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| Title Electronics and Power Electronics | Code 1010324231010320340 |
| Field Electrical engineering | Year / Semester 2 / 3 |
| Specialty - | Course core |
| Hours Lectures: 2 Classes: - Laboratory: - Projects / seminars: - | Number of credits 5 |
| | Language polish |

Lecturer:

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Status of the course in the study program:

Obligatory subject, Faculty of Electrical Engineering, Field: Electrical Engineering, Extramural undergraduate studies (BEng).

Assumptions and objectives of the course:

The student should obtain knowledge concerning characteristics and specifications of electronic components and principles of operation of the basic analogue and the digital circuits.

Contents of the course (course description):

Signals. Bode plots. Generalised theory of feedback. Passive electronic elements. Semiconductors: characteristics, p-n junction. Konstruktion, basic operating principles, characteristics and specifications of semiconductor devices: including the diodes, Zener diode, bipolar and field-effect transistors. Discrete linear amplifiers. Operational amplifiers: characteristics, specifications and applications to analogue signal processing. Analogue filters. Generators. Power supply. Introduction to the Boolean Algebra. Minimisation of logic functions using Karnaugh mapping techniques. Logic functors, logic families and their characteristics. Combinational logic elements and circuits. Sequential logic elements and circuits.

Introductory courses and the required pre-knowledge:

Basic knowledge of physics and electrical engineering.

Courses form and teaching methods:

Lectures supported by transparencies.

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

Written and oral examination.

Basic Bibliography:

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Additional Bibliography:

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