

Title <b>Dyploma Seminar</b>	Code <b>10103222310103201290</b>
Field <b>Electrotechnics</b>	Year / Semester <b>2 / 3</b>
Specialty <b>Microprocessor Control Systems in Electrotechnics</b>	Course <b>core</b>
Hours Lectures: - Classes: - Laboratory: - Projects / seminars: <b>2</b>	Number of credits <b>15</b>
Language <b>polish</b>	

**Lecturer:**

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**Status of the course in the study program:**

Obligatory course, Faculty of Electrical Engineering, field: Electrical Engineering, speciality: Microcomputer Control Systems in Electrical Engineering.

**Assumptions and objectives of the course:**

Knowledge improvement on methods and tools of analysis, modeling synthesis and designs of power electronics and drives systems as well as their influence on power network.

**Contents of the course (course description):**

Analysis and synthesis of power electronic energy converters and systems with converters. Ergo-optimal control of power electronic converters mainly by use of microprocessors. Methods of analysis and synthesis of power electronic drives. Algorithms of microprocessor control of converters and drives. Modeling and digital simulation of semiconductor devices, power electronic converters and automate drives. Researches on influence of converters on power network and its active and hybrid compensation.

**Introductory courses and the required pre-knowledge:**

Knowledge improvement of general and specialize study range.

**Courses form and teaching methods:**

Seminary meetings, presentation of self-study works and papers by students.

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

Based on presentation of self-study work, papers delivered by students and active participation in discussion.

**Basic Bibliography:**

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**Additional Bibliography:**

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