

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Exploitation of Vehicles		Code 1010614181010610357
Field of study Mechanical Engineering	Profile of study (general academic, practical) (brak)	Year /Semester 4 / 8
Elective path/specialty Motor Vehicles and Tractors	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: 14 Classes: - 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 technical sciences Technical sciences		ECTS distribution (number and %) 1 50% 1 50%
Responsible for subject / lecturer: dr inż. Michał Libera email: michal.libera@put.poznan.pl tel. +4861 665-2223 Faculty of Working Machines and Transportation ul. Piotrowo 3 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The student has a basic knowledge of vehicles construction and operation of its components as well as the basics of reliability.
2	Skills	Student is able to analyze and synthesize information, draw conclusions, formulate and justify opinions
3	Social competencies	Student is aware of the importance of rational use of vehicles in aspect of technical, economic and environmental
Assumptions and objectives of the course: Develop the ability to formulate and solve problems in operation and maintenance of vehicles.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Student knows the terminology in the field of operation and maintenance - [K1A_W14] 2. Student knows a elementary operation models and vehicle service strategies as well as ways to provide for spare parts - [K1A_W15] 3. Student knows how to evaluate the effectiveness of operation and maintenance - [K1A_W21] 4. Student understands the impact of operation and maintenance on technical state of the vehicle - [K1A_W22]		
Skills:		
1. Student is able to design, adapt and reorganize the simple operation and maintenance systems (selecting the correct model and strategy of the organization use vehicles). - [K1A_U18] 2. Student is able to manage a fleet of transport and to respond in the event of problems in the organization of the operation or maintenance. - [K1A_U16] 3. Student is able to perform or check a simple maintenance operations and repair - [K1A_U14]		
Social competencies:		
1. Understands the need and knows the possibilities of lifelong learning, knows the need for acquiring new knowledge for professional development. - [K1A_K01] 2. Is able to identify and resolve the dilemmas associated with the profession, among others. problems at the technology/environment level. - [K1A_K06]		

Assessment methods of study outcomes		
Lectures: test and personal interview, the essence of which is to check the understanding of issues of operation and maintenance.		
Course description		
The problem groups in the theory of operation and maintenance. The objectives and stages of research in operation and maintenance of vehicles. Destructive processes occurring at the vehicles. Factors affecting the condition of the vehicle. Models use of means of transport. The use of means of transport. Service of means of transport.		
Basic bibliography:		
1. Macha E.: Reliability of machines. Wydawnictwo Politechniki Opolskiej, Opole 2001 2. Hebda M.: Eksploatacja samochodów. Wydawnictwo Instytutu Technologii Eksploatacji, Radom 2005 3. Gronowicz J.: Eksploatacja techniczna i utrzymanie samochodów. Wydawnictwo Uczelniane Politechniki Szczecińskiej, Szczecin, 1997 4. Smalko Z.: Podstawy eksploatacji technicznej pojazdów. Warszawa, Wydawnictwo Politechniki Warszawskiej, 1987		
Additional bibliography:		
1. Niziński S.: Eksploatacja obiektów technicznych. Wyd. ITeE, Radom, 2002		
Result of average student's workload		
Activity	Time (working hours)	
1. Lecture participation	15	
2. Consultation	1	
3. Preparation for assessment	7	
4. Assessment participation	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	25	2
Contact hours	16	2
Practical activities	0	0