



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

Practice [S1MiBM2>PRA]

### Course

Field of study

Mechanical Engineering

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

compulsory

### Number of hours

Lecture

0

Laboratory classes

0

Other

0

Tutorials

0

Projects/seminars

160

### Number of credit points

6,00

### Coordinators

dr inż. Łukasz Bernat

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### Lecturers

### Prerequisites

Knowledge: structured theoretical knowledge in the field of study Skills: The ability to search for necessary information in literature, databases, catalogs. The ability to learn independently. Using information and communication techniques appropriate to the implementation of engineering tasks. Social Competence: Understanding the need for lifelong learning. Understanding the societal impact of engineering activities. Understanding the need for team collaboration.

### Course objective

Awareness of the possibility of using theoretical knowledge in the conditions of a market economy. Paying attention to the complexity of processes taking place in industrial plants. Acquainting with interdisciplinary issues occurring in industrial practice. Understanding the functioning of the enterprise as an organization.

### Course-related learning outcomes

Knowledge:

1. Understanding practical references in the field of design, manufacturing and management techniques.
2. Understanding the life cycle of mechatronic devices and systems.

3. Awareness of non-technical determinants of engineering activity.
4. Getting to know the principles of creating and developing forms of individual entrepreneurship.

#### Skills:

1. Is able to obtain information from literature, databases and other properly selected sources (also in English) to formulate and solve engineering problems.
2. Is able to work individually and in a team on the assigned issue (also of an interdisciplinary nature).
3. Is able to develop and present documentation regarding the implementation of an engineering task.
4. Is able to work in an industrial environment with particular emphasis on safety rules, ethics and other non-technical aspects.

#### Social competences:

1. Is aware of the need for lifelong learning due to the development of technology.
2. Is able to determine the importance of knowledge in solving practical problems and seeking the opinion of experts in case of difficulties in solving the problem independently.
3. Is aware of the social role of a technical university graduate, understands the need to formulate and convey information and opinions regarding technological achievements.
4. Can think and act in a creative and enterprising way.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Detailed report of completed internships or available work experience, questionnaires

### Programme content

The scope of content varies and is agreed individually with the internship promoter or supervisor.

Recommended scope of practice:

General characteristics of the economic entity: formal and legal status, organizational structure, employment, subject of activity. Analysis of the production process: production range, technologies used, forms of production organization. Analysis of the production process on the example of a selected final product: design (cooperation with the sales department, methods and tools supporting design), material development, technological processes (technological operations, standardization of working time, production equipment), auxiliary processes (supply operations, storage and transport within plant), quality control processes. Organization of work at the workstation: tasks performed at the workstation (types, number), spatial development plan for workstations, organization of work at the workstation (procurement of materials and tools, transport, maintenance, repairs, quality control, issuing works to the workstation and settlement of completed tasks). Organization of maintenance services and analysis of operational problems of production machines (description of failure, actions taken, repair). Project to improve work at the workstation. Analysis of production practice in terms of the topic of the engineering diploma thesis.

### Course topics

none

### Teaching methods

Practical exercises in a selected company, case study

### Bibliography

Basic:

Regulations of practice at the Faculty of Mechanical Engineering of the Poznań University of Technology

Additional:

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### Breakdown of average student's workload

	Hours	ECTS
Total workload	162	6,00
Classes requiring direct contact with the teacher	0	0,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	162	6,00