

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Teleinformation Systems		Code 1010615231010612255
Field of study Transport	Profile of study (general academic, practical) (brak)	Year /Semester 2 / 3
Elective path/specialty Road Transport	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: Second-cycle studies	Form of study (full-time, part-time) part-time	
No. of hours Lecture: 16 Classes: - 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 Technical sciences		ECTS distribution (number and %) 3 100% 3 100%
Responsible for subject / lecturer: Jaroslaw Selech PhD (Eng) email: jaroslaw.selech@put.poznan.pl tel. 61 665 22 27 Wydział Maszyn Roboczych i Transportu ul. Piotrowo 3, 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student has a basic knowledge of mathematical theory, in the field of informatics, electronics and a basic knowledge of IT systems.
2	Skills	Is able to obtain information from the literature, internet, databases and other sources in Polish and English. Can integrate the information to interpret and learn from them, create and justify opinions.
3	Social competencies	Is able to identify and resolve the dilemmas associated with use of information technology,. Is aware of and understands the importance problems at the technology and impact and its impact on the environment., is able to define the tasks and priorities for their implementation for himself and the coworkers team.
Assumptions and objectives of the course: Get a advanced knowledge of IT systems, the types of information systems and their description, the amount of information, coding and data compression, computer networks, allocation of information resources and its flow, means and standards for the transmission of information, the uses of information technology in transport, selected information systems.		
Study outcomes and reference to the educational results for a field of study		
Knowledge:		
1. Has the basic knowledge of the concepts of information technology - [[K2A_W15]] 2. Has the basic knowledge of the issues related to the construction of communication networks - [[K2A_W15]] 3. Has the basic knowledge of the associated with the construction of telecommunication networks - [[K2A_W15]] 4. Has the information concerning specifics of basic communications protocols used in the different layers of networks - [[K2A_W15]] 5. Is familiar with the basic functional and structural teleinformation network - [[K2A_W15]] 6. Has the basic knowledge of the use of ICT systems in transport - [[K2A_W15]]		
Skills:		
1. Is able to classified in the network due to the range and the interconnection - [[K2A_U08]] 2. Is able to point out the basic communication protocols and structural components of ICT networks - [[K2A_U08]] 3. Is able to characterize the network transmission media - [[K2A_U08]] 4. Is able to describe the construction of OSI layer model - [[K2A_U08]] 5. Is able to point out the examples of the use of ICT in transport - [[K2A_U08]]		
Social competencies:		

1. Understands the importance of ICT services for the information society - [[K2A_K02]]
2. Is able to identify issues relating to the design and creation of infrastructure for multimedia services in networks - [[K2A_K02]]
3. Is aware of the security of communications in telecommunication networks - [[K2A_K02]]
4. Is able to identify and assess current needs to ensure data security in ICT systems - [[K2A_K02]]

Assessment methods of study outcomes		
Average rating taking into account assessment of the student activity during lectures and a written final test		
Course description		
<p>Introduction and general concepts related to information and communication systems: IT System, definitions, basic concepts, distribution, telecommunication channels in the network, the Internet, history, users, services, coverage, models of the network - the classification due to the method of processing, distribution networks due to the range, Network Topology physical topologies, ring, double ring, star, tree, bus other logical topologies, categories of topological systems, LAN standards The construction of telecommunication networks LAN technologies, network, modem, network card, hub, switch, repeater, router, server, transmission media Technology switching and data transmission methods, techniques switching, packet switching, switching channels, transmission methods, types of connections Layered architecture, principles of tiered architectures, reference model ISO / OSI model TCP / IP model layer Other ICT systems in transport, information technology applications in transport. Examples of information systems in transport applications. Directions of development of information and communication technologies.</p>		
Basic bibliography:		
1. Bradford R.: Podstawy sieci komputerowych. Warszawa: WKŁ, 2009 2. Kula S., Systemy Teletransmisyjne, WKŁ, Warszawa 2006 3. Haykin S.: Systemy telekomunikacyjne, t. 1 i 2. Warszawa: WKŁ, 2004 4. Kabaciński W., Żal M.: Sieci telekomunikacyjne. Warszawa: WKŁ, 2008 5. Norris M.: Teleinformatyka. Warszawa: WKŁ, 2002		
Additional bibliography:		
1. Pr. zb.: Vademecum teleinformatyka t. I, II i III. Warszawa: IDG, 2002 2. Simmonds A.: Wprowadzenie do transmisji danych. Warszawa: WKŁ, 1999 3. Urbanek A. (red.): Leksykon. Teleinformatyka. Warszawa: IDG, 2001 4. Fryśkowski B., Grzejszczyk E.: Systemy transmisji danych. Warszawa: WKŁ, 2010		
Result of average student's workload		
Activity	Time (working hours)	
1. 1. Participation in lectures	16	
2. Learning of the lecturers content	3	
3. Preparation for the final test	10	
4. Participation in the final test	3	
5. Learning of the content	16	
Student's workload		
Source of workload	hours	ECTS
Total workload	48	3
Contact hours	19	1
Practical activities	3	1