

Title Electromagnetic energy conversion	Code 1010312321010320941
Field Power Engineering	Year / Semester 1 / 2
Specialty -	Course core
Hours Lectures: 1 Classes: - Laboratory: 1 Projects / seminars: -	Number of credits 0
	Language polish

Lecturer:

PhD DSc Andrzej Demenko
PhD Paweł Idziak
Institute of Electrical Engineering and Electronics
60-965 Poznań, ul. Piotrowo 3a
tel. +48 061 665 21 26, +48 061 665 26 36
e-mail: Andrzej.Demenko@put.poznan.pl
Pawel.Idziak@put.poznan.pl

Faculty:

Faculty of Electrical Engineering
ul. Piotrowo 3A
60-965 Poznań
tel. (061) 665-2539, fax. (061) 665-2548
e-mail: office_deef@put.poznan.pl

Status of the course in the study program:

Obligatory course of the study program for Power Engineering in Electrical Engineering Faculty, Full-time 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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