

# Transilvania University of Braşov, Romania

## Study program: Advanced Electrical System (in English)

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	Numerical methods for advanced electrical systems analysis	SEA101	1		2		4						
02	Advanced systems for measuring, data acquisition and processing	SEA102	2		1		5						
03	Environmental policy and electromagnetic compatibility	SEA103	2		1		4						
04	Modern energy storage systems	SEA104	2		1		4						
05	Control of power electronic converters	SEA105	2		1	1	5						
06	Research practical stage SEA-1	SEA106				10	8						
07	CAD for electrical systems	SEA107						1		2			5
08	Dynamic modelling of electrical systems	SEA108						1		1	1		5
09	Advanced optimization methods for electrical systems	SEA109						2			1		5
10	Smart electrical microgrids	SEA110						2		1	1		5
11	Ethics and academic integrity	SEA111						1					2
12	Research practical stage SEA-2	SEA112									12		8

### 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>Optional study package 1:</b>												
01	Hydro power energy conversion systems	SEA201	2		1		5					
02	Testing to electromagnetic disturbances	SEA202	2		1		5					
<b>Optional study package 2:</b>												
03	CAD/CAE in power electronics	SEA203	2		1	1	5					
04	Modern optimization solutions of electrical systems	SEA204	2		1	1	5					
<b>Optional study package 3:</b>												
05	Digital systems for power quality monitoring	SEA205	2		1		5					
06	Wind energy conversion systems	SEA206	2			1	5					

Optional study package 4:											
07	Solar power plants and hybrid energy systems	SEA207	2		1	1	5				
08	Computer-aided instrumentation	SEA208	2		1	1	5				
09	Research practical stage SEA-3	SEA209				12	10				
10	Research practical stage SEA-4	SEA210								12	10
11	Practical stage for dissertation thesis preparation	SEA211								12	10
12	Dissertation thesis preparation	SEA212								2	10