GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Regulations and standards in nuclear engineering, PG_00065889		
Field of study	Nuclear Engineering		
Date of commencement of studies	February 2027	Academic year of realisation of subject	2026/2027
Education level	second-cycle studies	Subject group	Obligatory subject group 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	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Electrical Power Engineering -> Faculty of Electrical and Control Engineering -> Faculties of Gdańsk University of Technology		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Marcin Jaskólski	
	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	3.0	7.0	25

Subject objectives

The aim of the course for students is to acquire knowledge of key legal acts and regulations and standards relevant to nuclear energy.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K7_W04] recognizes and interprets selected issues in the field of advanced detailed knowledge, particularly in the scope of methods, techniques, tools, algorithms and standards specific to Nuclear Power Technologies taking into account the principles of safety and radiological protection	Interprets selected standards for nuclear energy, particularly regarding safety and radiological protection.	[SW1] Assessment of factual knowledge
[K7_W11] interprets social, economic, legal (including industrial and intellectual property laws), and other non-technical aspects of engineering activities, and includes them into engineering practice	Interprets the legal conditions for nuclear energy activities.	[SW1] Assessment of factual knowledge

Subject contents

Course content – lecture

Lecture:1. International organizations in nuclear energy2. International law in the field of nuclear energy3. Legal documents regulating issues related to nuclear energy in the European Union4. Acts and regulations concerning nuclear energy in Poland (PEP, PPEJ, Atomic Law, BJiOR Strategy)5. IEEE standards in the field of safety and operation of nuclear power plants (selected issues)6. Review of the most important ASME standards in the field of nuclear energy7. Selected documents of the International Atomic Energy Agency (IAEA)

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table><tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr><tr><td>Lecture test</td><td>60.0%</td><td>100.0%</td></tr></table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>1. Zieliński A.S. (red.) (2024), Elektrownie jądrowe w nowoczesnej gospodarce, Wydawnictwo Naukowe PWN</td></tr>
<tr><td>Supplementary literature</td><td>International Atomic Energy Agency, Managing the First Nuclear Power Plant Project IAEA-TECDOC-1555, Vienna, 2007.

International Atomic Energy Agency (IAEA), Vienna Convention on Civil Liability for Nuclear Damage, 2023, https://www.iaea.org/topics/nuclear-liability-conventions/vienna-convention-on-civil-liability-for-nuclear-damage

United Nations Office for Disarmament Affairs (UNODA), Treaty on the Non-Proliferation of Nuclear Weapons (NPT), 2023, https://www.iaea.org/topics/non-proliferation-treaty

International Atomic Energy Agency (IAEA), Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment, 2023, https://www.iaea.org/publications/documents/conventions/convention-physical-protection-nuclear-material-and-its-amendment

International Atomic Energy Agency (IAEA), Convention on Nuclear Safety, 2023, https://www.iaea.org/topics/nuclear-safety-conventions/convention-nuclear-safety

International Atomic Energy Agency (IAEA), Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, 2023, https://www.iaea.org/topics/nuclear-safety-conventions/joint-convention-safety-spent-fuel-management-and-safety-radioactive-waste</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">1. What is the scope of responsibility of the President of the National Atomic Energy Agency?2. The most important legal documents in relation to nuclear energy and nuclear safety in the international arena.3. Key provisions of the law in force in the European Union4. The Atomic Law Act - Activities related to exposure requiring a permit.5. The Atomic Law Act - Activities related to exposure requiring notification in the scope of radiological protection6. The Atomic Law Act - Nuclear safety and radiological protection and protection of employees' health7. The Atomic Law Act - Selection of the location of a nuclear facility8. The Atomic Law Act - radioactive waste and spent nuclear fuel</td></tr>
<tr><td>Practical activites within the subject</td><td colspan="2">Not applicable</td></tr>
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