GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Inspection, Standards, Certification and Legislation- Aspects in Wind Energy, PG_00066988		
Field of study	Smart Renewable Energy Engineering		
Date of commencement of studies	October 2025	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Specialty 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	2	Language of instruction	English
Semester of study	3	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Engineering Structures -> Faculty of Civil and Environmental Engineering -> Wydziały Politechniki Gdańskiej		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Michał Wójcik	
	Teachers		

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	15.0	0.0	0.0	0.0	15.0	30

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	30	4.0	16.0	50

Subject objectives

The course aims to explain the role of certification in wind energy, its placement within the legal framework, and its impact on the selection of relevant technical standards and inspection procedures.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W06] is acquainted with global, European, and national energy policies and regulations regarding renewable energy and has basic knowledge of project management in the context of energy engineering	The student has knowledge of European and national energy policies and legal regulations related to renewable, including wind energy, and understands the basics of project management in this field.	[SW1] Assessment of factual knowledge
[K7_W05] understands the principles of sustainable development and safety in the context of energy systems, including the role of electrification, and can assess the environmental impact of renewable energy systems, particularly wind power installations	The student understands the importance of safety and sustainability principles in the context of certification and legislation in wind energy, and can assess the impact of regulations on the environment and energy systems.	[SW1] Assessment of factual knowledge
[K7_K05] complies with legal regulations and standards related to renewable energy, including wind power, ensuring that energy installations and projects operate in accordance with current legislation	The student understands and applies legal regulations and standards governing wind energy installations, ensuring compliance with current requirements.	[SK1] Assessment of group work skills
[K7_U04] possesses remote diagnostic skills and the ability to address technical issues in energy systems using remote diagnostic tools	The student is able to identify and analyze technical problems related to inspection and certification in wind energy and propose possible solutions using appropriate tools and standards.	[SU2] Assessment of ability to analyse information

<table>
<tr><td>Subject contents</td><td>The course will cover:
• Introduction to the layout of a wind farm and its key components.
• Roles of different stakeholders in the investment process and their importance for project success.
• Tasks of designers and the significance of the certification process.
• Key legal regulations applicable to wind energy.
• Overview of essential technical standards relevant for design.
• Scope of inspections carried out during the production and construction phases.</td></tr>
<tr><td>Prerequisites and co-requisites</td><td>No specific prerequisites. The student should have general engineering knowledge in renewable energy.</td></tr>
<tr><td>Assessment methods and criteria</td><td><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Written test</td><td>56.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td>Recommended reading</td><td><table><tr><td>Basic literature</td><td>• IEC 61400 Wind turbines International standards, https://webstore.iec.ch/en/publication/68499
• DNV (dawniej GL RC) certyfikacja turbin https://www.dnv.com/services/wind-turbine-type-certification-70124/
• Burton et al., Wind Energy Handbook Wiley Online Library
https://onlinelibrary.wiley.com/doi/book/10.1002/9781119992714</td></tr><tr><td>Supplementary literature</td><td>• Dyrektywa (UE) 2018/2001 (RED II) EUR-Lex (tekst skonsolidowany 16.07.2024)
https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:02018L2001-20240716
• Ustawa o OZE ISAP (tekst jednolity)
https://isap.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20240001361</td></tr><tr><td>eResources addresses</td><td></td></tr></table></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td></td></tr>
<tr><td>Work placement</td><td>Not applicable</td></tr>
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