

<b>STUDY MODULE DESCRIPTION FORM</b>		
Name of the module/subject <b>Maintenance</b>		Code <b>1011104461011112775</b>
Field of study <b>Logistics - Part-time studies - First-cycle</b>	Profile of study (general academic, practical) <b>general academic</b>	Year /Semester <b>3 / 6</b>
Elective path/specialty <b>-</b>	Subject offered in: <b>Polish</b>	Course (compulsory, elective) <b>obligatory</b>
Cycle of study: <b>First-cycle studies</b>	Form of study (full-time,part-time) <b>part-time</b>	
No. of hours Lecture: <b>12</b> Classes: <b>14</b> Laboratory: <b>-</b> Project/seminars: <b>-</b>		No. of credits <b>2</b>
Status of the course in the study program (Basic, major, other) <b>other</b>		(university-wide, from another field) <b>university-wide</b>
Education areas and fields of science and art		ECTS distribution (number and %)
<b>Responsible for subject / lecturer:</b> dr hab. inż. Józef Gruszka, prof. nadzw. email: jozef.gruszka@put.poznan.pl tel. 6653408 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		<b>Responsible for subject / lecturer:</b> -dr inż Małgorzata Jasiulewicz-Kaczmarek email: -malgorzata.jasiulewicz-kaczmarek@put.poznan.pl tel. -6653365 -Faculty of Engineering Management -ul. Strzelecka 11 60-965 Poznań
<b>Prerequisites in terms of knowledge, skills and social competencies:</b>		
1	<b>Knowledge</b>	Basic knowledge of tribology. Indispensable information within technology and machine parts
2	<b>Skills</b>	The ability to acquire knowledge
3	<b>Social competencies</b>	The ability to work in a group
<b>Assumptions and objectives of the course:</b> The aim of the subject is to familiarize the students with the most important information from the operation of the machines, their use and handling. Keeping the operating processes, taking into account the PN. On the basis of information from the drawing, technology and materials science, acquiring the skills to secure the process of machinery and equipment maintenance. Assessment of the reliability of the diagnosis. Designing cycles of technical inspections, repairs and modernisation of equipment		
<b>Study outcomes and reference to the educational results for a field of study</b>		
<b>Knowledge:</b> 1. Has a basic knowledge of: engineering graphics; design, technology, the construction and operation of machinery - [K1A_W05] 2. - [-]		
<b>Skills:</b> 1. Is able to independently develop the problem that exists within the studied subject - [K1A_U05] 2. Can make use of analytical, experimental and simulation method which falls within the scope of this area, can solve the project problem in the area of logistics and its detailed concepts (inventory management, logistics, distribution logistics and supply, logistics, ecologistics) and supply chain management - [K1A_U09]		
<b>Social competencies:</b> 1. Is aware of the need for lifelong learning; inspiring and organizing the learning process of other persons within the framework of the studied subject areas - [K1A_K01] 2. Is willing to work together and work in a group on the resolution in the framework of the studied subject - [K1A_K03] 3. potrafi planować i zarządzać w sposób przedsiębiorczy - [K1A_K06]		
<b>Assessment methods of study outcomes</b>		

formative assessment: lecture - based on discussions during the classes Exercises - based on a partial evaluation of exercises  summary assessment: lecture - multiple choice test Exercises - average of partial scores from individual exercises		
<b>Course description</b>		
The program of the subject includes the following subject areas: the genesis of learning about the exploitation, the existence of a technical object, theories of exploitation. Rules for the exploitation of equipment. Use of the devices. Elements of tribology, friction, wear, lubrication, the top layer. Basic issues associated with reliability, quality and durability. Diagnostic machines. Types of diagnostic tests. Maintenance of machinery and equipment related to logistics, maintenance of means of transport and storage devices. Classes Technological process of repair of machinery. Disassembly. Repairs. Review, regeneration, machine parts. Regeneration methods of machine parts and their repair. Installation of machine parts. Methods of maintaining and securing the moving machinery.		
<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. lecture	15	
2. Exercises	15	
3. consultations	15	
4. preparation for an exam	15	
<b>Student's workload</b>		
<b>Source of workload</b>	<b>hours</b>	<b>ECTS</b>
Total workload	60	2
Contact hours	45	1
Practical activities	15	1