

Transilvania University of Braşov, Romania

Study program: Automotive Engineering

Faculty: Mechanical Engineering
 Study period: 4 years (bachelor)
 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	Mathematical Analysis	AnaM	3	2			5					
02	Descriptive Geometry	GD	2		2		5					
03	Chemistry	Chim	2		1		4					
04	Materials Science	SM	2		1		3					
05	Materials Engineering	TM	2		1		3					
06	Applied Informatics	InfA	2		2		5					
07	(O1) Communiation and Academic Writing	Com	1	1			3					
08	(O1) Etics and Academic Integration	EIA										
09	Linear Algebra, Analytic and Differential Geometry	AGAD						2	3			5
10.	Technical Drawing and Infographics - I	DT1						2		2		5
11	Physics	Fizi						2		1		4
12	Mechanics - I	MEC1						3	1	1		5
13	Computers Programming and Programming Languages	PCLP						2		2		5
14	Electrical Engineering	ELM						2		1		4
15	(O2) Foreign Language - French	LF01/ LF02	1	1			2	1	1			2
16	(O2) Foreign Language - German	LG01/ LG02										
17	Physical Training	EF01/ EF02		1			(1)		1			(1)

2nd Year

No. crt.	Course	Code	3 rd Semester					4 th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Economics	ECON	1	1			3					
02	Technical Drawing and Infographics - II	DT2	1		3		5					

03	Mechanics - II	MEC2	2	2	2		6					
04	Strength of Materials - I	RM1	2	2	2		6					
05	Special Mathematics and Statistics	MSSM	2	2			4					
06	Applied Electronics	EleA	2		1		4					
07	Automotive Engineering Fundamentals	BIA						2		2		3
08	Fluid Mechanics and Hydraulic Machines	MFMH						2		2		4
09	Strength of Materials - II	RM2						3	1	1		5
10	Mechanisms	MECS						3	1	1		5
11	Machine Elements - I	OM1						2		1	1	4
12	Tolerances and Dimensional Control	TCD						2		1		3
13	(01) Foreign Language - French	LSF3/ LSe4	1	1			2	1	1			2
14	(01) Foreign Language - German	LSGe3/ LSGe4										
15	Physical Training	EF03/ EF034		1			(1)		1			(1)
16	Practical Placement	PRTH1	3 weeks x 30 h / week = 90 h									4

3rdYear

No. crt.	Course	Code	5 th Semester					6 th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Thermodynamics and Thermal Machines	TMT	2	1	2		5					
02	Vibrations	VIBR	2	1	1		5					
03	Hydraulic and Pneumatic Actuation	AHP	2		2	1	5					
04	Machine Elements - II	OM2	2		1	1	5					
05	Finite Elements Method	FEM	2		2		5					
06	Vehicle Dynamics I	DA1	3		2		5					
07	Vehicle Dynamics II	DA2						2				2
08	Vehicle Dynamics II P	DA2p									2	2
09	Processes and Characteristics of Internal Combustion Engines - I	PCMAI1						2		2	1	5
10	Construction and Calculus of Internal Combustion Engines - I	CCMAI1						2		2		4
11	Construction and Calculus of Automotive Vehicles - I	CCA1						2		1	1	5
12	Computer Aided Design	PAC						2		2		3
13	Autonomous Vehicles	VAut						1	1			2
14	Automatic Systems Bases	BSA						2	1	1		3
15	Practical Placement	PRTH2	3 weeks x 30 h / week = 90 h									4

4th Year

No. crt.	Course	Code	7 th Semester					8 th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
01	Construction and Calculus of Internal Combustion Engines - II	CCM2	2		1	1	5					
02	Processes and Characteristics of Internal Combustion Engines - II	PCM2	2		1	1	5					
03	Construction and Calculus of Automotive Vehicles - II	CCA2	2		1	1	5					
04	(O1) Automotive Fault Diagnosis	DIAG	2		1	1	4					
05	(O1) Structure and Management of Service Stations	ORAU										
06	(O2) Vehicles Testing	INCA	2		2		4					
07	(O2) Road Vehicle Homologation	OMAU										
08	Management	Manag										
09	(O4) Automotive sensorics and control systems	SSCAut	1	1			2					
10	(O4) History of Science and Technique	IST										
11	Automotive Electric and Electronic Systems	SEEA						2		2		3
12	Road Traffic Management	TRAF						2		1	1	3
13	Manufacturing and Assembling Technologies for Automotive Vehicles	TFA						2		1	1	3
14	(O5) Fuels	COMB						2		2		3
15	(O5) Working Fluids for Motor Vehicles	FLA										
16	(O6) Specials Vehicles	As						2		1	1	3
17	(O6) Tractors	TRA										
18	(O7) Hybrid and Electric Vehicles	AH						2		2		3
19	(O7) Components for Electric Vehicles	CEE										
20	(O8) Traffic Accident Reconstruction	RECA						2		1		2
21	(O8) Life Cycle Analysis of Vehicle Components	ACVA										
22	Graduate Project Elaboration	EPD								4		5
	Practical Placement for Graduate Project Elaboration	PPD	60 h / sem. (4.285 h / week)									5