



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 2025	Academic year of realisation of subject			2024/2025		
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						
Name and surname of lecturer (lecturers)	Subject supervisor	dr inż. Marcin Jaskólski					
	Teachers	dr inż. Marcin Jaskólski					
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	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	<p>Lecture: 1. International organizations in nuclear energy 2. International law in the field of nuclear energy 3. Legal documents regulating issues related to nuclear energy in the European Union 4. 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 energy 7. Selected documents of the International Atomic Energy Agency (IAEA)</p>						
Prerequisites and co-requisites							

Assessment methods and criteria	Subject passing criteria	Passing threshold	Percentage of the final grade
		Lecture test	60.0%
Recommended reading	Basic literature	1. Zieliński A.S. (red.) (2024), <i>Elektrownie jądrowe w nowoczesnej gospodarce</i> , Wydawnictwo Naukowe PWN	
	Supplementary literature	<p>International Atomic Energy Agency, <i>Managing the First Nuclear Power Plant Project IAEA-TECDOC-1555</i>, Vienna, 2007.</p> <p>International Atomic Energy Agency (IAEA), <i>Vienna Convention on Civil Liability for Nuclear Damage</i>, 2023, https://www.iaea.org/topics/nuclear-liability-conventions/vienna-convention-on-civil-liability-for-nuclear-damage</p> <p>United Nations Office for Disarmament Affairs (UNODA), <i>Treaty on the Non-Proliferation of Nuclear Weapons (NPT)</i>, 2023, https://www.iaea.org/topics/non-proliferation-treaty</p> <p>International Atomic Energy Agency (IAEA), <i>Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment</i>, 2023, https://www.iaea.org/publications/documents/conventions/convention-physical-protection-nuclear-material-and-its-amendment</p> <p>International Atomic Energy Agency (IAEA), <i>Convention on Nuclear Safety</i>, 2023, https://www.iaea.org/topics/nuclear-safety-conventions/convention-nuclear-safety</p> <p>International Atomic Energy Agency (IAEA), <i>Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management</i>, 2023, https://www.iaea.org/topics/nuclear-safety-conventions/joint-convention-safety-spent-fuel-management-and-safety-radioactive-waste</p>	
	eResources addresses	<p>Podstawowe</p> <p>https://www.gov.pl/web/polski-atom/prawo-krajowe-europejskie-i-miedzynarodowe - National, European and international law</p> <p>https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/prawo-atomowe-16890219 - ACT of 29 November 2000 - Atomic Law</p> <p>https://sip.lex.pl/akty-prawne/dzu-dziennik-ustaw/przygotowanie-i-realizacja-inwestycji-w-zakresie-obiektow-energetyki-17716352 - ACT of 29 June 2011 on the preparation and implementation of investments in nuclear power facilities and accompanying investments</p> <p>https://www.gov.pl/web/paa/strategia-i-polityka-w-zakresie-rozwoju-bezpieczenstwa-jadrowego-i-ochrony-radiologicznej-rzeczypospolitej-polskiej - Strategy and policy for the development of nuclear safety and radiological protection of the Republic of Poland</p> <p>https://ieeexplore.ieee.org/document/9086173 - 308-2020 - IEEE Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations - Redline</p> <p>Adresy na platformie eNauczanie:</p> <p>Przepisy i standardy w energetyce jądrowej - Moodle ID: 42723 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42723</p>	

Example issues/ example questions/ tasks being completed	<p>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 Union 4. 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 protection 6. The Atomic Law Act - Nuclear safety and radiological protection and protection of employees' health 7. The Atomic Law Act - Selection of the location of a nuclear facility. 8. The Atomic Law Act - radioactive waste and spent nuclear fuel</p>
Work placement	Not applicable

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