

# CURRICULUM

## Bachelor's degree program in Mechanical Engineering and Instrumentation

ECTS Subject code T p ME No  
 - T – type of course: B for BEng, M for MEng;  
 - I - IV semester – fundamental subjects - professional field 5.1. Machine engineering;  
 - p - additional symbol for Plovdiv Branch  
 - ME – specialty “Mechanical Engineering and Instrumentation” in Bulgarian;  
 - No – number of the subject;  
 Lectures (L), Tutorials (Tut.), Labs (Lab.), Auditorium Total (AT), Self-Study (SS), Exam (E),  
 Continuous Assessment (CA), Semester Project (SP), Semester Assignment (course work) (SA).

\	Code	SUBJECT	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA	
<b>SEMESTER I</b>													
1	MAT12	Mathematics I	30	30	0	<b>60</b>	150	<b>210</b>	1				7
2	PHY01	Physics	45	15	30	<b>90</b>	120	<b>210</b>	1				7
3	CHE01	Chemistry	30	0	15	<b>45</b>	105	<b>150</b>		1			5
4	CCE23	Information and Communication Technologies	30	0	45	<b>75</b>	165	<b>240</b>	1			1	8
5	LNG01	Foreign Language I	0	30	0	<b>30</b>	30	<b>60</b>		1			2
6	SPR01	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			1
<b>Total</b>			<b>135</b>	<b>75</b>	<b>90</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>30</b>
<b>SEMESTER II</b>													
7	MAT22	Mathematics II	30	30	0	<b>60</b>	120	<b>180</b>	1				6
8	ENG01	Material Science	45	0	45	<b>90</b>	120	<b>210</b>	1			1	7
9	MEC01	Mechanics I	30	15	15	<b>60</b>	150	<b>210</b>	1			1	7
10	EEA21	Basics of Electrical Engineering and Electronics	30	0	30	<b>60</b>	90	<b>150</b>		1			5
11	LNG02	Foreign Language II	0	30	0	<b>30</b>	30	<b>60</b>		1			2
12	PRC01	Practicum	0	0	0	<b>0</b>	60	<b>60</b>		1			2
13	SPR02	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			1
<b>Total</b>			<b>135</b>	<b>75</b>	<b>90</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>30</b>
<b>SEMESTER III</b>													
14	MAT31	Mathematics III	30	30	0	<b>60</b>	120	<b>180</b>	1				6
15	MEC02	Mechanics II	30	0	30	<b>60</b>	150	<b>210</b>	1			1	7
16	MEC03	Strength of Materials	45	0	30	<b>75</b>	135	<b>210</b>	1			1	7
17	ENG02	Engineering Graphics	30	0	45	<b>75</b>	105	<b>180</b>		1		1	6
18	CCE24	Internet Technologies	15	15	0	<b>30</b>	60	<b>90</b>		1			3
19	SPR03	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			1
<b>Total</b>			<b>150</b>	<b>45</b>	<b>105</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>30</b>
<b>SEMESTER IV</b>													
20	<b>MEC04</b>	Machine Elements	45	15	30	<b>90</b>	120	<b>210</b>	1				7
21	<b>MEC05</b>	Fluid Mechanics, Hydro and Pneumatic Drive	45	0	30	<b>75</b>	105	<b>180</b>	1				6
22	<b>ENR01</b>	Thermodynamics and Heat Transfer	30	0	30	<b>60</b>	90	<b>150</b>	1				5
23	<b>MEC06</b>	Theory of Machines and Mechanisms	30	15	15	<b>60</b>	120	<b>180</b>	1			1	6
24	<b>MEC07</b>	Machine Elements - project	0	0	0	<b>0</b>	90	<b>90</b>			1		3
25	<b>PRC02</b>	Practicum	0	0	0	<b>0</b>	60	<b>60</b>		1			2
26	<b>SPR04</b>	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			1
<b>Total</b>			<b>150</b>	<b>30</b>	<b>105</b>	<b>285</b>	<b>615</b>	<b>900</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>30</b>

## LIST OF THE OPTIONAL SUBJECTS

<b>List 1</b>		<b>ECTS = 5</b>
1	Technological processes on Computer Numeric Control machines	<b>BpME08.1</b>
2	External ballistics	<b>BpME08.2</b>
3	Metrology and measuring equipment II	<b>BpME08.3</b>
<b>List 2</b>		<b>ECTS = 4</b>
1	Converters in precision engineering	<b>BpME09.1</b>
2	Internal ballistics	<b>BpME09.2</b>
3	Measurement in ecology, medicine and biotechnology	<b>BpME09.3</b>
<b>List 3</b>		<b>ECTS = 4</b>
1	Optical technology	<b>BpME13.1</b>
2	Design and operation of small arms	<b>BpME13.2</b>
3	Non-destructive testing	<b>BpME13.3</b>
<b>List 4</b>		<b>ECTS = 5</b>
1	Metrology and measuring equipment II	<b>BpME18.1</b>
2	Design of elements for small arms (ammunition)	<b>BpME18.2</b>
3	Control automation	<b>BpME18.3</b>
<b>List 5</b>		<b>ECTS = 4</b>
1	Technological equipment in instrument making	<b>BpME19.1</b>
3	Intelligent Measuring Systems	<b>BpME19.2</b>
<b>List 6</b>		<b>ECTS = 5</b>
1	Computer integrated design in mechanical engineering	<b>BpME22.1</b>
2	Structure and action of ammunition	<b>BpME22.2</b>
3	Computer modelling and simulations	<b>BpME22.3</b>
<b>List 7</b>		<b>ECTS = 5</b>
1	Low-cost automation of discrete processes in precision engineering	<b>BpME23.1</b>
2	Production of elements for small arms (ammunition)	<b>BpME23.2</b>
3	Reliability and diagnostics of devices and machines	<b>BpME23.3</b>

## LIST OF THE FACULTATIVE SUBJECTS

№	Code	SUBJECT	Semester Load						Assesment				ECTS credits
			L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA	
<b>SEMESTER I</b>													
1	<b>FaBpME1</b>	CAD systems	15		30	<b>45</b>	75	<b>120</b>					<b>4</b>
<b>SEMESTER V</b>													
1	<b>FaSPR05</b>	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			<b>1</b>
2	<b>FaBpME2</b>	Specialty english	0	30	0	<b>30</b>	30	<b>60</b>					<b>2</b>
<b>SEMESTER VI</b>													
1	<b>FaSPR06</b>	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			<b>1</b>
2	<b>FaBpME03</b>	Project management(in english)	15	0	30	<b>45</b>	45	<b>90</b>					<b>3</b>
<b>SEMESTER VII</b>													
1	<b>FaSPR07</b>	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			<b>1</b>
<b>SEMESTER VIII</b>													
1	<b>FaSPR08</b>	Sport	0	0	0	<b>0</b>	30	<b>30</b>		1			<b>1</b>