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		2. Work individually and in teams, to formulate a report of the measurement results [K_U03+]						
Social competencies:								
1. Ability in independent thinking and creative activity. [K-K01 1]		•						

Assessment methods of study outcomes

Faculty of Electrical Engineering

Laboratory exercises:

- ? checking and promoting the knowledge of the problems necessary for carrying out the exercises in the sphere of definite laboratory tasks,
- ? assessment of the knowledge and skill related to fulfilling the exercise, assessment of the exercise report.

Additional points may be achieved for activity during the classes, particularly for:

- ? proposal of discussion of additional solutions of the problem;
- ? ability of cooperation in teams.

Course description

Operation of three-phase symmetric, three- and four-conductor systems in delta- or star-connection. Analysis of voltage distribution and current flow in three-phase systems at asymmetric supply and load. Recognition of properties of electric filters of LC and RC types. Properties of the filters used in D.C. power suppliers and their assessment. Studies and analysis of current-voltage characteristics and dynamic and static resistances of various non-linear elements.

Basic bibliography:

- 1. Kurdziel R. "Podstawy Elektrotechniki", WNT, Warszawa, 1973
- 2. Frąckowiak J., Nawrowski R., Zielińska M. "Podstawy elektrotechniki. Laboratorium", Wydawnictwo Politechniki Poznańskiej, Poznań 2011
- 3. Bolkowski S. "Teoria Obwodów elektrycznych", WNT. Warszawa 1998

Additional bibliography:

1. Krakowski M. "Elektrotechnika teoretyczna", PWN, Warszawa 1978

Result of average student's workload

Activity	Time (working hours)
1. participation in laboratory classes	15
2. participation in consultation	2
3. test/exam	2
4. preparation for laboratory exercises	8
5. carrying reports out	5
6. preparing to test/exam	3

Student's workload

Source of workload	hours	ECTS
Total workload	30	1
Contact hours	14	1
Practical activities	20	1