

Title <b>Electrotechnics</b>	Code <b>1010331131010320278</b>
Field <b>Control Engineering and Robotics</b>	Year / Semester <b>2 / 3</b>
Specialty -	Course <b>core</b>
Hours Lectures: - Classes: - Laboratory: <b>2</b> Projects / seminars: -	Number of credits <b>3</b>
	Language <b>polish</b>

**Lecturer:**

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**Status of the course in the study program:**

Obligatory subject, Faculty of Electrical Engineering, Field: Control and Robotics, Full time undergraduate studies.

**Assumptions and objectives of the course:**

Practical verification of laws of electrical circuit, observation of important electrical effects.

**Contents of the course (course description):**

The principles of superposition, proportional and mutual in electrical circuits. The theorems of Thevenin and Norton. The actual source of electrical energy, matching of receiver to source of electrical energy to maximum of power. RLC elements in sinusoidal alternating current circuits. The resonance in the serial circuits. The correction of load factor. The analysis of transient state in linear circuits. The symmetrical three-phase circuits. The analysis AC circuits with LC elements. Linear electric circuits with periodic non-sinusoidal currents in steady state. The filters. The equivalent networks.

**Introductory courses and the required pre-knowledge:**

The basic knowledge of electrical circuits; methods of analysis the electrical circuits.

**Courses form and teaching methods:**

Laboratory.

**Form and terms of complete the course - requirements and assessment methods:**

The pass the laboratory: positive mark of the report of exercise.

**Basic Bibliography:**

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**Additional Bibliography:**

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