Transilvania University of Braşov, Romania

Study program: Aerospace Engineering

Faculty: Technological Engineering and Industrial Management

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	1st Semester					2nd Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
	Compulsory subjects											
01	Mathematics	AM	2	2			4					
02	Descriptive geometry	GD	2	2			5					
03	Chemistry	CHI	2		1		3					
04	Computer programming and programming languages 1	PCL1	1		2		3					
05	Technical drawing and info- graphics 1	DTI1	2		3		5					
06	Physics	FIZ	2		2		5					
07	Physical Education and Sports 1	PES1	1	–	–		1					
08	Material science and engineering	SIM						3		2		5
09	Linear algebra, analytical and differential geometry	ALGA						2	2			4
10	Mechanics	MEC						2	3			5
11	Technical drawing and info- graphics 2	DTI2						1		4		5
12	Computer programming and programming languages 2	PCL2						2		2		5
13	Physical Education and Sports 2	PES2						1	–	–	1	1
	Optional pack											
14*	Ethics and Academic Integrity	IDP	1	1			2					
	Communication	COM	1	1			2					
15*	English Language 1	LM1a	1	–	–		2					
	French Language 1	LM1b	1	–	–		2					
16*	General economics	ECG						1	1			3
	Environment protection	PE						1	1			3
17*	English Language 2	LM2a						1	1	–		2
	French Language 2	LM2b						1	1	–		2

2nd Year

No. crt.	Course	Code	3rd Semester					4th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
	Compulsory subjects											
01	Special mathematics	MS	2	2			4					
02	Strength of materials 1	RM1	2	1	1		5					
03	Mechanisms and precision mechanics	MECSM	3		2		6					
04	Numerical methods in aviation	MNI	2		2		4					
05	Fluid mechanics and hydraulic equipment	MFH	2		1		3					
06	Electrotechnics and applied electronics	EEA	2		2		5					
07	Physical Education and Sports 3	PES3	1	–	–		1					
08	Machine elements 1	OM1						2		1	1	4
09	Strength of materials 2	RM2						2	1	1		4
10	3D Modelling	M3D						2		2		4
11	Fundamentals of aerospace engineering	BI1						3	1	2		5
12	Thermotechnics and heat engines	TET						2		1		3
13	Management	MIN						2	1			3
14	Internship (90 hours/ year)	PRAD										4
15	Physical Education and Sports 4	PES4						1	–	–	1	1
	Optional pack											
16*	English Language 3	LM3a	1	–	–		2					
	French Language 3	LM3b	1	–	–		2					
17*	English Language 4	LM4a						1	1	–		2
	French Language 4	LM4b						1	1	–		2

3rd Year

No. crt.	Course	Code	5th Semester					6th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
	Compulsory subjects											
01	Machine elements 2	OM2	2	–	1	1	4					
02	General aviation technologies I	TGA1	2	–	2	1	6					
03	Fundamentals of aerodynamics	BA	2	1	1	–	4					
04	Aviation regulations. Legislation.	RAL	1	1	–	–	3					
05	Aircrafts mechanics	MA	2	–	–	–	3					
06	Aircrafts mechanics. Project	MAP	–	–	–	2	2					
07	Tolerances and dimensional control	TCD	2	–	2	–	5					
08	Aircrafts and rockets aerodynamics	AAR						2	1	1	–	4
09	General aviation technologies II	TGA2						2		1	1	4
10	Fundamentals of aerospace propulsion	BPA						2	1	1	–	4
11	Quality assurance in aerospace	ACDA						1	–	1	1	3
12	Design of aerospace structures	CA						2	2	–	–	4
13	CAD/ CAM Systems	CADM						2	–	1	–	3
14	Composite materials – technologies and applications	MCTA						2	–	1	2	4
15	Practice in speciality (90 hours / year)	PRA3										4
	Optional pack											
16	Acquisition systems and data distribution in aeronautics	SADD	2	–	1	–	3					
	Finite elements in aerospace engineering	EFIA	2	–	1	–	3					

4th Year

No. crt.	Course	Code	7th Semester					8th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
	Compulsory subjects											
01	Reliability and security of aviation	FSSA	2	–	2	–	5					
02	Calculus and design of aeronautical structures	CPSA	2	–	1		3					
03	Calculus and design of aeronautical structures-Project	CPSAP	–	–	–	2	2					
04	Aircraft flight dynamics and stability	SDZ	2	–	–	2	4					
05	Hydraulic and pneumatic aircraft systems	BCHPA	2	–	1	–	3					
06	Technology of aircrafts structure	TSA						2	–	1	1	4
07	Technology of aircraft assembly	TAMA						2	–	1	–	2
08	Aeroelasticity and structures dynamics	ADS						2	–	1	1	3
09	Board equipment and navigation	EBNA						2	–	2	–	3
10	Elaboration diploma project	APIII									6	4
11	Internship for diploma project (60 hours)	DPRD										10
	Optional pack											
12	Aircraft design	DA	2	–	1	1	5					
	Airport and infrastructure Planning & Control	EIAE	2	–	1	1	5					
13	Helicopters and helicopters systems	ESE	3	–	2	–	4					
	Experimental aerodynamics		3	–	2	–	4					
14	Helicopters repair techniques	TRE	1	–	2	–	2					
	Aerospace structures stability	SSA	1	–	2	–	2					
15	Physical control methods in aviation	MFCA						2	–	2	–	4
	High speed aerodynamics	AVM						2	–	2	–	4
16	Operation and maintenance of helicopters and airplanes	EIEA						2	–	2	–	3
	Computational aeroelasticity	AC						2	–	2	–	3