

Transilvania University of Braşov, Romania

Study program: Automotive Engineering (in English)

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

Crt. No.	Course	C ₁ *	C ₂ **	Code	1st Semester							2nd Semester								
					C	S	L	P	SI [#]	V	Cr	C	S	L	P	SI	V	Cr		
1	Mathematical Analysis	DF	DI	AnaMe	3	2			55	E	5									
2	Descriptive Geometry	DF	DI	GDe	2		2		69	C	5									
3	Chemistry	DF	DI	Chime	2		1		58	E	4									
4	Materials Science	DD	DI	SMe	2		1		33	E	3									
5	Materials Engineering	DD	DI	TMe	2		1		33	E	3									
6	Applied Informatics	DF	DI	InfAe	2		2		69	E	5									
7	(O1) Communication and Academic Writing	DC	DO	Come	1	1			47	E	3									
	(O1) Etics and Academic Integration	DC	DO	EIAe																
8	Linear Algebra, Analytic and Differential Geometry	DF	DI	AGADe								2	3			55	E	5		
9	Technical Drawing and Infographics - I	DF	DI	DT1e								2		2		69	C	5		
10	Physics	DF	DI	Fizie								2		1		58	E	4		
11	Mechanics - I	DD	DI	MEC1e								3	1	1		55	E	5		
12	Computers Programming and Programming Languages	DF	DI	PCLPe								2		2		69	E	5		
13	Electrical Engineering	DD	DI	ELMEe								2		1		58	E	4		
14	(O2) Foreign Language French	DC	DO	LF01e/ LF02e	1	1			22	C	2	1	1		22	C	2			
	(O2) Foreign Language German	DC	DO	LG01e/ LG02e																
15	Physical Training	DC	DI	EF01e/ EF02e		1			11	A/R	(1)		1		11	A/R	(1)			
Total					15	5	7	0	397	E	C	30	14	6	7	0	397	E	C	30
										6	2	(31)						5	2	(31)
Total number of hours per week					27							27								

2nd Year

Crt. No.	Course	C ₁ *	C ₂ **	Code	3rd Semester							4th Semester								
					C	S	L	P	SI#	V	Cr	C	S	L	P	SI	V	Cr		
1	Economics	DC	DI	ECONe	1	1			47	E	3									
2	Technical Drawing and Infographics - II	DF	DI	DT2e	1		3		69	C	5									
3	Mechanics - II	DD	DI	MEC2e	2	2	2		66	E	6									
4	Strength of Materials - I	DD	DI	RM1e	2	2	2		66	E	6									
5	Special Mathematics and Statistics	DF	DI	MSSMe	2	2			44	E	4									
6	Applied Electronics	DD	DI	EleAe	2		1		58	E	4									
7	Numerical methods	DD	DI	MNUMe								2		2		19	E	3		
8	Fluid Mechanics and Hydraulic Machines	DD	DI	MFMHe								2		2		44	E	4		
9	Strength of Materials - II	DD	DI	RM2e								3	1	1		55	E	5		
10	Mechanisms	DD	DI	MECSe								3	1	1		55	E	5		
11	Machine Elements - I	DD	DI	OM1e								2		1	1	44	E	4		
12	Tolerances and Dimensional Control	DD	DI	TCDe								2		1		33	C	3		
13	(O1) Foreign Language - French	DC	DO	LSFe3/ LSFe4	1	1			22	C	2	1	1		22	C	2			
	(O1) Foreign Language - German			LSGe3/ LSGe4																
14	Physical Training	DC	DI	EF03e/ EF034		1			11	A/R	(1)		1			11	A/R	(1)		
15	Practical Placement	DD	DI	PRTHe	3 weeks x 30 h / week = 90 h											C	4			
Total					11	9	8	0	383	E	C	30	15	4	8	1	283	E	C	30
										5	2	(31)						5	3	(31)
Total number of hours per week					28							28								

3rd Year

Crt. No.	Course	C ₁ *	C ₂ **	Code	5th Semester							6th Semester								
					C	S	L	P	SI#	V	Cr	C	S	L	P	SI	V	Cr		
1	Thermodynamics and Thermal Machines	DD	DI	TMTe	2	1	2		55	E	5									
2	Vibrations	DD	DI	VIBRe	2	1	1		69	E	5									
3	Hydraulic and Pneumatic Actuation	DD	DI	AHPe	2		2	1	55	E	5									
4	Machine Elements - II	DD	DI	OM2e	2		1	1	69	C	5									
5	Automotive Engineering Bases	DS	DI	BIAe	2		2		69	E	5									
6	Vehicle Dynamics I	DD	DI	DA1e	3		2		55	E	5									
7	Vehicle Dynamics II	DD	DI	DA2								2				22	E	2		
8	Vehicle Dynamics II P	DD	DI	DA2										2	22	C		2		
9	Processes and Characteristics of Internal Combustion Engines - I	DS	DI	PCMAI1								2		2	1	55	E	5		
10	Construction and Calculus of Internal Combustion Engines - I	DS	DI	CCMAI1								2		2		44	E	4		
11	Construction and Calculus of Automotive Vehicles - I	DS	DI	CCA1								2		1	1	69	E	5		
12	Computer Aided Design	DD	DI	PACe								2		2		19	C	3		
13	Autonomous Vehicles	DS	DI	VAut								1	1			22	C	2		
14	Automatic Systems Bases	DD	DI	BSAe								2	1	1		19	E	3		
15	Practical Placement	DS	DI	PRTH2e	3 weeks x 30 h / week = 90 h											C	4			
Total					13	2	10	2	372	E	C	30	13	2	8	4	272	E	C	30
										5	1						5	4		
Total number of hours per week					27							27								

4th Year

Crt. No.	Course	C ₁ *	C ₂ **	Code	7th Semester							8th Semester								
					C	S	L	P	SI [#]	V	Cr	C	S	L	P	SI	V	Cr		
1	Construction and Calculus of Internal Combustion Engines - II	DS	DI	CCM2e	2		1	1	55	E	5									
2	Processes and Characteristics of Internal Combustion Engines - II	DS	DI	PCM2e	2		1	1	69	E	5									
3	Construction and Calculus of Automotive Vehicles - II	DS	DI	CCA2e	2		1	1	69	E	5									
4	(O1) Automotive Fault Diagnosis	DS	DO	DIAGe	2		1	1	44	E	4									
	(O1) Structure and Management of Service Stations	DS	DO	ORAUe																
5	(O2) Vehicles Testing	DS	DO	INCAe	2		2		44	E	4									
	(O2) Road Vehicle Homologation	DS	DO	OMAUe																
6	(O3) Finite Element Method	DS	DO	MEFe	2		2		69	E	5									
	(O3) Management	DS	DO	Manag																
7	(O4) Automotive sensorics and control systems	DC/DD	DO	SSCAut	1	1			22	C	2									
	(O4) History of Science and Technique	DC/DD	DO	ISTe																
8	Automotive Electric and Electronic Systems	DS	DI	SEEAe								2		2		35	E	3		
9	Road Traffic Management	DS	DI	TRAFe								2		1	1	35	E	3		
10	Manufacturing and Assembling Technologies for Automotive Vehicles	DS	DI	TFAe								2		1	1	35	C	3		
11	(O5) Fuels	DS	DO	COMBe								2		2		35	E	3		
	(O5) Working Fluids for Motor Vehicles	DS	DO	FLAe																
12	(O6) Autovehicule speciale	DS	DO	Ase								2		1	1	35	E	3		
	(O6) Tractors	DS	DO	TRAe																
13	(O7) Hybrid and Electric Vehicles	DS	DO	AHEe								2		2		35	E	3		
	(O7) Components for Electric Vehicles	DS	DO	CEEe																
14	(O8) Traffic Accident Reconstruction	DS	DO	RECAe								2		1		20	C	2		
	(O8) Life Cycle Analysis of Vehicle Components	DS	DO	ACVAe																
15	Diploma Project Elaboration	DS	DI	EPD										4		69	C	5		
16	Practical Placement for Diploma Project Elaboration	DS	DI	PPD								60 h / sem. (4.285 h / week)					C	5		
Total					13	1	8	4	372	E 6	C 1	30	14	0	14	3	299	E 5	C 4	30
Total number of hours per week					26							31								