

Title <b>Fundamentals of electrical engineering</b>	Code <b>1010315311010320842</b>
Field <b>Power Engineering</b>	Year / Semester <b>1 / 1</b>
Specialty -	Course <b>core</b>
Hours Lectures: <b>1</b> Classes: <b>10</b> Laboratory: -    Projects / seminars: -	Number of credits <b>5</b>
	Language <b>polish</b>

**Lecturer:**

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

Obligatory course at the Faculty of Electrical Engineering, majoring in electrical engineering, extramural second degree studies.

**Assumptions and objectives of the course:**

Extending knowledge of basic theory of circuits. Knowledge of methods of calculating the nonlinear circuits, filters, and modeling of electrical circuits. Signal flow graphs.

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

Linear and nonlinear elements. Nonlinear circuits for DC and AC. Graphical and numerical method for solving nonlinear circuits. Analysis and synthesis of magnetic circuits. Passive filters type k. Frequency response / damping. Active Filters with operational amplifiers. Modeling of electrical circuits. Block diagrams. Conversion of flowcharts. Signal flow graphs.

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

The fundamental rights of Electrotechnical Standardization. Classical method and function analysis of Laplace States transitional linear systems. Basics of the theory-way.

**Courses form and teaching methods:**

Lecture illustrated slides and simulation, accounting

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

Tests written for exercises.

**Basic Bibliography:**

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**Additional Bibliography:**

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