

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Diploma seminar		Code 1010311371010320081
Field of study Electrical Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 4 / 7
Elective path/specialty Microprocessor Control Systems in	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: - Classes: - Laboratory: - Project/seminars: 30		No. of credits 12
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 12 100% 12 100%
Responsible for subject / lecturer: dr hab. inż. Ryszard Porada, prof. nadzw. email: ryszard.porada@put.poznan.pl tel. 48 61 665 2360 Faculty of Electrical Engineering ul. Piotrowo 3A 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The capture of material of directional general and speciality subjects.
2	Skills	It knows to apply obtained knowledge from the range of directional general and speciality subjects
3	Social competencies	There has the consciousness of necessity of extending of her competences, a readiness to collection of cooperation within the framework of the group
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.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. to use the general and specialistic knowledge of within the range obtained speciality - [K_W04+ K_W22+++]		
Skills:		
1. to apply the general and specialistic knowledge of within the range obtained speciality - [K_U03 ++ K_U17 ++]		
Social competencies:		
1. It can think and work in the way creative and entrepreneurial - [K_K02 ++]		
Assessment methods of study outcomes		

<p>Seminar:</p> <p>? the evaluation of the knowledge and skills shown at presentations elaborated and delivered papers about the problem-character,</p> <p>? the evaluation of preparation and presentation of partial results realized works and the active participation in the discussion.</p> <p>Obtaining additional points for activity during exercises, in particular way for:</p> <p>? proposing to discuss additional aspects of the subject</p> <p>? effective use of knowledge obtained during solving of given problem;</p> <p>? the aesthetic care of elaborated papers and presentations.</p>		
Course description		
<p>Analysis and synthesis of power electronic energy converters and systems with converters. Energo-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. The analysis and the designing of analog and digital closed control systems</p>		
Basic bibliography:		
1. Handbooks, monographs and articles listed by tutors		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. participation in the seminar	30	
2. participation in consultations on the seminar	10	
3. preparation for the seminar	10	
4. preparation for the paper	20	
Student's workload		
Source of workload	hours	ECTS
Total workload	70	12
Contact hours	40	4
Practical activities	40	6