



TECHNICAL UNIVERSITY OF SOFIA

APPROVED

Rector:

/ Proff. M. Hristov, PhD /

Date:

Educational degree:

Professional qualification:

bachelor

Aviation Engineering

Duration:

Education form:

4 years

Full-time

CURRICULUM

Specialty: **AVIATION ENGINEERING**

Professional field: **5.5. "Transport, shipping and aviation"**

The education carry out in English

I. FUND OF STUDY TIME

Number of weeks								
Course	Auditorium work	Exam sessions	Educational practice	Educational and work placement	Specialized practice	State examination	Vacations	Total
I	30	11	–	–	–	–	11	52
II	30	11	–	2	–	–	9	52
III	30	11	–	–	3	–	8	52
IV	29	9	–	–	2	2	10	52

II. Curriculum

ECTS Subject code

FTMEN₀ – fundamental disciplines for the specialty

TAE SN

- T – type of course: B – for BEng, M – for MEng;
- AE – Aeronautical Engineering;
- SN - subsequent number of the subject;

Lectures (L), tutorials (Tut.), labs (Lab.) weekly;

exam (E), continuous assessment (CA); Semester projects (SP) / semester assignment(course work) (SA)

№	SUBJECT	Week Load					Assessment					ECTS subject code	ECTS credits
		L	Tut.	Lab	Classes total	Self study	Total	E	CA	SP	SA		

SEMESTER I

1	Mathematics I	3	2	0	5	8	13	1				BAEE01	8
2	Physics	3	1	1	5	8	13	1				BAEE02	8
3	Informatics I	2	0	3	5	8	13	1				BAEE03	6
4	Fundamental of design	2	0	2	4	7	11	1			1	BAEE04	8
5	Foreign language I	0	(2)	0	(2)	(2)	(4)		1*			BAEE05	0
6	Sports	0	(3)	0	(3)							BAEE06	0
Total		10	3	6	19	31	50	4			1		30

SEMESTER II

7	Mathematics II	3	2	0	5	8	13	1				BAEE07	8
8	Mechanics I	3	2	0	5	8	13	1				BAEE08	8
9	Informatics II Computing	2	0	3	5	7	12	1				BAEE09	6
10	Material science	3	0	2	5	7	12	1				BAEE10	8
11	Foreign language II	0	(2)	0	(2)	(2)	(4)		1*			BAEE11	0
12	Sports	0	(3)	0	(3)							BAEE12	0
Total		11	4	5	20	30	50	4	1				30

* - one continuous assessment for two semester discipline

№	SUBJECT	Week Load					Assessment					ECTS subject code	ECTS credits
		L	Tut	Lab	Classes total	Self study	Total	E	CA	SP	SA		

SEMESTER III

13	Mechanics II	3	2	0	5	8	13	1				BAEE13	8
14	Strength of materials	3	1	1	5	8	13	1			1	BAEE14	8
15	Fluid mechanics	3	0	2	5	8	13	1				BAEE15	7
16	Theory of electrical engineering	3	0	1	4	7	11	1				BAEE16	7
17	Foreign language III	0	(2)	0	(2)	(2)	(4)		1*			BAEE17	0
18	Sports	0	(3)	0	(3)							BAEE18	0
Total		12	3	4	19	31	50	4			1		30

SEMESTER IV

19	Electronics and microprocessor systems	3	0	2	5	8	12	1				BAEE19	7
20	Technical measurements	2	0	2	4	5	9	1				BAEE20	5
21	Thermodynamics and heat transfer	2	0	1	3	4	9	1				BAEE21	5
22	Control theory <i>theory of automatic control</i>	3	0	1	4	8	11		1			BAEE22	7
23	Machine elements	2	0	2	4	5	9	1			1	BAEE23	6
24	Foreign language IV	0	(2)	0	(2)	(2)	(4)		1*			BAEE24	0
25	Sports	0	(3)	0	(3)							BAEE25	0
Total		12	0	8	20	30	50	4	1		1		30

* - one continuous assessment for two semester discipline

SEMESTER V

26	Aircraft aerodynamics	3	1	0	4	6	10	1			1	BAEE26	6
27	Fundamentals of radiotechnics	3	0	1	4	6	10	1				BAEE27	6
28	Aircraft structures	3	0	1	4	6	10	1				BAEE28	6
29	Air navigation I	3	0	1	4	6	10	1				BAEE29	6
30	Elective course ** (List 1)	3	0	1	4	6	10		1			BAEE30	6
Total		15	1	4	20	30	50	4	1		1		30

SEMESTER VI

31	Flight dynamics I (Aircraft performance)	2	0	1	3	7	10	1			1	BAEE31	6
32	Avionics	3	0	1	4	6	10	1				BAEE32	6
33	Aircraft engines I	3	1	1	5	6	11	1				BAEE33	6
34	Management	2	0	1	3	4	7		1			BAEE34	5
35	Elective course ** (List 2)	3	1	1	5	7	12	1			1	BAEE35	7
Total		13	2	5	20	30	50	4	1		2		30

№	SUBJECT	Week Load					Assessment					ECTS subject code	ECTS credits
		L	Tut	Lab	Classes total	Self study	Total	E	CA	SP	SA		

SEMESTER VII

36	Flight dynamics II (stability and controllability of aircrafts)	2	0	1	3	7	10	1				BAEE36	6
37	Aircraft radio-electronic equipment	3	0	1	4	8	12	1		1		BAEE37	6
38	Aircraft systems	3	0	1	4	8	12	1				BAEE38	6
39	Elective course ** (List 3)	3	0	1	4	6	10	1			1	BAEE39	7
40	Human factors in aviation	2	0	1	3	3	6		1			BAEE40	5
Total		13	0	5	18	32	50	4	1	1	1		30

SEMESTER VIII - (14 WEEKS) ¹

41	Aircraft control systems	3	1	1	5	9	14	1				BAEE41	5
42	Aircraft maintenance	3	0	2	5	9	14	1				BAEE42	5
43	Reliability and safety of air transport	2	0	2	4	7	11	1				BAEE43	4
44	Elective course ** (List 4)	3	0	1	4	7	11	1		1		BAEE44	6
State Examination													10
Total		11	1	6	18	32	50	4		1			30

¹ The workload is for 15 weeks

Note:

** Subjects 30.1, 35.1, 39.1 и 44.1 form module "Operation and maintenance of aircrafts"

** Subjects 30.2, 35.2, 39.2 и 44.2 form module "Operation and maintenance of avionics"

** Subjects 30.3, 35.2, 39.2 и 44.3 form module "Civil aviation pilot"

III. BASIC PARAMETERS OF THE CURRICULUM

1. Duration – 4 years, 8 semesters

2. Audience work load on curriculum - 2310 hours

- 2.1. Lectures – 1455 hours
- 2.2. Seminars – 210 hours
- 2.3. Laboratory exercises – 645 hours

3. Total number of courses - 44

- 3.1. Compulsory courses - 30
- 3.2. Optional courses - 4
- 3.3. Foreign language - 4
- 3.4. Sports - 4

4. Control

- 4.1 Number of exams - 32
- 4.2 Number of continuous assessment - 4
- 4.3 Number of semester projects - 2
- 4.4 Number of course work - 7

5. Practical training - 7 weeks.

Date: 28.03.2011

Dean of FT:

/ Assoc. Proff. T. Evtimov, PhD /

The curriculum had been accepted by the Faculty Council of Transport Faculty with Protocol №80/01.02.2011.

The curriculum had been approved by the Academic Board of the TU - Sofia with Protocol №4/06.04.2011.

LIST OF ELECTIVE COURSES

Elective course ** (List 1) (ECHTK = 6)

1	Hydraulic and pneumatic drives	BAEE30.1
2	Electrical machines and apparatus	BAEE30.2
3	Aviation meteorology	BAEE30.3

Elective course ** (List 2) (ECHTK = 7)

1	Structural mechanics	BAEE35.1
2	Air navigation II	BAEE35.2

Elective course ** (List 3) (ECHTK = 8)

1	Aircraft engines II	BAEE39.1
2	Air law and air traffic control	BAEE39.2

Elective course ** (List 4) (ECHTK = 9)

1	Design and manufacture of aircrafts	BAEE44.1
2	Aircraft electrical systems	BAEE44.2
3	Organization and management of aircraft operations	BAEE44.3

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