

# Transilvania University of Braşov, Romania

## Study program: Simulation and Testing in Mechanical Engineering

Faculty: Mechanical 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)

### 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	Advanced Design Elements (CAD)	CAD	1		2		5					
02	Analysis of Mechanical Structures	ASM	2			2	5					
03	C++ Programming for Engineering Applications I		2		1		5					
04	Experimental Mechanics	ME	2		1		5					
05	Ethics and Academic Integrity	EIA	1				1					
06	Control of Dynamic Systems	CSD	1		1		5					
07	Practice for design / research					12	4					
08	Multibody Systems I							2		2		5
09	Hybrid Engineering							1		2		5
10	C++ Programming for Engineering Applications II							1		2		5
11	Practice for design / research							1		2		5
01	Lightweight Structures	SU										
	Mechanical Systems for Energy Conversion	SMCE						2			1	5
02	Fatigue life-based design	PDV										
	Optimization of Thermal Processes and Installations	OPIT						2		1		5

### 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
01	Structural Optimisation	OS	2	2			5					
02	Modal Analysis	AM	2		1		5					
03	Multibody systems II	SMC II	1		1		5					

04	Modeling and Simulation of Transfer Phenomena (CFD)	MSPT	2		1	1	6					
05	Practice for design / research	PPC III				12	3					
03	Non-linear analysis of deformable solids	ANSD	2		1		6					
	Testing of thermal equipments	TET										
06	Practice for research	PC									22	20