

Title Electromagnetic energy conversion	Code 1010315321010320853
Field Power Engineering	Year / Semester 1 / 2
Specialty -	Course core
Hours Lectures: 8 Classes: - Laboratory: 8 Projects / seminars: -	Number of credits 3
	Language polish

Lecturer:

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Status of the course in the study program:

Obligatory course of the study program for Power Engineering in Electrical Engineering Faculty, Extramural second-degree studies.

Assumptions and objectives of the course:

The student should obtain knowledge of the analysis of selected performances of electromagnetic converters that are used in power engineering.

Contents of the course (course description):

Magnetic circuits. Fundamentals of electromagnetic energy conversion. Models of electromagnetic converters. Transformations used for circuit models: phase, Fortescue and commutator transformation. Transformer and motional electromotive force. Unbalanced operation of transformer. Electromagnetic actuators and electromagnets. Generator operation of asynchronous machine. Synchronous generators. Energy conversion in transients of synchronous machines.

Introductory courses and the required pre-knowledge:

Elementary knowledge of electrical machines, circuit theory and magnetism.

Courses form and teaching methods:

Lectures supported by transparencies, laboratory exercises.

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

Written tests.

Basic Bibliography:

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Additional Bibliography:

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