STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Machine technology		**1011101341010242916**
Field of study	Profile of study (general academic, practical)	Year /Semester
Logistics - Full-time studies - First-cycle studies	**(brak)**	**2 / 4**
Elective path/specialty	Subject offered in:	Course (compulsory, elective)
-	**Polish**	**elective**
Cycle of study:	Form of study (full-time,part-time)	
First-cycle studies	**full-time**	
No. of hours		No. of credits
Lecture: **15** Classes: **-** Laboratory: **15** Project/seminars: **-**		**4**
Status of the course in the study program (Basic, major, other)	(university-wide, from another field)	
(brak)	**(brak)**	
Education areas and fields of science and art		ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge in the field of materials science, machine construction, manufacturing techniques.
2	**Skills**	The student has the ability to think logically, use information obtained from literature and the Internet.
3	**Social competencies**	The student understands the need to learn and acquire new knowledge.

Assumptions and objectives of the course:

Understanding the basic issues related to the design of technological processes for the production of machine parts and assembly.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Can: characterize the phases of existence of technical objects; define the concepts of the production process, technological process and its components; characterize the methods of computer-aided design and implementation of technological processes; select data for the design of the technological process. - [K1A_W05]

Skills:

1. Is able to: choose a blank to produce the indicated machine part; specify machining allowances; specify the time standard for a technological operation. - [K1A_U05]

2. He can: develop a technological process for selected part classes; give the concept of technological instrumentation for a technological operation. - [K1A_U09]

3. He can choose and apply the right method to solve a simple engineering task of a practical nature in the field of machine technology. - [K1A_U15]

Social competencies:

1. Is aware of the need for lifelong learning and the role of machine technology in the life cycle of the machine. - [K1A_K01]

2. He can work in a group; is willing to cooperate and work in a group to solve problems within the studied subject. - [K1A_K03]

Assessment methods of study outcomes

Forming rating

a) in the field of the laboratory: based on the current progress of the exercise

b) in the field of lectures: too large lecture group and limited time prevent any knowledge checking procedure

Assessment summary:

Lecture: Exam based on a written test consisting of 4 questions rated on a scale from 0 to 1. Credit for a minimum of 2.4 points.

Laboratory: Assessment based on oral or written answer in the scope of the content of each laboratory exercise, a report on each laboratory exercise as indicated by the laboratory conductor. All exercises must be completed in order to pass the laboratories (positive assessment of the answer and report).

Course description

Lecture:

General introduction to machine technology. Phases of the existence of a technical object. The essence of machine technology. New trends in machine technology. Production process. Technological process. Technological documentation. Output data for the design of the technological process. Semis. Technical working time standard. Machining bases. Allowances. Machining accuracy, errors. Product quality. The surface layer and its shaping factors. Technological equipment. Costs. Technological construction. Assembly. Designing technological processes of typical machine parts. Elements of computer-aided design of technological processes.

Lab:

1 Technology of machining axisymmetrical objects (shaft, sleeve, disc)

2 Post-processing techniques

3 The technology of machining non-axisymmetrical objects (body, lever, plate, bracket)

4 Robotic assembly technology

5 Technological process of a cylindrical gear

Teaching methods:

Lecture - informative and conversational lecture.

Laboratories - laboratory method.

Basic bibliography:

Additional bibliography:

Result of average student's workload

Activity	Time (working hours)
1. Lectures	15
2. Laboratory	15
3. Consultation	15
4. Preparation for laboratory	20
5. Students own study	20
6. Literature studying	15

Student’s workload

Source of workload	hours	ECTS
Total workload	100	4
Contact hours	45	1
Practical activities	15	1