SYLLABUS

1. Data about the program of study

1.1	Institution	The Technical University of Cluj-Napoca
1.2	Faculty	Electronics, Telecommunications and Information Technology
1.3	Department	Communications
1.4	Field of study	Electronics and Telecommunications Engineering
1.5	Cycle of study	Bachelor of Science
1.6	Program of study/Qualification	Telecommunications Technologies and Systems
1.7	Form of education	Full time
1.8	Subject code	TST-E56.00

2. Data about the subject

2.1	Subject name					Research and Design Activities					
2.2	Subject area					Electronics and Telecommunications Engineering					
2.3	Course responsible/lecturer					Diploma Thesis Coordinator					
2.4	Teachers in charge of applications					Diploma Thesis Coordinator					
2.5	Year of study	IV	2.6	Semester	2	2.7	Assessment	Exam	2.8	Subject category	DS/DOB

3. Estimated total time

Year/ Sem.	Subject name	No. of weeks	Course [hours/ week]	Applications [hours/ week]			Course [hours/ semester]	Applications [hours/ semester]			Indiv. study	TOTAL	Credits
				S	L	PR		S	L	PR			
IV/2	Research and Design Activities	14				8				112	96	208	8

3.1	Number of hours per week	8	3.2	of which, course	0	3.3	applications	8
3.4	Total hours in the curriculum	112	3.5	of which, course	0	3.6	applications	112

Individual study	Hours
Manual, lecture material and notes, bibliography	40
Supplementary study in the library, online and in the field	-
Preparation for seminars/laboratory works, homework, reports, portfolios, essays	50
Tutoring	3
Exams and tests	3
Other activities	

3.7	Total hours of individual study	96
3.8	Total hours per semester	208
3.9	Number of credit points	8

4. Pre-requisites (where appropriate)

4.1	Curriculum	N.A.
4.2	Competence	N.A.

5. Requirements (where appropriate)

5.1	For the course	Cluj-Napoca
5.2	For the applications	Cluj-Napoca

6. Specific competences

Professional competences	C6. To solve wide-band telecommunications networks' specific problems: propagation in various transmission media, high frequency circuits and equipment (microwaves and optical).
Cross competences	CT1. To methodically analyze engineering problems, by identifying the basic elements for which well-established solutions already exist, ensuring the fulfillment of the professional assignments CT2. To split activities into stages and to assign them to subordinates, together with a complete explanation of their responsibilities, based on hierarchical levels, ensuring an efficient information transfer and interpersonal communication CT3. To adapt to new technologies, professional and personal development, by continuous training using dedicated software and documentation in Romanian and in an international language, at the least

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

7.1	General objectives	Development of diploma project (fundamentals and design parts) in order to obtain the degree Telecommunications Technologies and Systems.
7.2	Specific objectives	Obtaining the fundamental knowledge and designing the proposed solution of the diploma project. Preliminary presentation in a competition such as the Student Symposium in Electronics and Telecommunications SSET.

8. Contents

8.2. Applications (lab)		Teaching methods	Notes
1	Research Planning	Discussions	
2	State-of-the-art Study		
3	Fundamental Knowledge		
4	Solution Design		
5	Theoretical Evaluation of the Solution		
6	Proposal for implementation/simulation methods		
7	Experiments Planning		

Bibliography

1. Recommended by the Diploma Thesis Coordinator

On-line references

2. Recommended by the Diploma Thesis Coordinator

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

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. Evaluations

Activity type	10.1	Assessment criteria	10.2	Assessment methods	10.3	Weight in the final grade
Applications (Project)		The level of acquired abilities		- Continuous formative evaluation - practical lab test		100%
10.4 Minimum standard of performance						
Mark ≥ 5						

Date of filling in
01.10.2014

Course responsible
Diploma Thesis Coordinator

Teachers in charge of applications
Diploma Thesis Coordinator

Date of approval
in the department
01.10.2014

Head of Communications
Department
Professor Virgil DOBROTA, PhD