

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Storage of materials and fuels		Code 1010634371010616004
Field of study Transport	Profile of study (general academic, practical) general academic	Year /Semester 4 / 7
Elective path/specialty Engineering of Pipeline Transport	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 9 Classes: - Laboratory: - Project/seminars: -		No. of credits 1
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 %) 1 100% 1 100%
Responsible for subject / lecturer: dr inż. Łukasz Wojciechowski email: lukasz.wojciechowski@put.poznan.pl tel. 616652376 Maszyny Robocze i Transport ul. Piotrowo 3, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Knowledge of issues from the strength of materials, the fundamentals of machine construction, metal science and logistics of transport, properties and properties of materials and fuels [PRK4]
2	Skills	Gathering knowledge from cognition and analysis of various application cases [PRK4]
3	Social competencies	General - technical knowledge of storage needs. [PRK4]
Assumptions and objectives of the course: -Getting to know the transport and storage of materials and fuels		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. has extended and in-depth knowledge of physics useful for formulating and solving selected technical tasks, in particular for correct modeling of real problems - [T1A_W02 [P6S_WG]] 2. knows the basic techniques, methods and tools used in the process of solving transport tasks, mainly of an engineering nature - [T1A_W07 [P6S_WG]]		
Skills: 1. is able to obtain information from various sources, including literature and databases, both in Polish and in English, appropriate to integrate them, make their interpretation and critical evaluation, draw conclusions, and fully justify the opinions they - [T1A_U01 [P6S_UW]]		
Social competencies: 1. understands that in technology, knowledge and skills quickly become obsolete - [T1A_K01 [P6S_KK]] 2. is aware of the importance of knowledge in solving engineering problems and knows examples and understands the reasons for malfunctioning transport systems that led to serious financial and social losses or to serious health and even life - [T1A_K02 [P6S_KK]]		
Assessment methods of study outcomes		
exam		

Course description		
Types and requirements of shredded materials stores. Classification and technical and economic characteristics of cargo devices for ground materials. Warehouse functions and role of warehouse in production and distribution. Organization of loading works in stations, cargo bases and reloading points. Processes of material flow, fuel and information. Safety of filling and emptying warehouses and protection in the storage process. Intra-factory pneumatic and hydraulic transport of materials and fuels		
Basic bibliography:		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. Participation for the lectures	15	
2. Consultations	3	
3. Preparation for the exam	6	
4. Participate in exam	4	
Student's workload		
Source of workload	hours	ECTS
Total workload	28	1
Contact hours	28	1
Practical activities	0	0