

Title Electronics and Power Electronics	Code 10103222110103201095
Field Electrical Engineering	Year / Semester 1 / 1
Specialty -	Course core
Hours Lectures: 2 Classes: - Laboratory: 1 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.

Assumptions and objectives of the course:

Theoretical knowledge and practical working, propriety and basic characteristics of complex and special electronics and power electronics systems.

Contents of the course (course description):

Complex power electronics rectifiers ? principle of work, mathematical description, characteristics. Reversible thyristor rectifiers ? balancing currents and methods of this limitation. Cycloconverters. Matrix converters. Power electronics systems of current supply in drives, power energetic and telecommunications. Stabilized feeders. AC/DC converters, resonant converters, DC/AC converters. Power electronics of power controllers in lighting and electrothermics. Contemporary methods and technology of improvement of feed quality. Systems of active compensation. Converters with improved energy factors.

Introductory courses and the required pre-knowledge:

Basic knowledge about electrotechnics, electronics, power electronics and control theory.

Courses form and teaching methods:

Lecture, laboratory.

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

Written and oral examination, examination of laboratory.

Basic Bibliography:

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Additional Bibliography:

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