GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Building Installations I, PG_00062073		
Field of study	Civil Engineering		
Date of commencement of studies	October 2023	Academic year of realisation of subject	2024/2025
Education level	first-cycle studies	Subject group	
Mode of study	Full-time studies	Mode of delivery	at the university
Year of study	2	Language of instruction	Polish
Semester of study	3	ECTS credits	1.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Electrical Engineering of Transport -> Faculty of Electrical and Control Engineering		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Jacek Skibicki	
	Teachers	dr inż. Izabela Prażuch dr hab. inż. Jacek Skibicki	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	7.0	8.0	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 main purpose of the subject is to become familiar with the principles of using electrical installations and the basics of their design. Information on the construction of electrical installations, their types, protections, electric shock protection, etc. will be provided. In addition, students will learn the methods of energy transmission in the power system and how to produce it.

Learning outcomes

Course outcome	Subject outcome	Method of verification
[K6_W03] Demonstrate knowledge and understanding of the processes, established standards and design methods in the civil engineering subject area and of their limitations.	The student is able to recognize the elements of the electrical installation, assign devices to particular protection classes, and is able to determine the conditions for conducting the electrical installation in the room.	[SW1] Assessment of factual knowledge
[K6_U04] Reads and prepares construction documentation (including drawings, graphic documentation in the CAD environment), efficiently uses maps as well as architectural, construction and geodetic drawings.	The student is able to design elements of the electrical installation system in a residential building based on the assumed power of electrical loads.	[SU1] Assessment of task fulfilment
[K6_W04] Knows the rules of descriptive geometry and technical drawing for preparing and reading architectural, construction and geodetic drawings; also with the use of CAD	The student is able to recognize and correctly interpret the elements and assumptions of the construction of an electrical installation in a residential building.	[SW1] Assessment of factual knowledge
[K6_U03] Design engineering objects and details, processes and engineering systems by applying appropriate standards and methods of design.	The student is able to select elements of the electrical installation in a residential building and the power supply installation.	[SU1] Assessment of task fulfilment

Subject contents

The concept of electrical installation. Construction of domestic and industrial installations. Electricity receivers. Overcurrent protection. Electric shock protection. Electrical installation in industry. Electricity transmission, overhead and cable lines. Electricity generation, conventional, nuclear, hydro, wind, solar and micro power plants. Prosument instalations.

<table>
<tr><td>Prerequisites and co-requisites</td><td colspan="2"></td></tr>
<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 final test</td><td>60.0%</td><td>60.0%</td></tr>
<tr><td>Colloquium on exercises</td><td>60.0%</td><td>40.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>Musiał. E.: Instalacje i urządzenia elektroenergetyczne. Warszawa. WSiP.

Wiatr J., Orzechowski M.: Poradnik projektanta elektryka. Warszawa. Medium.

Czapp S. Ochrona przeciwporażeniowa w sieciach i instalacjach niskiego napięcia. Warszawa PWN</td></tr>
<tr><td>Supplementary literature</td><td>Niestępski S, Parol M., Pasternakiewicz J., Wiśniewski T.: Instalacje elektryczne, budowa, projektowanie i eksploatacja. Warszawa OWPW.

Lichnowski J.: Urządzenia elektryczne na placu budowy. Warszawa. Arkady.</td></tr>
<tr><td>eResources addresses</td><td>Adresy na platformie eNauczanie:
Instalacje budowlane I 2024/25 - Moodle ID: 42105
https://enauczanie.pg.edu.pl/moodle/course/view.php?id=42105</td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">Selecting the cross section of electrical wiring. Selection of short-circuit protection.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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