

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Rail Municipal Transport		Code 1010612221010620556
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 2
Elective path/specialty Railway Transport	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 2 Classes: 1 Laboratory: - Project/seminars: -		No. of credits 3
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		ECTS distribution (number and %) 3 100%
Responsible for subject / lecturer: Bartosz FIRLIK DEng. email: bartosz.firlik@put.poznan.pl tel. +48 61 6652012 Faculty of Working Machines and Transportation Piotrowo 3 street, 60-965 Poznan		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	The student has all the basic message of construction of rail transport and transport organizations.
2	Skills	The student can solve concrete problems in technical systems.
3	Social competencies	The student can work in a group, taking in her different roles. The student determines the priorities is important in solving the set tasks.
Assumptions and objectives of the course: Familiarity with the existing in Russia and in the world of public transport systems, as well as construction (construction and operation of transport means of transport (tram, metro and bus).		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. has ordered podbudowaną theoretically knowledge in the field of transport vehicles, General description and classification of vehicles. - [K2A_W14]		
2. have the knowledge necessary to understand the subject. - [K2A_W22]		
Skills:		
1. can get access to information from the literature, the Internet, databases, and other. - [K2A_U01]		
2. knows how to communicate using different methods in the environment. - [K2A_U02]		
3. able to analyze the facilities and technical solutions, to find ready-made components and equipment, transport, assess their suitability for use in their applications. - [K2A_U10]		
Social competencies:		
1. understands the need and knows opportunities for continuous professional development in the field, knows the need to acquire new knowledge for professional development, is able to organize the learning process of others. - [K2A_K01]		
2. understands pozatechniczne aspects and consequences. - [K2A_K02]		
3. in the mind transfer of the received knowledge society, making efforts to be understood, is different solutions and point of view. - [K2A_K08]		
Assessment methods of study outcomes		
Written exam lecture, check zaliczeniowy of the exercises		

Course description		
<p>Urban transport development in the world and in Poland. The tasks of transport services and transport needs. Manufacturers, research centers, and distinctive design of Polish and foreign rolling stock and motor vehicles. Classification of rail vehicles and road conditions. Principles and General information about the construction of traction vehicles and other vehicles. Requirements engineering ? expendable materials for vehicles. Advantages and disadvantages of different public transport systems in View of loads acting on the vehicle and its components. The exposition of the foundations of the design and operation of modern rail vehicles and road conditions. Presentation of the urban transport is developed in Poland and in the world. The approximation of European Union policies, as well as local governments regarding urban transport. The exposition of the main problems of urban transport in the cities of Europe.</p>		
<p>Basic bibliography:</p> <p>1. Gąsowski W., Durzyński Z., Marciniak Z.: Elektryczne pojazdy trakcyjne. Wyd. PP. Poznań 1995. 2. Wesołowski J.: Miasto w ruchu. Dobre praktyki w organizowaniu transportu miejskiego, Instytut Spraw Obywatelskich, Łódź 2008.</p>		
<p>Additional bibliography:</p> <p>1. Zielona Księga - W kierunku nowej kultury mobilności w mieście (Bruksela, wrzesień 2007 r., COM(2007) 551)</p>		
Result of average student's workload		
Activity	Time (working hours)	
1. Preparing for class	5	
2. Participation in events (according to plan)	45	
3. Securing the content of lessons / report	6	
4. Consultations	1	
5. Preparation for the exam / credit	15	
6. The participation in the examination / end	4	
Student's workload		
Source of workload	hours	ECTS
Total workload	76	3
Contact hours	50	2
Practical activities	0	0