Title	Code
Electromechanical Drive Systems	**10103222210103201109**
Field: **Electrical Engineering**	Year / Semester: **1 / 2**
Specialty: **-**	Course: **core**
Hours: Lectures: **1** Classes: **-** Laboratory: **1** Projects / seminars: **-**	Number of credits: **4**
	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 second-degree studies

Assumptions and objectives of the course:

The student should obtain knowledge of the mathematical models of electric drives and knowledge of control and performances of selected electromechanical devices

Contents of the course (course description):

Circuit models of induction machine, voltage equation in natural coordinate frame. Two-axis model of induction machine, transformation of impedance matrix. Equilibrium equations for drive with induction motors: steady state and transients. Scalar and field-vector control of induction motor drives Magnetic circuits. Equations of synchronous machines. Converter fed motor. Drives with stepping motors. Brushes DC motors and universal motors. Drives with brushless DC motors. Structures of control systems for electric drives.

Introductory courses and the required pre-knowledge:

Elementary knowledge of electrical machines and energy conversion, as well as knowledge of electric circuit analysis

Courses form and teaching methods:

Lectures supported by power point presentations, laboratory exercises related to the electric drives

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

Oral examination, verification of knowledge during laboratory exercises, verification of exercise reports

Basic Bibliography:

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Additional Bibliography:

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