



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Prediploma seminar [S1Mech2>SPD]

### Course

Field of study  
Mechatronics

Year/Semester  
3/6

Area of study (specialization)  
–

Profile of study  
general academic

Level of study  
first-cycle

Course offered in  
Polish

Form of study  
full-time

Requirements  
elective

### Number of hours

Lecture  
0

Laboratory classes  
0

Other  
0

Tutorials  
0

Projects/seminars  
15

### Number of credit points

1,00

### Coordinators

dr inż. Jakub Grabski  
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### Lecturers

### Prerequisites

Knowledge of the construction, operation and design of all components of a mechatronic device Design of mechanical devices and electronic systems. Knowledge of the principles of selecting components of a mechatronic device Ability to select control elements, including microcontrollers and PLCs, and write their software

### Course objective

Acquiring practical skills in selecting the topic and scope of an engineering diploma thesis

### Course-related learning outcomes

Knowledge:

Has knowledge of the principles of writing papers, editing text, preparing a spreadsheet and presentation K\_W03

Knowledge of the scope of an engineering diploma thesis K\_W03

Knows the principles of patenting and patent protection and is able to find and analyze patents K\_W27

Skills:

Is able to plan and conduct experiments, computer simulations, interpret obtained results and draw conclusions K\_U28

Is able to obtain information from various sources K\_U01

Social competences:

Understands the need for lifelong learning; can inspire and organize the learning process of other people K\_K01

Can define priorities for the implementation of a specific task K\_K04

Can cooperate and work in a group K\_K03

Correctly identifies and resolves dilemmas related to the profession K\_K05

Is aware of the social role of the engineer K\_K07

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Assessment based on the presentation of issues related to education in the field of Mechatronics and the presentation of the topic and scope of the engineering diploma thesis

Presentation of a preliminary review of the literature and patents, assumptions, objectives and scope of the diploma thesis.

### Programme content

Familiarization with the structure of a diploma thesis. Defining and selecting the topic of the thesis and the supervisor.

### Course topics

1. Familiarization with the requirements for engineering theses and the course of the thesis preparation process
2. Review of knowledge acquired during studies - part 1.
3. Establishing and discussing topics of diploma theses.
4. Methodology for conducting a review of the state of the art and patents in the scope of the prepared diploma thesis
5. Performing and delivering a presentation of the topic and scope of the diploma thesis

### Teaching methods

Presentations and discussions on thesis

### Bibliography

Basic:

1. Heimann Bodo, Gerth Wilfried, Popp Karl, Mechatronika, WNT
2. Horowitz P., Hill W. „Sztuka elektroniki”.
3. Tadeusz Mikulczyński, Zdzisław Samsonowicz, Rafał Więclawek, Automatyzacja procesów produkcyjnych, PWN, WNT 2015.
4. Poradnik mechatronika, Helion
5. Mariusz Olszewski, Mechatronika, Rea

Additional:

1. PODSTAWY MECHATRONIKI , REA.

### Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	15	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	10	0,50