

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Theory of Machines		Code 1011101321011122435
Field of study Logistics - Full-time studies - First-cycle studies	Profile of study (general academic, practical) general academic	Year /Semester 1 / 2
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) elective
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 15 Classes: - Laboratory: - Project/seminars: -		No. of credits 3
Status of the course in the study program (Basic, major, other) other		(university-wide, from another field) university-wide
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 3 100% 3 100%
Responsible for subject / lecturer: dr hab. inż. Józef Gruszka, prof. nadzw.. PP email: jozef.gruszka@put.poznan.pl tel. 665 33 77 Faculty of Engineering Management ul. Strzelecka 11 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Basic knowledge of technology
2	Skills	The ability to acquire knowledge
3	Social competencies	The ability to work in a group
Assumptions and objectives of the course: To familiarize students with the basic principles of construction, operation and operation of general purpose machines and equipment, which are equipped in an industrial plan		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. 1. Has a basic knowledge of: engineering graphics; design, technology, the construction and operation of machinery - [K1A_W05] - [-] 2. 2. Has a basic knowledge of: mechanics and machine-building industry as well as the strength of materials - [K1A_W07] - [-]		
Skills:		
1. 1. Is able to independently develop the problem that exists within the studied subject - [K1A_U05] - [-] 2. 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		

<p>-Formative assessment:</p> <p>a) within the scope of the laboratory: on the basis of an assessment of the current progress of the assigned tasks related to the construction, operation and operation of general purpose machinery and equipment.</p> <p>b) in lectures: on the basis of answers to questions about material modified in previous lectures.</p> <p>Summary summary:</p> <p>a) lecture - written test on the basis of previously prepared questionnaire</p> <p>b) Written assignment of assigned tasks related to the construction, operation and operation of general purpose machinery and equipment within individual visits to production sites.</p>		
Course description		
<p>Program content:</p> <p>lectures:</p> <ul style="list-style-type: none"> - Introduction to subject matter, basic concepts, machine classification, - standardization, typisation and unification of machine parts and subassemblies, - Clutches, brakes, gears, - Mechanisms used in machine tools, - Machines and devices for transport, trolleys, cranes, overhead cranes, cranes, conveyors, - Compressors and fans, - Pumps, water motors, turbines - Installations, pneumatic, hydraulic, - Refrigeration equipment, - Internal combustion engines <p>Laboratories: To familiarize yourself with the construction, operation and operation of general purpose machinery and equipment as part of technical visits to production sites.</p> <p>Didactic methods:</p> <p>lectures; monographic with the use of a computer with the division of the content of the program into separate thematic issues in connection with the subject of the laboratory</p> <p>Laboratories: visits to production facilities in the field of familiarization with the operation and operation of general purpose machinery and equipment</p>		
<p>Basic bibliography:</p> <ol style="list-style-type: none"> 1. Kijewski J. , Maszynoznawstwo, WSiP, Warszawa 2011 2. Dąbrowski Z, Pakowski R: Maszynoznawstwo; Warszawa 2013; 3. Legutko S., Podstawy eksploatacji maszyn i urządzeń, WSiP Warszawa 2004 4. Gruszka J., Technologiczne kształtowanie cech funkcjonalnych warstwy wierzchniej tulei cylindrowych (w silnikach spalinowych)-Monografia, Wyd.PP, Poznań 2012 		
<p>Additional bibliography:</p> <ol style="list-style-type: none"> 1. S.Legutko Eksploatacja maszyn, Wyd. Politechnika Poznańska. Poznań 2007 2. Rutkowski A., Części maszyny, Wyd.WSiP, 1992 		
Result of average student's workload		
Activity	Time (working hours)	
1. Lectures	15	
2. Preparation for the exam	30	
3. Consultation	15	
4. Literature studying	20	
Student's workload		
Source of workload	hours	ECTS
Total workload	80	3
Contact hours	30	1
Practical activities	0	0