II. EDUCATIONAL PLAN

№ №	Course code	Name of course	Amount of credits (ECTS)	Total hours	Independent work of students	Contact hours				Kurs işləri/Kurs layihələri	prerequisite (must be learned first) subject code	Correquisite (parallel teaching) subject code	Semesters	Weekly load
						Cəmi	including							
							Lectures	Seminar, other classes	Lab.classes					
1	2	3	4	5	6	7	8	9	10		11	12	13	14
	HF-B00	**1. Humanity courses**	**30**	**900**	**450**	**450**	**90**	**330**						
1.	HF-B01	History of Azerbaijan	5	150	75	75	45	30					1	5
2.	HF-B02	Business and academic communication in Azerbaijan language	4	120	60	60	15	45					1	4
3.	HF-B03.1	Business and academic communication in English-General English	3	90	45	45		45					1	3
4.	HF-B03.2	Business and academic communication in English- Development of speaking skills	4	120	60	60		60					2	4
5.	HF-B03.3	Business and academic communication in English- Academic vocabulary and reading skills	4	120	60	60		60					3	4
6.	HF-B03.4	Business and academic communication in English- Social communication activities	4	120	60	60		60					4	4
		Elective	**6**	**180**	**90**	**90**	**30**	**30**						
7.	HSF-B04	**1 block:**	3	90	45	45	30	15					2	3
	HSF-B04.1	Philosophy												
	HSF-B04.2	Sociology												
	HSF-B04.3	The Constitution of Azerbaijan Republic and fundamentals of law												
	HSF-B04.4	Logics												
	HSF-B04.5	Ethics and Esthetics												
	HSF-B04.6	Culturology												
8.	HSF-B05	**2 block:**	3	90	45	45	30	15					4	3
	HSF-B05.1	Information technologies												
	HSF-B05.2	Information Control												
	HSF-B05.3	Fundamentals of entrepreneurship and introduction to business												
	HSF-B05.4	Political science												
	İPF-B00	**Courses of the professional education**	**96**	**3180**	**1515**	**1665**	**750**	**675**	**240**					
9.	İPF-B01	Calculus with Analytic Geometry	4	120	60	60	30	30					1	4

10.	İPF-B02	Mathematical analysis	4	120	60	60	30	30					2	4
11.	İPF-B03	Differential equations	4	120	60	60	30	30					3	4
12.	İPF-B04	Engineering Mathematics	4	120	60	60	45	15					3	4
13.	İPF-B05	Physics 1	6	180	90	90	45	30	15				1	6
14.	İPF-B06	Physics 2	5	150	75	75	45	15	15				2	5
15.	İPF-B07	Chemistry	4	120	75	45	30		15				1	3
16.	İPF-B08	Engineering graphics	4	120	60	60		30	30				1	4
17.	İPF-B09	Machine graphics	5	150	90	60		30	30				2	4
18.	İPF-B10	(Introduction to Aerospace Engineering	5	150	90	60	45		15				2	4
19.	İPF-B11	CAD/CAE/CAM technologies for aerospace industry	6	180	105	75	45		30				5	5
20.	İPF-B12	Programming	4	120	60	60	30		30				2	4
21.	İPF-B13	Fundamentals of control	6	180	90	90	45	30	15	**CW**			5	6
22.	İPF-B14	Flight dynamics	6	180	90	90	60	30		**CW**			6	6
23.	İPF-B15	Electrics and electronics	5	150	90	60	30		30				3	4
24.	İPF-B16	Electrical machines and apparatus	5	150	75	75	45	15	15				4	5
25.	İPF-B17	Aerospace manufacturing technologies	7	210	105	105	75	30					6	7
26.	İPF-B18	Computing and Numerical Methods for Engineering	6	180	90	90	60	30					4	6
27.	İPF-B19	Guide documents	3	90	45	45	30	15					6	3
28.	İPF-B20	Civil defense	3	90	45	45	30	15					5	3
29.	FF-B01	Professional russian	0	60	0	60	0	60					3	4
30.	FF-B02	Professional English-1	0	45	0	45	0	45					5	3
31.	FF-B03	Professional English-2	0	45	0	45	0	45					6	3
32.	FF-B04	Professional English-3	0	45	0	45	0	45					7	3
33.	FF-B05	Professional English-4	0	45	0	45	0	45					8	7,5
34.	FF-B06	Physical training-1	0	30	0	30	0	30					1	2
35.	FF-B07	Physical training 2	0	30	0	30	0	30					2	2
	İPFS-B00	**Courses of professional education (Elective)**	**46**	**1380**	**705**	**675**								
	İPFS-B01	**1 block**												
36.	İPFS-B01.1	Thermodynamics and heat transfer	5	150	75	75	45	30					3	5
	İPFS-B01.2	Digital Systems and Microprocessors	5	150	75	75	45		30				3	5
	İPFS-B02	**2 block**												

37.	İPFS-B02.1	Theoretical mechanics	4	120	60	60	45	15					3	4
	İPFS-B02.2	Radar Techniques and Applications	4	120	60	60	45	15					3	4
	İPFS-B03	**3 block**												
38.	İPFS-B03.1	Engineering Materials	4	120	60	60	45	15					3	4
	İPFS-B03.2	Design and systems of flight vehicles	4	120	60	60	45	15					3	4
	İPFS-B04	**4 block**												
39.	İPFS-B04.1	Fluid Mechanics	4	120	60	60	45	15					4	4
	İPFS-B04.2	Digital Systems and Signal Processing	4	120	60	60	45		15				4	4
	İPFS-B04.3	Theory of gyroscopes	4	120	60	60	45	15					4	4
	İPFS-B05	**5 block**												
40.	İPFS-B05.1	Mechanics of Materials	5	150	75	75	60	15		**CW**			4	5
	İPFS-B05.2	Theory of electrical circuits	5	150	75	75	30	15	30	**CW**			4	5
	İPFS-B06	**6 block**												
41.	İPFS-B06.1	Theory of machines	3	90	45	45	30	15					4	3
	İPFS-B06.2	Power electronics and drives	3	90	45	45	30		15				4	3
	İPFS-B07	**7 block**												
42.	İPFS-B07.1	Aerodynamics	5	150	75	75	60		15				5	5
	İPFS-B07.2	Communication and navigation systems	5	150	75	75	45	30					5	5
	İPFS-B07.3	Gyroscopic instruments and systems	5	150	75	75	45	30					5	5
	İPFS-B08	**8 block**												
43.	İPFS-B08.1	Mechanics of Aerospace Structures	5	150	75	75	60	15					5	5
	İPFS-B08.2	Electromechanical energy conversion	5	150	75	75	45	30					5	5
	İPFS-B08.3	Sensors and measuring converters	5	150	75	75	45	30					5	5
	İPFS-B09	**9 blok**												
44.	İPFS-B09.1	Machine Design	5	150	75	75	60	15					5	5

	İPFS-B09.2	Electrical and instrument systems of flight vehicles	5	150	75	75	45	30					5	5
	İPFS-B10	**10 block**												
45.	İPFS-B10.1	Theory of aerospace propulsion	6	180	105	75	60	15					6	5
	İPFS-B10.2	Design of Aerospace Electronics	6	180	105	75	30	45					6	5
	İPFS-B10.3	Manufacturing technology of aviation devices and systems	6	180	105	75	60	15					6	5
	İFS-B00	**Courses of professional education (courses of specialization by elective)**	**38**	**1140**	**570**	**570**								
	İFS-B11	**11 block**												
46.	İFS-B11.1	Structural strength of flight vehicles	8	240	120	120	90	30		**CW**			6	8
	İFS-B11.2	Design and strength of aircraft	8	240	120	120	90	30		**CW**			6	8
	İFS-B11.3	Ballistics and theory of flight	8	240	120	120	90	30					6	8
	İFS-B11.4	Fundamentals of flight theory of the spacecraft	8	240	120	120	90	30					6	8
	İFS-B11.5	Design of on-board microelectronic and microprocessor devices	8	240	120	120	75	45		**CW**			6	8
	İFS-B11.6	Communication, navigation and radar systems of flight vehicles	8	240	120	120	75	45		**CW**			6	8
	İFS-B11.7	Navigation, orientation and stabilization systems of spacecraft	8	240	120	120	75	45		**CW**			6	8
	İFS-B11.8	Microprocessor devices for flight vehicles control systems	8	240	120	120	90	30		**CW**			6	8
	İFS-B12	**12 block**												
47.	İFS-B12.1	Design of flight vehicles systems	6	180	90	90	60	30		**CW**			7	6
	İFS-B12.2	Aircraft engine design and strength	6	180	90	90	75	15		**CW**			7	6
	İFS-B12.3	Design, strength and dynamics of the rocket	6	180	90	90	60	30		**CW**			7	6
	İFS-B12.4	Design, strength and dynamics of the spacecraft	6	180	90	90	75	15		**CW**			7	6
	İFS-B12.5	Design of flight vehicles control systems	6	180	90	90	45	45		**CW**			7	6
	İFS-B12.6	Automatic control systems of flight vehicles	6	180	90	90	60	30		**CW**			7	6
	İFS-B12.7	Information-computing systems and complexes of spacecraft	6	180	90	90	60	30		**CW**			7	6
	İFS-B12.8	Control systems of the flight vehicles	6	180	90	90	60	30					7	6
	İFS-B13	**13 block**												
48.	İFS-B13.1	Manufacturing and testing technologies of flight vehicles	5	150	75	75	45	30					7	5
	İFS-B13.2	Technical maintenance of flight vehicles and aviation engines	5	150	75	75	60	15					7	5
	İFS-B13.3	Theory of rocket engines	5	150	75	75	60	15					7	5

	İFS-B13.4	Spacecraft propulsion systems	5	150	75	75	60	15					7	5
	İFS-B13.5	Information networks of avionics	5	150	75	75	45	30					7	5
	İFS-B13.6	Reliability and diagnostics of avionics systems	5	150	75	75	45	30					7	5
	İFS-B13.7	Space vehicles and power plants	5	150	75	75	45	30					7	5
	İFS-B13.8	Inertial navigation systems	5	150	75	75	45	30					7	5
	İFS-B14	**14 block**												
49.	İFS-B14.1	Design and engineering of aviation engines	5	150	75	75	60	15		**CW**			7	5
	İFS-B14.2	Powerplants	5	150	75	75	60	15		**CW**			7	5
	İFS-B14.3	Design of rocket engines	5	150	75	75	60	15		**CW**			7	5
	İFS-B14.4	Spacecraft systems	5	150	75	75	60	15		**CW**			7	5
	İFS-B14.5	Inertial and satellite navigation systems	5	150	75	75	45	30					7	5
	İFS-B14.6	Information -computing systems of avionics	5	150	75	75	45	30		**CW**			7	5
	İFS-B14.7	Electromechanical systems of spacecraft	5	150	75	75	45	30					7	5
	İFS-B14.8	Information-measuring systems and devices of flight vehicles	5	150	75	75	60	15		**CW**			7	5
	İFS-B15	**15 block**												
50.	İFS-B15.1	Design of powerplants	4	120	60	60	45	15					7	4
	İFS-B15.2	Diagnostics and reliability of flight vehicles	4	120	60	60	45	15					7	4
	İFS-B15.3	Rocket complexes and launch equipments	4	120	60	60	45	15					7	4
	İFS-B15.4	Spacecraft layout and equipment	4	120	60	60	45	15					7	4
	İFS-B15.5	Hardware of avionics systems	4	120	60	60	45	15					7	4
	İFS-B15.6	Optoelectronic instruments and devices	4	120	60	60	45	15					7	4
	İFS-B15.7	Optoelectronic devices of spacecraft	4	120	60	60	45	15					7	4
	İFS-B15.8	Theoretical basics of control systems and elements of flight vehicles motion	4	120	60	60	45	15					7	4
	İFS-B16	**16 block**												
51.	İFS-B16.1	Technology of composite structures (constructions)	4	120	60	60	45	15					8	10
	İFS-B16.2	Manufacturing and repair of aircraft and aviation engines	4	120	60	60	45	15					8	10
	İFS-B16.3	Manufacturing and testing technologies of rockets	4	120	60	60	45	15					8	10
	İFS-B16.4	Manufacturing and testing technologies of spacecraft	4	120	60	60	45	15					8	10
	İFS-B16.5	Software of avionics systems	4	120	60	60	30	30					8	10

	İFS-B16.6	Avionics of a certain flight vehicle	4	120	60	60	30	30					8	10
	İFS-B16.7	Communication and telemetry systems of spacecraft	4	120	60	60	30	30					8	10
	İFS-B16.8	On-board control computers and complexes	4	120	60	60	45	15					8	10
	İFS-B17	**17 block**												
52.	İFS-B17.1	Design of flight vehicles	6	180	90	90	60	30					8	15
	İFS-B17.2	Design and maintenance of aircraft systems	6	180	90	90	75	15					8	15
	İFS-B17.3	Design of rockets	6	180	90	90	60	30		**CW**			8	15
	İFS-B17.4	Design of spacecraft	6	180	90	90	60	30		**CW**			8	15
	İFS-B17.5	Design of avionic systems	6	180	90	90	45	45		**CW**			8	15
	İFS-B17.6	Maintenance of avionic systems of flight vehicles	6	180	90	90	60	30					8	15
	İFS-B17.7	Design of spacecraft control systems	6	180	90	90	60	30		**CW**			8	15
	İFS-B17.8	Design of automatic control systems of flight vehicles	6	180	90	90	60	30		**CW**			8	15
			210	**6600**	**3285**	**3315**								
		Final summ of the courses	**210**	**6600**	**3285**	**3315**								
	TE-BOO	Practices and Final Attestation of Bachelor Thesis	**30**											
	TE-B01	Practices	**21**											
	TE-B01-1	Practice -1 (General Familirization)	**3**										**2**	
	TE-B01-2	Practice -2 (Locksmith-mechanical working)	**6**										**4**	
	TE-B01-3	Practice -3 (Manufacturing technologies)	**6**										**6**	
	TE-B01-4	Practice -4 (Maintenance technologies)	**6**										**8**	
	TE-B02	Final Attestation of Bachelor Thesis	**9**											
	TE-B02-1	Bachelor Thesis	**9**										**8**	
		Total	**240**	**6600**	**3285**	**3315**								

III. Time allotted for education (in weeks)

Year	Theoretical training	Exam session	Practice	Final State Certification	Holidays	Total
I	30	10	2	-	8	**50**
II	30	10	4	-	8	**52**
III	30	10	4	-	8	**52**
IV	21	9	4	6	4	**44**
Total	**111**	**39**	**14**	**6**	**28**	**198**

IV. General information about the educational process

Semestr	1	2	3	4	5	6	7	8	Total
Amount of ECTS	30	30	30	30	30	30	20	10	**210**
Number of exams	8	8	8	7	7	6	5	3	**52**
Weekly load	31	30	33	30	32	32	23	32.5	
Number of course works	-	-	-	1	1	1	2	1	**6**
Number of course projects	-	-	-	-	-	-	-	-	
Practice (1, 2, 3, 4)	-	3	-	6	-	6	-	6	**21**
Final State Certification	-	-	-	-	-	-	-	9	**9**
Total ECTS									**240**