AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY

Code:	UBPJO-093	Module name:	Computer networks		
Academic year:	2017/2018	Semester:	Spring	ECTS credits:	4
Programme:	AGH UST International Courses				
Course homepage:	http://intcourses.agh.edu.pl/	Lecture language:	English		
Responsible teacher:	dr inż. Czekierda Łukasz (luke@agh.edu.pl)				
Academic teachers:	dr inż. Czekierda Łukasz (luke@agh.edu.pl)				

Description of learning outcomes for module

MLO code	Student after module completion has the knowledge/ knows how to/is able to	Method of learning outcomes verification (form of completion)
Skills		
M_U001	Basic onfiguration of computer networks	Activity during classes, Execution of laboratory classes
M_U002	Basic network troubleshooting skills	Execution of laboratory classes
Knowledge		
M_W001	Understanding of layered models in networking	Examination
M_W002	Understanding of routing and routing protocols' operation	Examination
M_W003	Addressing in computer networks	Examination

FLO matrix in relation to forms of classes

MLO code	Student after module completion has the knowledge/ knows how to/is able to	Form of classes

		Lectures	Auditorium classes	Laboratory classes	Project classes	Conversation seminar	Seminar classes	Practical classes	Fieldwork classes	Workshops	Others	E-learning
Skills												
M_U001	Basic onfiguration of computer networks	-	-	+	-	-	-	-	-	-	-	-
M_U002	Basic network troubleshooting skills	-	-	+	-	-	-	-	-	-	-	-
Knowledge												
M_W001	Understanding of layered models in networking	+	-	-	-	-	-	-	-	-	-	-
M_W002	Understanding of routing and routing protocols' operation	+	-	-	-	-	-	-	-	-	-	-
M_W003	Addressing in computer networks	+	-	-	-	-	-	-	-	-	-	-

Module content

Lectures

Introduction. OSI/ISO and TCP/IP models

Physical layer of the OSI/ISO model

Data link layer of the ISO/OSI model. Ethernet.

Network layer of the OSI/ISO model.

IP addressing. Static routing

Dynamic routing in IP networks

Transport layer of the OSI/ISO model

Laboratory classes

Physical layer of the ISO/OSI model

Basics of Ethernet

VLANs and Spanning Tree Protocol

Introduction to IP. ARP. DHCP

Static routing in IP networks

Configuraion of RIP - a distance-vector dynamic routing protocol

Configuration of OSPF - a link state dynamic routing protocol

Method of calculating the final grade

50%: grade for laboratories
50%: grade for the exam

Prerequisites and additional requirements
Prerequisites and additional requirements not specified

Recommended literature and teaching resources
Selected RFC documents.

Scientific publications of module course instructors related to the topic of the module
Additional scientific publications not specified

Additional information
None

Student workload (ECTS credits balance)

Student activity form	Student workload
Examination or Final test	2 h
Participation in lectures	14 h
Participation in laboratory classes	14 h
Realization of independently performed tasks	20 h
Preparation for classes	50 h
Summary student workload	100 h
Module ECTS credits	4 ECTS