



TECHNICAL UNIVERSITY - SOFIA

CURRICULUM
of
“MECHANICAL ENGINEERING”

Professional Field:

5.1. Mechanical Engineering

Educational Degree:

Bachelor

Professional qualification:

Mechanical Engineer

Training Duration:

4 years

Form of Education:

Full time

The training is executed in English

I. WEEKS OF ATTENDANCE:

Course	Weeks of Study	Exam Sessions	Number of Weeks							Total
			Practical Training	Industrial Training	Specialized Practical Training	Pre-graduation Practice	Diploma Project	State Exam	Holydays	
I	30	9	-	-	-	-	-	-	13	52
II	30	9	-	3	-	-	-	-	10	52
III	30	9	-	-	3	-	-	-	10	52
IV	25	7	-	-	-	2	7	3	8	52

II. COURSE DESIGN:

ECTS subject code **T ME №**

- **T** – type of course: **B** for BEng, **M** for MEng;
- **MEC** – “Mechanical Engineering”;
- **№** – subsequent number of the subject;

lectures (L), tutorials (Tut), labs (Lab), Auditorium Total (AT), Self Study (SS) weekly;

exam (E), continuous assessment (CA), semester project (SP) / semester assignment (course work) (SA)

No	SUBJECT	Week load						Assessment				ECTS code	ECTS credits
		L	Tut	Lab	AT	SS	Total	E	CA	SP	SA		

SEMESTER I

1	Mathematics Part I	3	3	0	6	6	12	1				BMEC01	7
2	Physics Part I	2	0	2	4	5	9	1				BMEC02	6
3	Material Science	2	2	1	5	5	10	1				BMEC03	6
4	Computing Part I	2	0	2	4	5	9	1				BMEC04	5
5	Engineering Graphics with CAD Part I	2	0	2	4	6	10		1		1	BMEC05	6
6	Foreign Language	0	0	(2)	(2)	(2)	(4)		1*			BMEC06	0
7	Sports	0	(3)	0	(3)	0	(3)					BMEC07	0
	Total	11	5	7	23	27	50	4	1	0	1		30

SEMESTER II

8	Mathematics Part II	3	3	0	6	6	12	1				BMEC08	7
9	Physics Part II	2	2	1	5	5	10	1				BMEC09	6
10	Computing Part II	2	0	2	4	4	8		1			BMEC10	5
11	Mechanics	3	2	0	5	6	11	1			1	BMEC11	7
12	Engineering Graphics with CAD Part II	2	0	2	4	5	9	1			1	BMEC12	5
13	Foreign Language	0	0	(2)	(2)	(2)	(4)		1*			BMEC13	0
14	Sports	0	(3)	0	(3)							BMEC14	0
	Total	12	7	5	24	26	50	4	2	0	2		30

* - the subject “Foreign Language” provides one semester assignment during the academic year

No	SUBJECT	Week load						Assessment				ECTS code	ECTS credits
		L	Tut	Lab	AT	SS	Total	E	CA	S P	SA		

SEMESTER III

15	Electrical engineering	2	0	2	4	4	8	1				BMEC15	5
16	Thermodynamics and heat transfer	2	0	2	4	6	10	1				BMEC16	6
17	Strength of Materials	3	2	1	6	6	12	1				BMEC17	7
18	Machine Elements I	2	0	2	4	6	10	1		1		BMEC18	6
19	Theory of Mechanisms and Machines	2	0	2	4	6	10		1		1	BMEC19	6
20	Foreign Language	0	0	(2)	(2)	(2)	(4)		1*			BMEC20	0
21	Sports	0	(3)	0	(3)							BMEC21	0
	Total	11	2	9	22	28	50	4	1	1	1		30

SEMESTER IV

22	Electronics	3	0	2	5	6	11	1				BMEC22	7
23	Machine Elements II	3	1	1	5	9	14	1		1		BMEC23	8
24	Hydraulic and pneumatic fluid power	3	0	2	5	6	11	1				BMEC24	7
25	Technology of Mechanical Engineering	3	0	2	5	9	14	1			1	BMEC25	8
26	Foreign Language	0	0	(2)	(2)	(2)	(4)		1*			BMEC26	0
27	Sports	0	(3)	0	(3)							BMEC27	0
	Total	12	1	7	20	30	50	4	1	1	1		30

* - the subject "Foreign Language" provides one semester assignment during the academic year

SEMESTER V

28	Fundamentals of Programming for Internet	2	0	3	5	7	12		1		1	BMEC28	8
29	Design of Automated Production Machines	2	0	2	4	5	9	1				BMEC29	5
30	Materials Handling Equipment	2	0	2	4	5	9	1				BMEC30	5
31	Applied Optics	2	0	2	4	5	9	1				BMEC31	5
32	Structural Non-metallic Composites	2	0	2	4	7	11	1			1	BMEC32	7
	Total	10	0	11	21	29	50	4	1	0	2		30

SEMESTER VI

33	Metrology and Measurement Devices	2	0	2	4	7	11	1			1	BMEC33	7
34	Economics	2	2	0	4	4	8	1				BMEC34	5
35	Reliability of Machines	2	2	0	4	6	10	1				BMEC35	6
36	Control and Regulation Systems	2	0	2	4	6	10	1				BMEC36	6
37	Logistics Engineering	2	0	2	4	5	9		1			BMEC37	5
38	Engineering Design Part I	0	0	(3)	(3)	2	2			1		BMEC38	1
	Total	10	4	6	20	30	50	4	1	1	1		30

No	SUBJECT	Week load						Assessment				ECTS code	ECTS credits
		L	Tut	Lab	AT	SS	Total	E	CA	S P	SA		

SEMESTER VII

39	Quality Management and Control	2	0	2	4	5	9	1			1	BMEC39	5
40	European Technical Legislation and Standardization	2	1	0	4	5	9		1			BMEC40	5
41	Computer Integrated Manufacturing	2	0	2	4	5	9	1				BMEC41	5
42	Optional subject 1	3	0	2	5	7	12	1				BMEC42	8
43	Construction and Road Equipment	2	0	2	4	5	9	1				BMEC43	5
44	Engineering Design Part II	0	0	(2)	(2)	2	2			1		BMEC44	2
	Total	11	1	8	21	29	50	4	1	1	1		30

SEMESTER VIII – 10 weeks

45	Automated Manufacturing Systems	3	0	2	5	10	15	1				BMEC45	6
46	Optional subject 2	3	0	3	6	11	17	1				BMEC46	7
47	Management of Companies	3	2	0	5	9	14		1			BMEC47	5
48	Pre-Diploma Project	0	0	0	0	4	4			1		BMEC48	2
	Diploma Project	Diploma Thesis										BMEC49	10
	Total	9	2	5	16	34	50	1	1	1	0		30

NOTES:

1. The eligible subjects (pos. 42 and 46) are updated annually and adopted by the Faculty Council of the Faculty of mechanical engineering.
2. Engineering Design Part I and Part II (pos. 38 and 44) are eligible and relate to the corresponding subjects.

III. MAIN PARAMETERS OF THE CURRICULUM

1. Training duration: 4 years, 8 semesters.

2. Auditorium workload according to the curriculum:

Total: 2410 h, of them:

Lectures: **1245 h;**

Seminars: **320 h;**

Labs: **845 h.**

3. Total number of the subject positions: 48

3.1. Compulsory: 38

3.2. Optional: 2

3.3 Foreign language: 4

3.4 Sports: 4

4. Assessment:

4.1. Exams: 30

4.2. Continuous Assessments: 9

4.3. Semester Projects: 5

4.4. Semester Assignments: 9

5. Practice: 8 weeks.

DEAN of Faculty of Mechanical Engineering:

/Assoc. Prof. L. Dimitrov/

Accepted by the FC of the FME on 17.11.2009/Protocol No 3.

Confirmed by the AC of TU Sofia on 16.12.2009/Protocol No 11.

LIST OF OPTIONAL SUBJECTS

<i>LIST 1</i>		ECTS code
1.	Modelling and simulation of mechanical systems	BMEC42a
2.	Manipulators and robots	BMEC42b
3.	Measuring Devices	BMEC42c
4.	Non-destructive Control	BMEC42d
<i>LIST 2</i>		ECTS code
1.	Intelligent Manufacturing Systems	BMEC46a
2.	Loading and warehouse logistics	BMEC46b
3.	Office Devices	BMEC46c

DEAN of Faculty of Mechanical Engineering:
/Assoc. Prof. L. Dimitrov/

Accepted by the FC of the FME on 12.05.2009/Protocol No 11.