

# Transilvania University of Braşov, Romania

## Study program: Electronic and Communication Integrated Systems

Faculty: Electrical Engineering and Computer Science  
 Study period: 2 years (master)  
 Academic year structure: 2 semesters (14 weeks per semester)  
 Examination sessions (two): winter session (January/February)  
 summer session (June/July)

Courses per years (C= course; S = seminar; L = laboratory; P = project)

### 1<sup>st</sup> Year

No. crt.	Course	Code	1 <sup>st</sup> Semester					2 <sup>nd</sup> Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Software technologies for systems testing	SECI101	1	-	-	2	6					
02	Distributed and real-time systems	SECI102	2	-	-	2	6					
03	Packet processors	SECI103	2	-	-	-	6					
04	Data communications	SECI104	1	-	2	1	6					
05	Ethics and academic integrity	SECI105	1	-	-	-	4					
06	Research (practice)	SECI106	-	-	-	-	2					
<b>Thoroughgoing Study Direction: Digital communication networks</b>												
07	Digital signal processors	SECI207						2	-	-	1	6
08	Industrial control and data transmission networks	SECI208						1	-	-	2	6
09	Quality of Services and computer networks security	SECI209						1	-	-	2	6
10	Research (practice)	SECI210						-	-	-	-	2
One discipline is chosen from each package												
Optional package no. 1												
11	Communication networks modelling	SECI211						1	-	-	1	4
	Protocols for interconnecting hybrid networks	SECI212										
Optional package no. 2												
12	Physical layer of communication networks and switching techniques	SECI213						2	-	-	1	6
	Smart antennas for mobile communications systems	SECI214										
<b>Thoroughgoing Study Direction: Embedded systems</b>												
13	Research (practice)	SECI215						-	-	-	-	2
One discipline is chosen from each package												
Optional package no. 1												
14	Modern architectures of processors and microcontrollers	SECI216						1	-	-	2	6
	Hardware Description Languages	SECI217										
Optional package no. 2												
15	Analog interfacing and conditioning systems	SECI218						1	-	-	2	6
	Network on Chip	SECI219										
Optional package no. 3												

16	Industrial control and data transmission networks	SECI220							1	-	-	1	5
	VLSI testing technologies and reliability	SECI221											
Optional package no. 4													
17	Interfacing standards for embedded systems	SECI222							2	-	-	1	5
	Systems on chip security	SECI223											
	Programmable logic systems	SECI224											
Optional package no. 5													
18	Microcontroller and DSP programming	SECI225							2	-	-	1	6
	Neural networks	SECI226											

## 2<sup>nd</sup> Year

No. crt.	Course	Code	3 <sup>rd</sup> Semester					4 <sup>th</sup> Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
<b>Thoroughgoing Study Direction: Digital communication networks</b>													
1	Intelligent communication networks	SECI301	1	-	-	2	5						
2	Mobile communications and mobile computing	SECI302	2	-	1	1	7						
3	Research (practice)	SECI303	-	-	-	-	6						
One discipline is chosen from each package													
Optional package no. 1													
4	Distributed databases for telecommunications	SECI304	1	-	1	1	6						
	Radio channel modelling	SECI305											
Optional package no. 2													
5	Design and testing of digital communication networks	SECI306	2	-	1	1	6						
	Multimedia streams in IP networks	SECI307											
<b>Thoroughgoing Study Direction: Embedded systems</b>													
6	Research (practice)	SECI308	-	-	-	-	6						
One discipline is chosen from each package													
Optional package no. 1													
7	Systems remote control	SECI309	1	-	1	1	6						
	Virtual instrumentation in embedded systems	SECI310											
Optional package no. 2													
8	Industrial and consumer microcontroller-based applications	SECI311	1	-	-	2	6						
	ASIC design	SECI312											
Optional package no. 3													
9	Low-power intelligent sensor networks	SECI313	2	-	1	1	6						
	Energy management of embedded electronics and communications systems	SECI314											
Optional package no. 4													
10	Applications in telecommunications, domotics and medical electronics	SECI315	2	-	-	2	6						
	Automotive control systems	SECI316											
	Computer-aided design in electronics EDA	SECI317											
<b>All directions</b>													
11	Research Projects Management	SECI401	1	-	-	1	4						
12	Research (practice)	SECI402	-	-	-	-	10						
13	Practice for master thesis preparing	SECI403	-	-	-	-	10						
14	Preparing the master thesis	SECI404	-	-	-	-	6						