COURSE SPECIFICATION

Course code	full-time programme:	**M#2-S1-ME-603**
	part-time programme:	
Course title in Polish	**Praktyka zawodowa**	
Course title in English	**Engineering practice**	
Valid from (academic year)	**2024/2025**	

GENERAL INFORMATION

Programme of study	**MECHANICAL ENGINEERING**
Level of qualification	**first-cycle**
Type of education	**academic**
Mode of study	**full-time programme**
Specialism	**all**
Department responsible	**Department of Metal Science and Manufacturing Processes**
Course leader	**dr inż. Piotr Thomas**
Approved by	**dr hab. Jakub Takosoglu, prof. PŚk, Dean of the Faculty of Mechatronics and Mechanical Engineering**

COURSE OVERVIEW

Course type		**programme-specific**
Course status		**compulsory**
Language of instruction		**English**
Semester of delivery	full-time programme	**Semester VI**
	part-time programme	
Pre-requisites		
Examination required (YES/NO)		**NO**
ECTS value		**4**

Mode of instruction		**lecture**	**class**	**laboratory**	**project**	**seminar**
No. of hours per semester	full-time programme					**160**
	part-time programme					

LEARNING OUTCOMES

Category of outcome	**Outcome code**	**Course learning outcomes**	**Corresponding programme outcome code**

Knowledge	W01	Has the knowledge necessary to organize the workplace in accordance with the principles of occupational health and safety, environmental protection and ergonomics that apply in the workplace.	MiBM1_W19
	W02	Knows, at an advanced level, the techniques of manufacturing machine parts, has detailed knowledge of the construction of various types of systems for processing and shaping materials, and advanced knowledge enabling the design of the appropriate variant of the device, depending on the manufacturing techniques used in the plant where the practice takes place, taking into account quality assurance issues.	MiBM1_W07
	W03	Has well-organized, extended knowledge of the properties of structures and the use of engineering materials, allowing for the proper selection of materials in the field of construction of machines used in industry.	MiBM1_W08
	W04	Knows, at an advanced level, the principles, methods and purposes of creating and analyzing technical documentation with elements of engineering design using graphic and computational programs, as well as standard design methods used in workplaces.	MiBM1_W09
Skills	K01	Is able to prepare documentation regarding the implementation of an engineering task using specialized terminology in the field of mechanics and machine construction, prepare a text containing a discussion of the results of this task, taking into account possible aspects of the device design, using various engineering tools. Is able to analyze and synthesize the results obtained in industrial conditions.	MiBM1_U04
	K02	Is able to critically analyze the functioning and evaluate existing technical solutions, devices, facilities, systems, processes and services in the field of design, construction, production and operation of machines, is able to identify and diagnose an engineering problem in the area of mechanics and machine construction and propose methods of solving it taking into account various variants.	MiBM1_U10
	K03	Is able to properly apply occupational health and safety rules and understands the importance of the occupational health and safety management system; can find their place in an industrial environment, meeting occupational health and safety rules, can plan and organize their own and their team's work in an effective and safe manner.	MiBM1_U17
	K04	Is able to cooperate and work in a group during the implementation of various engineering projects, and is also able to properly determine priorities for the implementation of a task specified by himself or others.	MiBM1_U20

Competence	K01	Is ready to think and act in an entrepreneurial way and prepared for optimal organizational activities in the workplace.	MiBM1_K04
	K02	Is ready to perform professional roles related to the field of study in mechanics and machine construction, to follow ethical principles, and cares about the achievements and traditions of the profession.	MiBM1_K06

COURSE CONTENT

Type of instruction lecture	Topics covered
Praktyka	The internship is cognitive and practical in nature and can take place in any plant (enterprise) whose activities are related to the design, production or operation of machines and technological devices, in particular for metal processing. As part of the internship, the student should become familiar with the organization of the plant and the tasks of individual production departments, with particular attention to the purpose and construction of machines and technological devices as well as selected technological processes used in the plant. If the plant uses software to support design, production or quality management, the student should also become familiar with it. The student should learn how to operate machines and technological devices. In addition, it can perform (after appropriate occupational health and safety training and supervision) simple machining, design or assembly work. The student should actively participate in work for the plant, using the knowledge acquired at the university, and the nature of the work he or she performs should be consistent with the field of his or her studies. The student does not have to complete an internship in all available departments of the plant. After agreeing with the supervisor, the internship for the ME field can be narrowed down to selected sections consistent with the study program. The internship lasts 4 weeks (160 hours).

	Internship program: 1. Conducting occupational health and safety and fire protection training. applicable at the faculties where the student will do the internship. 2. Getting to know the structure and organization of the company. In addition, the organization of departmental work, work and tasks of individual production departments. 3. Getting to know the technological processes used in the plant, with particular emphasis on the departments where the student has practice. 4. Getting to know the problems of designing, modernizing and operating machines, devices or production lines in the field of mechanics and machine construction. 5. Familiarization with software supporting design, manufacturing or quality management (if the plant has such software). 6. Getting to know the organization of the quality control system used in the company. 7. During the internship, the student should learn about various machines and technological devices used in the metal industry, become familiar with their construction and purpose, as well as the tools used. The operation of machines and devices is understood to a large extent as observing their operation. However, this observation should not be passive. Under the supervision of an employee, the student can independently perform simple activities, e.g. attach a workpiece, measure it or replace tools. On the easy route in the operation of a technological machine - after appropriate training - can carry out production for the plant under the supervision of a responsible employee. 8. During the internship, the student may perform simple design work consistent with his/her field of study, agreed with a company representative. 9. Completion of the internship: preparing a report on the internship, passing the internship, completing formalities related to the end of the internship.

ASSESSMENT METHODS

Outcome code	Methods of assessment *(Mark with an X where applicable)*					
	Oral examination	**Written examination**	**Test**	**Project**	**Report**	**Other**
W01						X
W02						X
W03						X
W04						X
K01					X	
K02					X	
K03					X	
K04					X	
K01						X
K02						X

ASSESSMENT TYPE AND CRITERIA

Mode of instruction	Assessment type	Assessment criteria
praktyka	blad	Credit based on the student's attendance at the internship and the internship report prepared by the student with a discussion of the completed tasks and the final conversation. During the internship, inspections may be carried out by the faculty internship manager or internship coordinator in the ME field.

OVERALL STUDENT WORKLOAD

ECTS weighting												
No.	**Activity type**	**Student workload**										**Unit**
		full-time programme					**part-time programme**					
1.	Scheduled contact hours	L	C	Lb	P	S	L	C	Lb	P	S	h
2.	Other contact hours (office hours, examination)											h
3.	**Total number of contact hours**											h
4.	**Number of ECTS credits for contact hours**											ECTS
5.	**Number of independent study hours**											h
6.	**Number of ECTS credits for independent study hours**											ECTS
7.	**Number of practical hours**											h
8.	**Number of ECTS credits for practical hours**	**4**										ECTS
9.	**Total study time**											h
10.	**ECTS credits for the course** *1 ECTS credit = 25-30 hours of study time*	**4**										ECTS

READING LIST

1. Literatura zalecana do przedmiotów w ramach studiowanego kierunku.
2. Materiały dostępne w zakładzie, w którym odbywa się praktyka , służące do realizacji postawionych prostych zadań inżynierskich z zakresu mechaniki i budowy maszyn.