

# Transilvania University of Braşov, Romania

## Study program: Motor vehicles and future technologies

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	Numerical methods applied in engineering	MNAI	2		1		5					
02	Project management	MP	1	1		1	5					
03	Materials and technologies in the automotive industry	MTNIA	2		2		5					
04	Modeling and finite element analysis	MAEF	1			2	5					
05	The life cycle of automotive systems	CVSA	1		2		5					
06	Automotive CAD-CAE-CAM	DFCI						1		2		5
07	Systems simulation in automotive engineering	SSIA						2			1	5
08	New solutions for internal combustion engines	SNMAI						2		1		5
09	The modern conception of vehicles	CMA						2		1		5
10	Optimizing the processes of forming the fuel mixture and of combustion	OPFAA						1		1	1	5
11	Procedures for design and testing of vehicles and mobile equipment	PTVSA						1		1	1	5
12	Thermal management and energy recovery in internal combustion engines	MTREM						2		2		5
13	Active and passive safety systems	SSAP						2		2		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	Future fuels	CombV	2		1		5					
02	Environment protection and recycling of vehicle components	PMRCA	2	1			5					
03	Auxiliary systems of internal combustion engines	SAMAI	2			2	5					
04	Utility vehicles and tractors	ACT	2			2	5					
05	Engine testing and homologation	TOM	2		1		5					
06	Special vehicles	ASPEC	2		1		5					
07	Vehicles with alternative propulsion systems	ASPA	1		1	1	5					
08	Intelligent systems in motor vehicles	SIA	1		1	1	5					
09	Academic ethics	EU							1			2
10	Research and/or development activities for dissertation accomplishment	APCS								10.4		13
11	Dissertation accomplishment	ELD								4.6		10