SYLLABUS

1. Data about the program of study

1.1 Institution	The Technical University of Cluj-Napoca
1.2 Faculty	Faculty of Automation and Computer Science
1.3 Department	Computer Science
1.4 Field of study	Computer Science and Information Technology
1.5 Cycle of study	Bachelor of Science
1.6 Program of study/Qualification	Computer science/ Engineer
1.7 Form of education	Full time
1.8 Subject code	56.00

2. Data about the subject

2.1 Subject name	***Communication protocols and networks project***				
2.2 Course responsible/lecturer	Assoc. prof. dr. eng. Emil Cebuc - Emil.Cebuc@cs.utcluj.ro				
2.3 Teachers in charge of seminars/ laboratory/ project	Assoc. prof. dr. eng. Adrian Peculea - Adrian.Peculea@cs.utcluj.ro Assoc. prof. dr. eng. Bogdan Iancu - Bogdan.Iancu@cs.utcluj.ro				
2.4 Year of study	IV	2.5 Semester	8	2.6 Type of assessment (E - exam, C - colloquium, V - verification)	C
2.7 Subject category	*DF – fundamentală, DD – în domeniu, DS – de specialitate, DC – complementară*				DS
	DI – Impusă, DOp – opțională, DFac – facultativă				Di

3. Estimated total time

3.1 Number of hours per week	2	of which:	Course		Seminars		Laboratory		Project	2
3.2 Number of hours per semester	28	of which:	Course		Seminars		Laboratory		Project	28
3.3 Individual study:										
(a) Manual, lecture material and notes, bibliography										
(b) Supplementary study in the library, online and in the field										20
(c) Preparation for seminars/laboratory works, homework, reports, portfolios, essays										
(d) Tutoring										
(e) Exams and tests										4
(f) Other activities:										

3.4 Total hours of individual study (suma (3.3(a)...3.3(f)))	24
3.5 Total hours per semester (3.2+3.4)	52
3.6 Number of credit points	2

4. Pre-requisites (where appropriate)

4.1 Curriculum	Local Area Networks, 6-th semester
4.2 Competence	LAN protocols, LAN structure, LAN services

5. Requirements (where appropriate)

5.1. For the course	N/A
5.2. For the applications	Classroom, PC with internet access

6. Specific competence

6.1 Professional competences	**C5** Designing, managing the lifetime cycle, integrating and ensuring the integrity of hardware, software and communication systems (1 credit) • **C5.1** Specifying the relevant criteria regarding the lifetime cycle, quality, security and the computing system's interaction with the environment and the human operator • **C5.2 -** Using interdisciplinary knowledge for adapting an information system to application domain requirements • **C5.3** Using fundamental principles and methods for ensuring the security, the safety and ease of exploitation of the computing systems • **C5.4 -** Adequate utilization of quality, safety and security standards in information processing • **C5.5** Creating a project including the problem's identification and analysis, its design and development, also proving an understanding of the basic quality requirements
6.2 Cross competences	**CT2** Identifying, describing, and conducting processes in the projects management field, assuming different roles inside the team and clearly and concisely describing, verbally or in writing, in Romanian and in an international language, the results from the activity field. (1 credit)

7. Discipline objective (as results from the *key competences gained*)

7.1 General objective	Teamwork, working with partial and contradicting specifications
7.2 Specific objectives	A team of 3-4 students can design a medium size LAN

8. Contents

8.1 Lectures	Hours	Teaching methods	Notes
-			
Bibliography -			
8.2 Applications – Seminars/Laboratory/Project	Hours	Teaching methods	Notes
Introduction, team setup, project requirements and specifications	4	Brief presentation of possible solutions Refinement of project specifications	
Project design stage 1	4		
Project design stage 2	4		
Project design stage 3	4		
Project documentation 1	4		
Project documentation 2	4		
Project presentation and colloquium	4		
Bibliography 1. Packet Tracer user manual 2. OpNet user Manual 3. Equipment data sheet available on Internet, specific to each equipment selected by students			

**Se vor preciza, după caz: tematica seminariilor, lucrările de laborator, tematica și etapele proiectului.*

9. Bridging course contents with the expectations of the representatives of the community, professional associations and employers in the field

Project content is kept state of the art by using latest devices available on the market.

10. Evaluation

Activity type	Assessment criteria	Assessment methods	Weight in the final grade
Course	-	-	-
Seminar	-	-	-
Laboratory	-	-	-

Project	Submitted project fulfils requirements	Each project is evaluated individually, Intermediate steps conformance and deadline projects submitted on-line by e-mail	80% 20%

Minimum standard of performance:
Students can select proper networking devices to fulfil design specifications. Students can configure equipment in a Packet Tracer simulation to fulfil specific functions.
Grade calculus: 100% final exam
Conditions for participating in the final exam: at most one absence, intermediate task fulfilled at due time
Conditions for promotion: grade ≥ 5

Date of filling in: 05.06.2024	**Teachers**	**Title First name Last name**	**Signature**
	Course	Assoc.prof.dr.eng. Emil Cebuc	
	Applications	Assoc.prof.dr.eng. Adrian Peculea	
		Assoc.prof.dr.eng. Bogdan Iancu	

Date of approval in the department 20.02.2024	Head of department, Prof.dr.eng. Rodica Potolea
Date of approval in the Faculty Council 22.02.2024	Dean, Prof.dr.eng. Mihaela Dînșoreanu