transformation towards climate neutrality. The lecture also covers advanced methods for diagnosing the macro and micro environment in the context of investments in green technologies and sustainable development standards.						

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[IiEL3_U10] The student has mastered a foreign language at the B2 vocabulary within his/her specialty in a foreign language at B2 level, according to CEFR.	The student is proficient in a foreign language at the B2 level of the Common European Framework of Reference for Languages, with particular emphasis on terminology related to the low-emission economy, renewable energy sources, and green building practices.	[SU1] oral statement/conversation/discussion
	[ZISZL3_U01] Student is able to correctly interpret socio-economic phenomena, current events in economic policy, economy, especially in the field of health protection in the social and economic dimension, as well as independently formulate his/her own opinions in this regard and propose adequate solutions in the event of changes taking place in these areas.	The student is able to correctly interpret socio-economic phenomena and current events in economic policy and economics, particularly in the context of the low-emission economy, renewable energy sources, and green building practices. The student can also independently formulate opinions on these issues and propose appropriate solutions in response to the changes occurring in these areas.	[SU1] oral statement/conversation/discussion
	[ZISZL3_W01] Student has basic knowledge in the discipline of management and quality science and understands its relationship with other social sciences.	The student has a basic understanding of management and quality sciences and understands their relationship with other social sciences, particularly in the context of the low-emission economy, renewable energy sources, and green building practices.	[SW4] test/exam - oral or written
	[ZSSML3_K03] The student knows the need to identify important problems, including economic and social issues, and plan ways to solve them.	The student is aware of the necessity to identify important economic and social issues, particularly in the areas of sustainable development, low-emission economy, renewable energy sources, and green building practices, and understands the need to plan appropriate ways to address these issues.	[SK1] oral statement/conversation/discussion
	[FiRL3_U10] The student has mastered a foreign language at the B2 vocabulary within his/her specialty in a foreign language at B2 level, according to CEFR.	The student is proficient in a foreign language at the B2 level of the Common European Framework of Reference for Languages, with particular emphasis on terminology related to the low-emission economy, renewable energy sources, and green building practices.	[SU1] oral statement/conversation/discussion
	[ZISZL3_K05] He/she understands the need and is aware of ethical, sustainable and socially responsible behaviour in professional life.	The student understands the need and is aware of the importance of behaving in an ethical, balanced, and socially responsible manner in their professional life.	[SK1] oral statement/conversation/discussion
	[FiRL3_W06] The student has advanced knowledge of methods and tools, including data acquisition and analysis techniques, appropriate to management science and quality, which allow describing economic structures and institutions and the processes within and between them.	The student possesses advanced knowledge in the field of management and quality sciences, with particular emphasis on its applications in the low-emission economy, renewable energy sources, and green building practices. The student understands its connections with other social sciences, such as economics, law, sociology, and environmental sciences.	[SW1] oral statement/conversation/discussion
	[ZSSML3_W01] The student as advanced knowledge in the discipline of management and quality sciences and understands its interrelationship with other social sciences.	The student possesses advanced knowledge in the field of management and quality sciences, with particular emphasis on its applications in the low-emission economy, renewable energy sources, and green building practices. The student understands its connections with other social sciences, such as economics, law, sociology, and environmental sciences.	[SW4] test/exam - oral or written

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	[FiRL3_K03] Communication: - is able to present his view, issue in a way that others can understand - boldly (but thoughtfully) expresses his opinion, is not afraid to ask questions - is able to culturally participate in discussions - is able to give constructive criticism.	The student is able to present their views and issues related to the low-emission economy, renewable energy sources, and green building practices in a clear and precise manner. The student confidently (yet thoughtfully) expresses their opinions, engaging in dialogue on topics related to energy transition and sustainable development, unafraid to ask questions. The student can participate politely in discussions on innovative solutions, regulations, and environmental challenges. The student is capable of offering constructive criticism, taking into account various perspectives and the needs of stakeholders in the context of sustainable development	[SK1] oral statement/conversation/discussion
	[IiEL3_W01] The student has advanced knowledge of the place of social sciences in the system of sciences, their nature, methodology and connections with other sciences.	The student possesses advanced knowledge of the place of social sciences within the system of sciences, their nature, and methodology, with particular emphasis on their connections with natural, technical, and economic sciences in the context of sustainable development, low-emission economy, and green building practices.	[SW4] test/exam - oral or written
	[ZSSML3_U11] The student has mastered a foreign language at the B2 vocabulary within his/her specialty in a foreign language at B2 level, according to CEFR.	The student is proficient in a foreign language at the B2 level of the Common European Framework of Reference for Languages, with particular emphasis on terminology related to the low-emission economy, renewable energy sources, and green building practices.	[SU1] oral statement/conversation/discussion
	[ZARZL3_K05] The student is ready to correctly evaluate phenomena and clearly justify his position through rational, logical and entrepreneurial use of knowledge - basing his assertions and decisions on the analysis of received information.	The student is ready to make appropriate assessments of phenomena related to the low-emission economy, renewable energy sources, and green building practices, and to clearly justify their position through a rational, logical, and entrepreneurial approach to knowledge application, basing their statements and decisions on the analysis of available information and data in these areas.	[SK4] test/exam - oral or written
	[ZARZL3_W04] The student has advanced knowledge of the environment of the enterprise, its factors and changes occurring in this area, as well as the relationship, significance and impact of the environment and stakeholders on the functioning of the enterprise. Knows advanced methods of diagnosing macro- and micro-environment.	The student possesses advanced knowledge of the business environment in the context of a low-emission economy, with particular emphasis on factors related to renewable energy sources and green building practices. The student understands the changes occurring in this area and their impact on businesses.	[SW4] test/exam - oral or written
	[IiEL3_K01] The student understands the need to constantly supplement and deepen acquired knowledge; is open to new ideas and teaching methods.	The student understands the need for continuous updating and deepening of knowledge in the areas of low-emission economy, renewable energy sources, and green building practices. The student is open to new ideas, innovative technologies, and methods related to education and the implementation of sustainable solutions.	[SK1] oral statement/conversation/discussion

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Subject contents	1. The process of transitioning the economy towards climate neutrality assumptions, processes, forms of support 2. Investments in renewable energy sources types of sources, investment opportunities, environmental benefits 3. Prosumer energy definition, essence, social dimension, examples 4. Zero- and plus-energy buildings definition, standards, and green building certification systems, examples 5. Smart metering definition, applications, benefits of implementation 6. Investments by local government units in emission reduction examples, financing opportunities, social benefits								
Prerequisites and co-requisites	none								
Assessment methods and criteria	<table><tr><td>Subject passing criteria</td><td>Passing threshold</td><td>Percentage of the final grade</td></tr><tr><td>test</td><td>51.0%</td><td>100.0%</td></tr></table>	Subject passing criteria	Passing threshold	Percentage of the final grade	test	51.0%	100.0%		
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Recommended reading	Basic literature	1. OECD. Green Growth Studies Energy; OECD Publishing: Paris, France, 20122. Thomson G. Energy Efficiency and Sustainable Development. CALLISTO REFERENCE 20173. World Green Building Council The business case for green building A Review of the Costs and Benefits for Developers, Investors and Occupants,2013 http://www.worldgbc.org/							
	Supplementary literature	1. Hellström, T. Dimensions of environmentally sustainable innovation: the structure of eco innovation concepts, w: Sustainable Development, v. 15, n. 3 (2007), s. 148159 2. Jednak, S.; Kragulj, D. Economic Aspects of Energy Efficiency and Sustainability, Relevance of Energy Efficiency in the Context of Sustainable Development; FON: Belgrade, Serbia, 2020; pp. 729 3. Kućęba R., Zawada M., Szajt M. Kowalik J. Prosumer Energy as a Stimulator of Micro- Smart Grids Development - on the Consumer Side. IOP Conference Series: Earth and Environmental Science, Volume 164, 2018 2nd International Conference on Energy and Environmental Science1618 January 2018, Kuala Lumpur, Malaysia 4. United Nations Industrial Development Organizations 2015 Industrial Prosumers of Renewable Energy. Contribution to Inclusive and Sustainable Industrial Development (Vienna) https://www.unido.org/fileadmin/media/documents/pdf/Energy_Environment/PROSUME 5. Hart, S.L. Beyond Greening: Strategies for a Sustainable World. W: Harvard Business Review 75, no. 1 (1997)							
	eResources addresses	Adresy na platformie eNauczanie:							
Example issues/ example questions/ tasks being completed									
Work placement	Not applicable								

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