

SYLLABUS

1. Data about the program of study

1.1 Institution	Technical University of Cluj-Napoca
1.2 Faculty	Faculty of Electronics, Telecommunications, and Information Technology
1.3 Department	Communications
1.4 Field of study	Electronic Engineering, Telecommunications, and Information Technologies
1.5 Cycle of study	Master of Science
1.6 Program of study / Qualification	Telecommunications / Master
1.7 Form of education	Full time
1.8 Subject code	TC-E06.00

2. Data about the subject

2.1 Subject name	Research Project 1						
2.2 Subject area	Theoretical area Methodological area Analytic area						
2.3 Course responsible							
2.4 Teacher in charge with seminar / laboratory / project	Assoc. Prof. Daniel ZINCA, Daniel.Zinca@com.utcluj.ro Professor Virgil DOBROTA, Ph.D. Virgil.Dobrota@com.utcluj.ro Professor Emanuel PUSCHITA, Emanuel.Puschita@com.utcluj.ro Assoc. Prof. Nicolae CRISAN, Nicolae.Crisan@com.utcluj.ro						
2.5 Year of study	1	2.6 Semester	1	2.7 Assessment	E	2.8 Subject category	DS/DI

3. Estimated total time

3.1 Number of hours per week	2	of which: 3.2 course	0	3.3 laboratory	2
3.4 To Total hours in the curriculum	28	of which: 3.5 course	0	3.6 laboratory	28
Distribution of time					hours
Manual, lecture material and notes, bibliography					16
Supplementary study in the library, online specialized platforms and in the field					18
Preparation for seminars / laboratories, homework, reports, portfolios and essays					14
Tutoring					12
Exams and tests					12
Other activities:					0
3.7 Total hours of individual study	72				
3.8 Total hours per semester	100				
3.9 Number of credit points	4				

4. Pre-requisites (where appropriate)

4.1 curriculum	N. A.
4.2 competence	N. A.

5. Requirements (where appropriate)

5.1. for the course	Amphitheatre, Cluj-Napoca
5.2. for the seminars / laboratories / projects	Laboratory, Cluj-Napoca

6. Specific competences

Professional competences	<p>C1. Use of the fundamental elements related to devices, circuits, systems, instrumentation and electronic technology</p> <p>C2. Applying the basic methods for the acquisition and processing of signals</p> <p>C3. Application of the basic knowledge, concepts and methods regarding the architecture of computer systems, microprocessors, microcontrollers, languages and programming techniques</p> <p>C4. Design, implementation and operation of data, voice, video and multimedia services. This is based on the understanding and the application of fundamental concepts in telecommunications and transmission of information</p> <p>C5. Selecting, installing, configuring and operating fixed or mobile telecommunications equipment. Equipping a site with usual telecommunications networks</p> <p>C6. Solving specific problems of the broadband communications networks: propagation in different environment, circuits and equipment for high frequencies (microwaves and optical).</p>
Cross competences	N.A.

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

7.1 General objective	Since each student has 0.5 project hours for each of the four disciplines contracted this semester, the general objective of each project is the general objective of the discipline to which it belongs: TC-E01.00, TC-E02.00, TC-E03.00 and TC-E04.00.
7.2 Specific objectives	Since each student has 0.5 project hours for each of the four disciplines contracted this semester, the specific objective of each project is the general objective of the discipline to which it belongs: TC-E01.00, TC-E02.00, TC-E03.00 and TC-E04.00.

8. Contents

8.2 Project	Teaching methods	Notes
Since each student has 0.5 project hours for each of the four disciplines contracted this semester, the content of each project related to the content of the discipline to which it belongs: TC-E01.00, TC-E02.00, TC-E03.00 and TC-E04.00.	Practical work on software platforms, presentations on the board, discussions	N/A
Bibliography		

Since each student has 0.5 project hours for each of the four disciplines contracted this semester, the bibliography and online bibliography of each project are those of the discipline to which it belongs: TC-E01.00, TC-E02.00, TC-E03.00 and TC-E04.00.

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

The discipline content and the acquired skills, in agreement with the expectations of the professional competences acquired, will be used in the following COR occupations (Electronics Engineer; Telecommunications Engineer; Electronics Design Engineer; System and Computer Design Engineer; Communications Design Engineer) or in the new occupations proposed to be included in COR (Sale Support Engineer; Multimedia Applications Developer; Network Engineer; Communications Systems Test Engineer; Project Manager; Traffic Engineer; Communications Systems Consultant).

10. Evaluation

Since each student has 0.5 project hours for each of the 4 disciplines contracted this semester, the evaluation rules and the minimum performance standard are those of the discipline to which they belong: TC-E01.00, TC-E02.00, TC-E03.00 and TC-E04.00.

Final mark: $N = (\text{Project mark TC-E01.00} + \text{Project mark TC-E02.00} + \text{Project mark TC-E03.00} + \text{Project mark TC-E04.00})/4 \geq 5$. In case of missing a mark for a project, the student will be graded = Absent.

Date of filling in:	Responsible	Title First name SURNAME	Signature
11.06.2024	Applications	Assoc. Prof. Daniel ZINCA, Ph.D.	
		Professor Virgil DOBROTA, Ph.D.	
		Professor Emanuel PUSCHITA, Ph.D.	
		Assoc. Prof. Nicolae CRISAN, Ph.D.	

Date of approval in the Council of the Communications Department 10.07.2024	Head of Communications Department Prof. Virgil DOBROTA, Ph.D.
Date of approval in the Council of the Faculty of Electronics, Telecommunications and Information Technology 11.07.2024	Dean Prof. Ovidiu POP, Ph.D.