

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Maintenance		Code 1011101461011122775
Field of study Logistics - Full-time studies - First-cycle studies	Profile of study (general academic, practical) (brak)	Year /Semester 3 / 6
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: 15 Laboratory: - Project/seminars: -		No. of credits 2
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art		ECTS distribution (number and %)
Responsible for subject / lecturer: 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		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic knowledge of tribology. Indispensable information within technology and machine parts
2	Skills	The ability to acquire knowledge
3	Social competencies	The ability to work in a group
Assumptions and objectives of the course: 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		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has a basic knowledge of: engineering graphics; design, technology, the construction and operation of machinery - [K1A_W05]		
2. Has a basic knowledge of: mechanics and machine-building industry as well as the strength of materials - [K1A_W07]		
Skills:		
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]		
Social competencies:		
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]		
Assessment methods of study outcomes		
Assessment exercises and test or exam.		

Course description		
<p>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.</p> <p>Classes</p> <p>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.</p>		
Basic bibliography:		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. lecture	15	
2. laboratory	15	
3. preparation for laboratory	20	
4. preparation for an exam	30	
Student's workload		
Source of workload	hours	ECTS
Total workload	80	3
Contact hours	30	2
Practical activities	15	1