

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Machine technology</b>		Code <b>1011101331010222916</b>
Field of study <b>Logistics - Full-time studies - First-cycle studies</b>	Profile of study (general academic, practical) <b>(brak)</b>	Year /Semester <b>2 / 3</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>elective</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time, part-time) <b>full-time</b>	
No. of hours Lecture: <b>30</b> Classes: <b>-</b> Laboratory: <b>45</b> Project/seminars: <b>-</b>		No. of credits <b>3</b>
Status of the course in the study program (Basic, major, other) <b>(brak)</b>		(university-wide, from another field) <b>(brak)</b>
Education areas and fields of science and art		ECTS distribution (number and %)
<b>Responsible for subject / lecturer:</b>  prof. dr hab. inż. Stanisław Legutko email: stanislaw.legutko@put.poznan.pl tel. 616652577 Wydział Budowy Maszyn i Zarządzania ul. Piotrowo 3, 60-965 Poznań		
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge in the field of materials science, machine construction, manufacturing techniques.
2	<b>Skills</b>	The student has the ability to think logically, use information obtained from literature and the Internet.
3	<b>Social competencies</b>	The student understands the need to learn and acquire new knowledge.
<b>Assumptions and objectives of the course:</b> Understanding the basic issues related to the design of technological processes for the production of machine parts and assembly.		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 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] 2. Is able to: explain the basic concepts in the field of technological equipment; characterize the factors describing the top layer; characterize the basic factors of technological and operational quality. - [K1A_W07]		
<b>Skills:</b> 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]		
<b>Social competencies:</b> 1. He can work in a group; is willing to cooperate and work in a group to solve problems within the studied subject. - [K1A_K03] 2. Is aware of the need for lifelong learning and the role of machine technology in the life cycle of the machine. - [K1A_K01]		
<b>Assessment methods of study outcomes</b>		

<p>Forming rating</p> <p>a) in the field of the laboratory: based on the current progress of the exercise</p> <p>b) in the field of lectures: too large lecture group and limited time prevent any knowledge checking procedure</p> <p>Assessment summary:</p> <p>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.</p> <p>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).</p>		
<b>Course description</b>		
<p>Lecture:</p> <p>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.</p> <p>Lab:</p> <p>1 Technology of machining axisymmetrical objects (shaft, sleeve, disc)</p> <p>2 Post-processing techniques</p> <p>3 The technology of machining non-axisymmetrical objects (body, lever, plate, bracket)</p> <p>4 Robotic assembly technology</p> <p>5 Technological process of a cylindrical gear</p> <p>Teaching methods:</p> <p>Lecture - informative and conversational lecture.</p> <p>Laboratories - laboratory method.</p>		
<b>Basic bibliography:</b>		
<b>Additional bibliography:</b>		
<b>Result of average student's workload</b>		
<b>Activity</b>	<b>Time (working hours)</b>	
1. Lectures	30	
2. Laboratory	45	
3. Preparation for the laboratory	10	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	85	3
Contact hours	75	3
Practical activities	45	1