STUDY MODULE DESCRIPTION FORM

Name of the module/subject		Code
Teleinformation Systems		**1010605231010612255**

Field of study	Profile of study (general academic, practical)	Year /Semester
Transport	**(brak)**	**2 / 3**
Elective path/specialty	**Subject offered in:**	**Course (compulsory, elective)**
-	**Polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
Second-cycle studies	**part-time**

No. of hours	No. of credits
Lecture: **16** Classes: **-** Laboratory: **-** Project/seminars: **-**	**3**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**100 3%**

Responsible for subject / lecturer:

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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

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.

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	30
2. Learning of the lecturers content	3
3. Preparation for the final test	12
4. Participation in the final test	3

Student's workload

Source of workload	hours	ECTS
Total workload	48	3
Contact hours	36	2
Practical activities	12	0