GDAŃSK UNIVERSITY OF TECHNOLOGY

Subject card

Subject name and code	Electrotechnics and Electronics II, PG_00039795		
Field of study	Materials Engineering, Materials Engineering, Materials Engineering		
Date of commencement of studies	October 2021	Academic year of realisation of subject	2022/2023
Education level	first-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	2	Language of instruction	Polish
Semester of study	4	ECTS credits	2.0
Learning profile	general academic profile	Assessment form	assessment
Conducting unit	Department of Electrochemistry, Corrosion and Materials Engineering -> Faculty of Chemistry		
Name and surname of lecturer (lecturers)	Subject supervisor	dr hab. inż. Krzysztof Żakowski	
	Teachers	dr hab. inż. Krzysztof Żakowski dr inż. Łukasz Gaweł	

Lesson types and methods of instruction

Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
Number of study hours	0.0	0.0	30.0	0.0	0.0	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	1.0	19.0	50

Subject objectives

Mastering the basics of electrical engineering by the student in the scope enabling the understanding of the principles of operation of selected electrical machines, devices, systems, principles of operation of measuring instruments. The acquired knowledge will be useful in the further course of studies, in future professional work and in everyday life when using modern electrical and electronic devices.

Learning outcomes

Course outcome	Subject outcome	Method of verification
K6_U01	Student performs measurements of electrical quantities.	[SU4] Assessment of ability to use methods and tools
K6_W05	The student knows the application of basic electronic components.	[SW3] Assessment of knowledge contained in written work and projects
K6_U03	The student uses modern electrical and electronic devices.	[SU3] Assessment of ability to use knowledge gained from the subject
K6_K01	The student understands the need for continuous improvement of professional skills.	[SK5] Assessment of ability to solve problems that arise in practice

Subject contents

- Measuring instruments.
- Resistance measurements.
- Measurements of earthing resistance.
- Diode and rectifiers.
- Operational amplifier.
- Prototype systems.
- Electrical installations of the apartment.

Prerequisites and co-requisites

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Participation in exercises and reports.	60.0%	100.0%

Recommended reading

Basic literature	not applicable
Supplementary literature	not applicable

	eResources addresses	Adresy na platformie eNauczanie: Elektrotechnika i elektronika IM 2022/23 lab. - Moodle ID: 24459 https://enauczanie.pg.edu.pl/moodle/course/view.php?id=24459
Example issues/ example questions/ tasks being completed	• Design of electrical installation. • Calculation of the equivalent resistance of the system. • Determination of the voltage-current characteristics of a diode. • Investigation of the characteristics of the integrating amplifier.	
Work placement	Not applicable	