# STUDY MODULE DESCRIPTION FORM

| Name of the module/subject | | Code |
|---|---|---|
| **Diploma seminar** | | **1010311261010320081** |
| Field of study: **Electrical engineering** | Profile of study (general academic, practical): **(brak)** | Year /Semester: **3 / 6** |
| Elective path/specialty: **-** | 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: **1** | | No. of credits: **3** |
| 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 %): **3 100%**, **3 100%** |

## Responsible for subject / lecturer:

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## 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

Seminar:

? the evaluation of the knowledge and skills shown at presentations elaborated and delivered papers about the problem-character,

? the evaluation of preparation and presentation of partia results realized works and the active participation in the discussion.

Obtaining additional points for activity during exercises, in particular way for:

? proposing to discuss additional aspects of the subject

? effective use of knowledge obtained during solving of given problem;

? the aesthetic care of elaborated papers and presentations.

## Course description

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 semiconductors devices, power electronic converters and automate drives. The analysis and the designing of analog and digital closed control systems.

## 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 | 15 |
| 2. participation in consultations on the seminar | 10 |
| 3. preparation for the seminar | 10 |
| 4. preparation for the paper | 10 |

## Student's workload

| Source of workload | hours | ECTS |
|---|---|---|
| Total workload | 45 | 3 |
| Contact hours | 30 | 2 |
| Practical activities | 0 | 0 |