

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	1 st Semester					2 nd Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
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	Professional integration and development	IDP	1	1			2						
08	Modern languages 1a (English)	LM1a	1	1			3						
	Modern languages 1b (French)	LM1b											
09	Physical training 1	EDF1		1			1						
10	Material science and engineering	SIM						3		2			5
11	Linear algebra, analytical and differential geometry	ALGA						2	2				4
12	Mechanics	MEC						2	3				5
13	Technical drawing and info- graphics 2	DTI2						1		4			5
14	Computer programming and programming languages 2	PCL2						2		2			5
15	General economics	ECG						1	1				3
16	Modern languages 2a (English)	LM2a						1	1				3
	Modern languages 2b (French)	LM2b											
17	Physical training 2	EDF2							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	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	Modern languages 3a (English)	LM3a	1	1			3						
	Modern languages 3b (French)	LM3b											
08	Physical training 3	EDF3		1			1						
09	Machine elements 1	OM1						2	1	1		4	
10	Strength of materials 2	RM2						2	1	1		4	
11	3D Modelling	M3D						2	2			4	
12	Fundamentals of aerospace engineering	BI1						3	1	2		5	
13	Thermotechnics and heat engines	TET						2	1			3	
14	Management	MIN						2	1			3	
15	Internship (90 hours/ year)	PRAD										4	
16	Modern languages 4a (English)	LM4a						1	1			3	
	Modern languages 4b (French)	LM4b											
17	Physical training 4	EDF4							1			1	

3rd Year

No. crt.	Course	Code	5 th Semester					6 th Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
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	Reliability and security of aviation	FSSA	2	-	2	-	5						
06	Tolerances and dimensional control	TCD	2	-	2	-	5						
07	Acquisition systems and data distribution in aeronautics	SADD	2	-	1	-	3						
08	Experimental aerodynamics	AE	2	-	1	-	3						
09	Aircrafts mechanics	MA						2	-	-	-	2	
10	Aircrafts mechanics	MA						-	-	-	2	2	
11	General aviation technologies II	TGA2						2	-	1	1	5	
12	Fundamentals of aerospace propulsion	BPA						2	1	1	-	4	
13	Quality assurance in aerospace	ACDA						1	-	1	1	3	
14	Plan practice (90 hours/year)	PRA3										4	
15	Design of aerospace structures	CA						2	2	-	-	4	
16	CAD/ CAM Systems	CADM						2	-	1	-	3	
17	Composite materials – technologies and applications	MCTA						2	-	1	2	4	

4th Year

No. crt.	Course	Code	7 th Semester					8 th Semester					
			C	S	L	P	Cred	C	S	L	P	Cred	
01	Aircrafts and rockets aerodynamics	AAR	2	1	1	-	5						
02	Calculus and design of aeronautical structures	CPSA	2	-	1		3						

03	Calculus and design of aeronautical structures- Project	CPSAP	-	-	-	2	2						
04	Technology of aircrafts structure	TSA	2	-	1	1	4						
05	Hydraulic and pneumatic aircraft systems	BCHPA	2	-	1	-	3						
06	Aircraft design	DA	2	-	1	1	5						
07	Airport and infrastructure Planning & Control	EIAE	2	-	1	1	5						
08	Helicopters and helicopters systems	ESE	3	-	2	-	4						
09	Finite elements in aerospace engineering	EFIA	3	-	2	-	4						
10	Helicopters repair techniques	TRE	1	-	2	-	2						
11	Aerospace structures stability	SSA	1	-	2	-	2						
12	Technology of aircraft assembly	TAMA						2	-	1	-	2	
13	Aircraft flight dynamics and stability	SDZ						2	-	-	2	4	
14	Aeroelasticity and structures dynamics	ADS						2	-	1	1	3	
15	Board equipment and navigation	EBNA						2	-	2	-	3	
16	Physical control methods in aviation	MFCA						2	-	2	-	4	
17	High speed aerodynamics	AVM						2	-	2	-	4	
18	Operation and maintenance of helicopters and airplanes	EIEA						2	-	2	-	3	
19	Computational aeroelasticity	AC						2	-	2	-	3	
20	Elaboration diploma project	APIII									6	4	
21	Internship for diploma project (60 hours)	DPRD											10