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
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	(O1) Professional integration and development	IDP	1	1			2					
08	(O1) Communication	COM										
09	(O2) Modern languages1a (English)	LM1a	1	1			3					
	(O2) Modern languages 1b (French)	LM1b										
	(O2) Modern languages 1b (German)											
	(O2) Modern languages 1b (Spanish)											
10	Physical training 1	EDF1		1			1					
11	Material science and engineering	SIM						3		2		5
12	Linear algebra, analytical and differential geometry	ALGA						2	2			4
13	Mechanics	MEC						2	3			5
14	Technical drawing and info- graphics 2	DTI2						1		4		5
15	Computer programming and programming languages 2	PCL2						2		2		5
16	(O3) General economics	ECG						1	1			3
17	(O3) Environment protection											
18	(O4) Modern languages 2a (English)	LM2a						1	1			3
	(O4) Modern languages 2b (French)	LM2b										
	(O4) Modern languages 2b (German)											
	(O4) Modern languages 2b (Spanish)											
19	Physical training 2	EDF2							1			1

2nd Year

No. crt.	Course	Code	3rd Semester					4th 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	(O5) Modern languages 3a (English)	LM3a	1	1			3					
	(O5) Modern languages 3b (French)	LM3b										
	(O5) Modern languages 3b (German)											
	(O5) Modern languages 3b (Spanish)											
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	(O6) Modern languages 4a (English)	LM4a						1	1			3
	(O6) Modern languages 4b (French)	LM4b										
	(O6) Modern languages 4b (German)											
	(O6) Modern languages 4b (Spanish)											
17	Physical training 4	EDF4							1			1

3rd Year

No. crt.	Course	Code	5th Semester					6th 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	Aircrafts mechanics	MA	2	-	-	-	3					
06	Aircrafts mechanics. Project	MAP	-	-	-	2	2					
07	Tolerances and dimensional control	TCD	2	-	2	-	5					
08	(O7) Acquisition systems and data distribution in aeronautics	SADD	2	-	1	-	3					
09	(O7) Finite elements in aerospace engineering	EFIA	2	-	1	-	3					
10	Aircrafts mechanics	MA						2	-	-	-	2
11	Aircrafts and rockets aerodynamics	AAR						2	1	1	-	4
12	General aviation technologies II	TGA2						2		1	1	4
13	Fundamentals of aerospace propulsion	BPA						2	1	1	-	4
14	Quality assurance in aerospace	ACDA						1	-	1	1	3
15	Plan practice (90 hours/year)	PRA3										4
16	Design of aerospace structures	CA						2	2	-	-	4
17	CAD/ CAM Systems	CADM						2	-	1	-	3
18	Composite materials – technologies and applications	MCTA						2	-	1	2	4

4th Year

No. crt.	Course	Code	7 th Semester					8th Semester				
			C	S	L	P	Cred	C	S	L	P	Cred
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	(O8) Aircraft design	DA	2	-	1	1	5					
07	(O8) Airport and infrastructure Planning & Control	EIAE	2	-	1	1	5					
08	(O9) Helicopters and helicopters systems	ESE	3	-	2	-	4					
09	(O9) Experimental aerodynamics		3	-	2	-	4					
10	(10) Helicopters repair techniques	TRE	1	-	2	-	2					
11	(10) Aerospace structures stability	SSA	1	-	2	-	2					
12	Technology of aircrafts structure	TSA						2	-	1	1	4
13	Technology of aircraft assembly	TAMA						2	-	1	-	2
14	Aeroelasticity and structures dynamics	ADS						2	-	1	1	3
15	Board equipment and navigation	EBNA						2	-	2	-	3
16	(O11) Physical control methods in aviation	MFCA						2	-	2	-	4
17	(O11) High speed aerodynamics	AVM						2	-	2	-	4
18	(O12) Operation and maintenance of helicopters and airplanes	EIEA						2	-	2	-	3
19	(O12) Computational aeroelasticity	AC						2	-	2	-	3
20	Elaboration diploma project	APIII									6	4
21	Internship for diploma project (60 hours)	DPRD										10