Title	Code
Electrical Machines	**1010321241010320147**
Field: **Electrical Engineering**	Year / Semester: **2 / 4**
Specialty: **-**	Course: **core**
Hours: Lectures: **2** Classes: **1** Laboratory: **3** Projects / seminars: **-**	Number of credits: **7**
	Language: **polish**

Lecturer:

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Status of the course in the study program:

Obligatory subject, Faculty of Electrical Engineering, Field: Electrical Engineering, Full-time first-degree studies

Assumptions and objectives of the course:

The student should obtain knowledge of the constructions and performances of special induction motors, synchronous and commutator machines

Contents of the course (course description):

Single-phase induction motors. Two-phase control motors. Self-excited induction generator. Synchronous machines: basic theory and construction, phasor diagram and equivalent circuit, open circuit and short-circuit characteristics of generator, steady state operating characteristics, effect of salient poles, operation in power system, permanent magnet machines, starting of synchronous motors, dumping windings, selected transients. Direct current commutator machines: basic theory and construction, schematic representation, air gap magnetic field, commutation, armature reaction, compensating winding, generator characteristics, motor characteristic, motor speed control, selected transient of DC motor. Alternating current commutator motors.

Introductory courses and the required pre-knowledge:

Knowledge of the magnetic circuits of electrical machines and knowledge of the performances of transformers and induction machines.

Courses form and teaching methods:

Lectures supported by transparencies, exercises related to practical problems.

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

Oral examination.

Basic Bibliography:

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Additional Bibliography:

http://www.put.poznan.pl/

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