

Transilvania University of Braşov, Romania

Study program: Energy modernization in the built environment

Faculty: Civil Engineering
 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)

1st Year

No. crt.	Course	Code	1 st Semester					2 nd Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Advanced numerical analysis	ANA	2	2			5					
02	Systems and measuring equipment and specific data acquisition and facilities construction	SEMADS CI	2		2		5					
03	Heuristic design in architecture and structural engineering	EPAIS	2			2	6					
04	Integrated renewable energy systems in the built environment	SERMC	2			2	6					
05	Ethics and academic integrity	EIA	1				2					
06	Practical activity I (11 hours / week)	SP01					6					
Route 1: Modernization and rehabilitation of buildings												
07	Rehabilitation of infrastructure and the foundation soil	RICTF						2			2	6
08	Waterproofing of buildings	HICO						2	2			6
09	Practical activity II (12 hours / week)	SP02										7
10	Modern structures made of prestressed concrete	SMBP						2			2	6
	Design of structures to earthquakes	CSAS										
11	Rheology of construction materials	RMC						2	2			5
	Fracture mechanics and fatigue design of steel structures	MR										
Route 2: Energy efficient systems of installations in constructions												
07	Modern systems of heating and district hot water for buildings	SMIPAAC						2			2	6
08	Efficient ventilation and air conditioning systems	SEVCA						2	2			5
09	Equipment in buildings using solar energy	IUCBES						2		2		6
10	Practical activity II (12 hours / week)	SP02										7
11	Energy simulation in buildings	SEC						2		2		6
	Comfort in buildings	CAC										
Route 3: Modernization and rehabilitation of construction engineering systems												
07	Rehabilitation of infrastructure for construction engineering systems	RITCI						2			2	6
08	Materials for constructions engineering systems	MCI						2	2			6
09	Computational methods for modernization and rehabilitation of construction engineering systems	MCRMCI						2		2		6
10	Practical activity II (12 hours / week)	SP02										7
11	Rheology of construction materials	RMC						2	2			5

