

**CURRICULUM**  
**Bachelor's degree program in INDUSTRIAL ENGINEERING in English**  
**as of 2021/2022 academic year**

ECTS Subject code T IEe No

- T – type of course: B for BEng, M for MEng;

- I - IV semester – fundamental subjects - professional field 5.13. General Engineering;

- BIEe – “Industrial Engineering” in English;

- 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	BpIEe01	Mathematics I	22	20	0	42	108	150	1				5
2	BpIEe02	Physics I	22	20	15	57	93	150	1				5
3	BpIEe03	Chemistry	22	0	15	37	83	120		1			4
4	BpIEe04	Mechanics I	22	15	0	37	83	120	1				4
5	BpIEe05	Applied Geometry and Engineering Graphics	15	0	30	45	75	120		1		1	4
6	BpIEe06	Computing I	15	15	22	52	68	120		1			4
7	BpIEe07	Introduction to Manufacturing and Industrial Practice I	0	0	0	0	30	30		1			1
8	BpIEe08	English Language	0	30	0	30	30	60		1			2
9	BpIEe09	Sports	0	0	0	0	30	30		1			1
<b>Total</b>			<b>118</b>	<b>100</b>	<b>82</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>30</b>
<b>SEMESTER II</b>													
10	BpIEe10	Mathematics II	22	15	0	37	83	120	1				4
11	BpIEe11	Physics II	22	15	12	49	71	120	1				4
12	BpIEe12	Mechanics II	22	15	0	37	53	90	1			1	3
13	BpIEe13	Computing II	15	0	12	27	63	90		1			3
14	BpIEe14	Electrical Engineering I	22	15	12	49	101	150		1			5
15	BpIEe15	Electronics I	22	0	12	34	86	120		1		1	4
16	BpIEe16	Materials Science	22	0	15	37	53	90		1			3
17	BpIEe17	English Language	0	30	0	30	30	60		1			2
18	BpIEe18	Introduction to Manufacturing and Industrial Practice II	0	0	0	0	30	30		1			1
19	BpIEe19	Sports	0	0	0	0	30	30		1			1
<b>Total</b>			<b>147</b>	<b>90</b>	<b>63</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>30</b>
<b>SEMESTER III</b>													
20	BpIEe20	Mathematics III	22	16	0	38	82	120	1				4
21	BpIEe21	Strength of Materials	22	16	15	53	97	150	1			1	5
22	BpIEe22	Electrical Engineering II	22	16	15	53	97	150	1			1	5
23	BpIEe23	Electronics II	24	0	21	45	75	120		1			4
24	BpIEe24	Computing III	16	0	21	37	83	120		1			4
25	BpIEe25	Economics	22	15	0	37	53	90		1			3
26	BpIEe26	Measurements and Instrumentation I	22	0	15	37	83	120		1			4
27	BpIEe27	Sports	0	0	0	0	30	30		1			1
<b>Total</b>			<b>150</b>	<b>63</b>	<b>87</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>30</b>

<b>SEMESTER IV</b>													
28	BpIEe28	Control Theory I	26	0	15	<b>41</b>	79	<b>120</b>		1		<b>4</b>	
29	BpIEe29	Fluid Mechanics	15	15	15	<b>45</b>	75	<b>120</b>	1			<b>4</b>	
30	BpIEe30	Principles of Mechanical Engineering Design	26	15	15	<b>56</b>	64	<b>120</b>	1			<b>4</b>	
31	BpIEe31	Computing IV	15	0	15	<b>30</b>	60	<b>90</b>		1		<b>3</b>	
32	BpIEe32	Measurements and Instrumentation II	15	0	30	<b>45</b>	75	<b>120</b>	1			<b>4</b>	
33	BpIEe33	Enterprise Management	26	16	0	<b>42</b>	78	<b>120</b>	1			<b>4</b>	
34	BpIEe34	Operations Research	26	15	0	<b>41</b>	79	<b>120</b>		1		<b>4</b>	
35	BpIEe35	Industrial Training	0	0	0	<b>0</b>	30	<b>30</b>		1		<b>1</b>	
36	BpIEe36	Principles of Mechanical Engineering Design - project	0	0	0	<b>0</b>	30	<b>30</b>			1	<b>1</b>	
37	BpIEe37	Sports	0	0	0	<b>0</b>	30	<b>30</b>		1		<b>1</b>	
<b>Total</b>			<b>149</b>	<b>61</b>	<b>90</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>30</b>

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			L	Tut.	Lab.	AT	SS	Total	E	CA	SP	SA	
<b>SEMESTER V</b>													
38	BpIEe38	Mathematics IV	22	16	0	<b>38</b>	82	<b>120</b>	1				<b>4</b>
39	BpIEe39	Control Theory II	15	18	15	<b>48</b>	102	<b>150</b>	1				<b>5</b>
40	BpIEe40	Materials Technology	26	0	15	<b>41</b>	79	<b>120</b>	1				<b>4</b>
41	BpIEe41	Computer Aided Design	22	0	15	<b>37</b>	83	<b>120</b>		1		1	<b>4</b>
42	BpIEe42	Industrial Manufacturing Systems I	22	18	0	<b>40</b>	80	<b>120</b>		1		1	<b>4</b>
43	BpIEe43	Production Operation Management I	22	18	0	<b>40</b>	80	<b>120</b>		1			<b>4</b>
44	BpIEe44	Measurements Systems	26	0	30	<b>56</b>	64	<b>120</b>	1				<b>4</b>
45	BpIEe45	Project of choice by BpIEe38, BpIEe39, BpIEe40, BpIEe43, BpIEe44	0	0	0	<b>0</b>	30	<b>30</b>			1		<b>1</b>
<b>Total</b>			<b>155</b>	<b>70</b>	<b>75</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>30</b>
<b>SEMESTER VI</b>													
46	BpIEe46	Industrial Manufacturing Systems II	24	15	15	<b>54</b>	96	<b>150</b>	1				<b>5</b>
47	BpIEe47	Thermodynamics and Heat	22	15	15	<b>52</b>	98	<b>150</b>	1				<b>5</b>
48	BpIEe48	Technical Safety	16	0	15	<b>31</b>	59	<b>90</b>		1			<b>3</b>
49	BpIEe49	Production Operation Management II	22	15	0	<b>37</b>	83	<b>120</b>	1				<b>4</b>
50	BpIEe50	Manufacturing Design I	22	0	30	<b>52</b>	68	<b>120</b>		1			<b>4</b>
51	BpIEe51	Human Resource Management	22	15	0	<b>37</b>	83	<b>120</b>		1			<b>4</b>
52	BpIEe52	Manufacturing Design I - project	0	0	0	<b>0</b>	30	<b>30</b>			1		<b>1</b>
53	BpIEe53	Optional Subject from list L1	22	0	15	<b>37</b>	83	<b>120</b>		1			<b>4</b>
<b>Total</b>			<b>150</b>	<b>60</b>	<b>90</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>30</b>
<b>SEMESTER VII</b>													
54	BpIEe54	Quality Control	26	15	15	<b>56</b>	94	<b>150</b>	1				<b>5</b>
55	BpIEe55	Control Engineering	26	0	15	<b>41</b>	79	<b>120</b>	1				<b>4</b>
56	BpIEe56	Systems Modelling and Simulation	26	0	15	<b>41</b>	79	<b>120</b>		1		1	<b>4</b>
57	BpIEe57	Manufacturing Design II	26	0	15	<b>41</b>	79	<b>120</b>	1				<b>4</b>
58	BpIEe58	Computer Integrated Manufacturing I	26	0	15	<b>41</b>	79	<b>120</b>		1			<b>4</b>
59	BpIEe59	Elements of Industrial Automation	26	0	15	<b>41</b>	79	<b>120</b>	1				<b>4</b>
60	BpIEe60	Manufacturing Design II - project	0	0	0	<b>0</b>	30	<b>30</b>			1		<b>1</b>
61	BpIEe61	Optional Subject from list L2	24	0	15	<b>39</b>	81	<b>120</b>		1			<b>4</b>
<b>Total</b>			<b>180</b>	<b>15</b>	<b>105</b>	<b>300</b>	<b>600</b>	<b>900</b>	<b>4</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>30</b>

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<b>SEMESTER VIII</b>													
62	BpIEe62	Computer Integrated Manufacturing II	20	0	15	35	55	90		1			3
63	BpIEe63	Environmental Production Engineering	20	0	15	35	55	90		1			3
64	BpIEe64	Manufacturing Strategies	20	20	0	40	80	120		1			4
65	BpIEe65	Financial Accounting	20	20	0	40	80	120		1			4
66	BpIEe66	Optional Subject List L3	15	0	10	25	65	90	1				3
67	BpIEe67	Optional Subject List L4	15	0	10	25	65	90	1				3
68	BpIEe68	Diploma project	0	0	0	0	300	300	Defense of diploma thesis			10	
<b>Total</b>			<b>110</b>	<b>40</b>	<b>50</b>	<b>200</b>	<b>700</b>	<b>900</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>30</b>

## LIST OF THE OPTIONAL SUBJECTS

<b>List 1</b>		<b>ECTS = 4</b>
1	Programming and use of industrial robots	<b>BpIEe53.1</b>
2	Industrial electronics and electric drives	<b>BpIEe53.2</b>
<b>List 2</b>		<b>ECTS = 4</b>
1	Introduction to SAP	<b>BpIEe61.1</b>
2	Multivariable control systems	<b>BpIEe61.2</b>
<b>List 3</b>		<b>ECTS = 3</b>
1	Control systems with microcontrollers	<b>BpIEe66.1</b>
2	Communication networks in systems automation	<b>BpIEe66.2</b>
<b>List 4</b>		<b>ECTS = 3</b>
1	Industrial applications of laser technology	<b>BpIEe67.1</b>
2	Manufacturing in Electronics Industry	<b>BpIEe67.2</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	FaBpIEe01	Bulgarian Language (for foreigners)	0	30	0	30	30	60		1				2
<b>SEMESTER II</b>														
1	FaBpIEe02	Bulgarian Language (for foreigners)	0	30	0	30	30	60		1				2
<b>SEMESTER V</b>														
1	FaBpIEe03	Sport	0	0	0	0	30	30		1				1
<b>SEMESTER VI</b>														
1	FaBpIEe04	Sport	0	0	0	0	30	30		1				1
<b>SEMESTER VII</b>														
1	FaBpIEe05	Sport	0	0	0	0	30	30		1				1
<b>SEMESTER VIII</b>														
1	FaBpIEe06	Sport	0	0	0	0	30	30		1				1

**Notes:** The content of the lists of elective and optional subjects is subject to updating before the beginning of the academic year by a decision of the Faculty Council.