FACULTY OF ELECTRICAL ENGINEERING

SUBJECT CARD

Name in Polish:	**Technika wysokich napięć 2**
Name in English:	**High voltage technology 2**
Main field of study (if applicable):	**Electrical Engineering**
Specialization (if applicable):	
Level and form of studies:	**1st level, part-time**
Kind of subject:	**obligatory**
Subject code:	**ELR051162**
Group of courses:	**NO**

	Lecture	Classes	Laboratory	Project	Seminar
Number of hours of organized classes in University (ZZU):			20		
Number of hours of total student workload (CNPS):			60		
Form of crediting:			crediting with grade		
For group of courses mark (X) final course:					
Number of ECTS points:			2		
including number of ECTS points for practical (P) classes :			2		
including number of ECTS points for direct teacher-student contact (BK) classes:			1.40		

PREREQUISITES RELATING TO KNOWLEDGE, SKILLS AND OTHER COMPETENCES

1. Has knowledge of the basics of materials engineering.
2. He has knowledge of the basics of high-voltage engineering.

SUBJECT OBJECTIVES

C1. Familiarize students with the basic knowledge about phenomena in dielectrics under the influence of strong electrical stress and the basics of high-voltage-measurement techniques

C2. Acquiring practical skills necessary for the proper assambly of testing and measuring devices, and proper implementation and development of measurement results.

C3. Promoting cooperation in the group, teamwork.

SUBJECT LEARNING OUTCOMES

relating to knowledge:

relating to skills:

PEU_U01 Can use the knowledge gained earlier to describe the mechanism of phenomena

PEU_U02 Knows how to properly perform measurements high voltage systems and then develop and interpret the results.

relating to social competences:

PEU_K01 Awareness of teamwork and responsibility of all members of the team for the execution of the task

PROGRAMME CONTENT

	Form of classes - laboratory	Number of hours:
Lab 1	Overview of Safety Regulations and Rules of Internal Procedure of laboratory. Getting to know the location of power switchboards, escape routes, firefighting equipment. Establish rules complete the course. Familiarize with handling control panel of high-voltage stand.	2
Lab 2	AC high-voltage test stand	3
Lab 3	Generation and measurement of DC high-voltage	3
Lab 4	The strength of air at 50 Hz alternating voltage	3
Lab 5	Surface strength in the air of insulation systems at 50 Hz alternating voltage	3
Lab 6	Distribution of voltage on insulators chain	3
Lab 7	The term to make up for not completed classes, credit for laboratory	3
	Total hours:	**20**

TEACHING TOOLS USED
N1. Verification of preparation for classes written and / or oral answer. N2. Taking measurements using laboratory equipment N3. Development of measurement results in the form of a report.

EVALUATION OF SUBJECT LEARNING OUTCOMES ACHIEVEMENT		
Evaluation *F – forming (during semester)* *P – concluding (at semester end)*	**Educational effect number**	**Way of evaluating educational effect achievement**
F1(L)	PEU_U01 PEU_U02 PEU_K01	Evaluation of preparation for classes
F2(L)	PEU_U01 PEU_U02 PEU_K01	Evaluation of the report
P(L)	P=0.6*F1+0.4*F2	

PRIMARY AND SECONDARY LITERATURE
PRIMARY LITERATURE: [1] Fleszyński J., Laboratorium wysokonapięciowe w dydaktyce i elektroenergetyce, OWPWr, 1999. [2] Fleszyński J., Lisiecki J., Pohl Z., Miernictwo wysokonapięciowe i laboratorium wysokich napięć, skrypt PWr, 1990. [3] Flisowski Z., Technika wysokich napięć, WNT, 1988, i późniejsze [4] Juchniewicz J., Lisiecki J., Wysokonapięciowe układy izolacyjne, skrypt PWr, 1980 **SECONDARY LITERATURE:** [1] norma PN-92/E-04060 (IEC 60-1), Wysokonapięciowa technika probiercza. Ogólne określenia i wymagania probiercze.

SUBJECT SUPERVISOR
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