

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Telematic in Transport		Code 1010612211010622216
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 1 / 1
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: Arkadiusz Barczak, DEng. email: arkadiusz.barczak@put.poznan.pl tel. +48 61 665 20 11 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 a basic knowledge of information technologies and telecommunications, basic theory of processes probabilistycznych, harmonic signals and theory counts.
2	Skills	A student can apply their knowledge in the study and solution of problems, telematics.
3	Social competencies	The student determines the priorities is important in solving the set tasks, able to work effectively in a group, taking on different roles.
Assumptions and objectives of the course: Understanding the role of telematics in enhancing security and improving the effectiveness and efficiency in motion control and monitoring of vehicles.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Presents an in-depth and advanced knowledge in the field of automation, telecommunications, telematics. Has knowledge in the area of transfer of the information in telecommunication systems. - [K2A_W15]		
2. Has a basic knowledge of the subject telematics devices, which are equipped with cars and knowledge in the field of services sold in telecommunication networks. - [K2A_W20]		
Skills:		
1. Is able to use the correct terminology for telematics. Can apply solutions, telecommunications and information technology products for the needs of transport. - [K2A_U16]		
2. Can effectively cooperate in the field of sales of services of data transmission in intelligent transport systems. - [K2A_U18]		
Social competencies:		
1. Understand the social, economic and legal aspects of the use of telematics, with special emphasis on the sustainable development of transport. - [K2A_K02, K2A_K06]		
Assessment methods of study outcomes		
Test, written examination		
Course description		

Telematics as a synthesis of Informatics and telecommunications. The functions and scope of application of telematics in transport. The system architecture telematic: a functional aspect, the physical aspect of communication aspect information. Layer the network structure. Standards, standardization and unification in telematic. Protocols, wired and wireless network and security data. Telematics in transport machine room - ETCS. Examples of systems, telematic services, used for the transport of the engine room.

Basic bibliography:

1. Bajon-Dąbrowa M.: Podstawy sterowania ruchem kolejowym, Oficyna Wyd. Polit. Warsz., 2007.

Additional bibliography:

1. Kurose James F., Ross Keith W.: Sieci komputerowe, Helion S.A., 2006.

Result of average student's workload

Activity	Time (working hours)	
1. Preparation for the performance	5	
2. Participation in lectures	30	
3. Fixing the contents of the lectures	6	
4. Consultations in lectures	2	
5. Exam preparation	8	
6. Participation in the exam	2	
7. Preparing for exercises	5	
8. Part in the exercises	15	
9. Fixing the contents of physical exercises	4	
10. Consultations for physical exercises	2	
11. Preparation of set-off	6	
12. Participation in success	2	
Student's workload		
Source of workload	hours	ECTS
Total workload	87	3
Contact hours	53	2
Practical activities	0	0