Course Syllabus

Course from study programme for the cycle: 2023/2024

I. General Information

Course name	Computer networks and Internet
Programme	Computer networks and Internet
Level of studies (BA, BSc, MA, MSc, long-cycle MA)	BA
Form of studies (full-time, part-time)	full-time
Discipline	computer science
Language of instruction	english

Course coordinator	Marcin Płonkowski

Type of class *(use only the types mentioned below)*	Number of teaching hours	Semester	ECTS Points
lecture	15	I	5
tutorial			
classes			
laboratory classes	30	I	
workshops			
seminar			
introductory seminar			
foreign language classes			
practical placement			
field work			
diploma laboratory			
translation classes			
study visit			

Course pre-requisites	Basic knowledge in mathematics, physics and computer science at the high school level

II. Course Objectives

Getting to know the basics of computer networks	
Acquiring the ability to plan and build computer networks	
Acquisition of knowledge and skills in the field of configuring network devices	
Developing students' teamwork skills in creating computer networks	

III. Course learning outcomes with reference to programme learning outcomes

Symbol	Description of course learning outcome	Reference to programme learning outcome
KNOWLEDGE		
W_01	Student knows how modern computer networks work	K_W01, K_W04
W_02	Student knows the structure of the layered network model	K_W04
W_03	Student knows the role of network devices and protocols	K_W04
W_04	Student knows the principles of planning, configuration and testing of computer networks	K_W04
SKILLS		
U_01	Student can build a simple computer network	K_U02, K_U04, K_U15, K_U24
U_02	Student knows how to plan, configure and test a computer network	K_U02, K_U06, K_U17, K_U24
U_03	Student is able to find and solve problems in computer networks	K_U02, K_U06, K_U24, K_U30
SOCIAL COMPETENCIES		
K_01	Student understands the need for further education	K_K01
K_02	Student is able to correctly draw up a plan of action	K_K02

IV. Course Content

1. Explore the Network
2. Configure a Network Operating System
3. Network Protocols and Communications
4. Network Access
5. Ethernet
6. Network Layer
7. Transport Layer
8. IP Addressing
9. Subnetting IP Networks
10. Application Layer
11. Build a Small Network

V. Didactic methods used and forms of assessment of learning outcomes

Symbol	Didactic methods *(choose from the list)*	Forms of assessment *(choose from the list)*	Documentation type *(choose from the list)*
KNOWLEDGE			
W_01	Conventional lecture / Conversational lecture	Exam / Written test	Evaluated test / written test
W_02	Conventional lecture / Conversational lecture konwencjonalny/Wykład problemowy	Exam / Written test	Evaluated test / written test

W_03	Conventional lecture / Conversational lecture	Exam / Written test	Evaluated test / written test
W_04	Conventional lecture / Conversational lecture	Exam / Written test	Evaluated test / written test
SKILLS			
U_01	Practical classes	Test / Written test	Evaluated test / written test
U_02	Practical classes	Test / Written test	Evaluated test / written test
U_03	Practical classes	Test / Written test	Evaluated test / written test
SOCIAL COMPETENCIES			
K_01	Practical classes	Test / Written test/ Observation	Evaluated test / written test
K_02	Practical classes	Test / Written test/ Observation	Evaluated test / written test
K_03	Practical classes	Test / Written test/ Observation	Evaluated test / written test
K_04	Practical classes	Test / Written test/ Observation	Evaluated test / written test
K_05	Practical classes	Test / Written test/ Observation	Evaluated test / written test

VI. Grading criteria, weighting factors.....

Assessment methods and criteria:
Final Exam - 80%
Activity - 20%

0% - 49% - unsatisfactory (2.0)
50% - 59% - satisfactory (3.0)
60% - 69% - satisfactory plus (3.5)
70% - 79% - good (4.0)
80% - 89% - good plus (4.5)
90% - 100% - very good (5.0)

Satisfactory:

(W) - Student is able to discuss the basic issues related to computer networks.
(U) - Student is able to plan a simple computer network.
(K) - Student understands the need for further education.

Good:
(W) - Student is able to discuss the basic issues related to computer networks and knows all the discussed layers in the OSI model.
(U) - Student is able to plan and build a simple computer network.
(K) - Student understands the need for further education and is able to correctly draw up a plan of action

Very good:
(W) - Student is able to discuss the basic issues related to computer networks and knows all the discussed layers in the OSI model, and also knows what role protocols play in particular layers.
(U) - Student is able to plan, build a simple computer network and configure network devices.
(K) - Student understands the need for further education, is able to correctly draw up a plan of action and can show initiative in solving problems in computer networks

W1 - W4 - exam, colloquium, preparation for classes
U1 - U3 - colloquium, preparation for classes, work and activity during classes
K1 - K5 - preparation for classes, work and activity in classes

VII. Student workload

Form of activity	Number of hours
Number of contact hours (with the teacher)	**75**
Number of hours of individual student work	**50**

VIII. Literature

Basic literature
1. CCNA R&S 1: Introduction to Networking v6.0 Online Curriculum - Curriculum available on Cisco Networking Academy (after login)
Additional literature
Mark A. Dye, Rick McDonald, Antoon „Tony" W. Rufi, Network Fundamentals, CCNA Exploration Companion Guide, Cisco Press 2012.