



## CURRICULUM

Professional orientation: **Machine Engineering**

Program: **Computerized Manufacturing Technologies**

Professional qualification: **Mechanical Engineer**

Educational and qualifical degree: **Bachelor**

Form of study: **Full - Time**

Term of study: **4 years / 8 semesters**

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Mathematics, part 1	1				30	15		15	60	115	175	7
2	Engineering Graphics and Technical Drawing		1			30		30		60	90	150	6
3	Information Technologies and Systems		1			15		30		45	105	150	6
4	Material Science	1				30		30		60	90	150	6
5	English				1		45			45	45	90	3
6	Elective Subject				1						30	30	1
6a	Specialized Sport Activities, part 1				1						30	30	1
6b	Sport and Social Adaptation, part 1				1						30	30	1
7	Practical Training, part 1				1						30	30	1
<b>Total for the 1 semester:</b>		<b>2</b>	<b>2</b>		<b>3</b>	<b>105</b>	<b>60</b>	<b>90</b>	<b>15</b>	<b>270</b>	<b>505</b>	<b>775</b>	<b>30</b>
8	Mathematics, part 2	2				30	15		15	60	90	150	6
9	Introduction to the Speciality	2				15		30		45	90	135	5
10	Materials Technology	2				30		30		60	90	150	6
11	Applied Geometry and Technical Documentation		2			30		30		60	75	135	5
12	Technical Mechanics	2				30		15	15	60	90	150	6
13	Elective Subject				2						30	30	1
13a	Specialized Sport Activities, part 2				2						30	30	1
13b	Sport and Social Adaptation, part 2				2						30	30	1
14	Practical Training, part 2				2						30	30	1
<b>Total for the 2 semester:</b>		<b>4</b>	<b>1</b>		<b>2</b>	<b>135</b>	<b>15</b>	<b>105</b>	<b>30</b>	<b>285</b>	<b>495</b>	<b>780</b>	<b>30</b>
15	Industrial Management		3			30		15		45	90	135	5
16	Strength of Materials	3				30		15		45	105	150	6
17	Applied Computerized Engineering Calculations		3					45	15	60	90	150	5
18	Machine Elements	3				30		15		45	105	150	6
19	Fluid Mechanics	3				30		15		45	90	135	5
20	Basics of Computer Aided Design in Mechanical Engineering		3			15		30		45	90	135	5
21	Elective Subject				3						30	30	1
21a	Specialized Sport Activities, part 3				3						30	30	1
21b	Sports Management, part 1				3						30	30	1

No	Subject Name	Types of term control				Semester auditorium load					Unsupervised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Total for the 3 semester:</b>		<b>3</b>	<b>3</b>		<b>1</b>	<b>135</b>		<b>135</b>	<b>15</b>	<b>285</b>	<b>600</b>	<b>885</b>	<b>33</b>
22	Strength of Materials	4				30		30		60	90	150	6
23	Thermal Engineering	4				15		30		45	105	150	6
24	Theory of Mechanisms and Machines		4			30		15	15	60	90	150	6
25	Electrical Engineering and Electronics	4				15		30		45	90	135	5
26	Interchangeability and Technical Measurements		4			30		30		60	90	150	6
27	Elective Subject				4						30	30	1
27a	Specialized Sport Activities, part 4				4						30	30	1
27b	Sports Management, part 2				4						30	30	1
<b>Total for the 4 semester:</b>		<b>3</b>	<b>2</b>		<b>1</b>	<b>120</b>		<b>135</b>	<b>15</b>	<b>270</b>	<b>495</b>	<b>765</b>	<b>30</b>
28	Machine Elements, project			5					30	30	30	60	2
29	Cutting of Materials	5				30		15		45	105	150	6
30	Cutting Tools	5				15		30	15	60	90	150	6
31	Quality Management	5				30		30		60	90	150	6
32	Materials Selection for Engineering Design		5			30		30		60	90	150	6
33	3D Modelling		5			30		30		60	75	135	5
<b>Total for the 5 semester:</b>		<b>3</b>	<b>2</b>	<b>1</b>		<b>135</b>		<b>135</b>	<b>45</b>	<b>315</b>	<b>480</b>	<b>795</b>	<b>31</b>
34	Computer Systems for Mechanical Engineering		6			30		15	15	60	90	150	6
35	Machine Tools	6				30		15		45	60	105	4
36	Heat Treatment of Metals	6				30		15	15	60	90	150	6
37	Programming for CNC Machines	6				30		30		60	75	135	5
38	Manufacturing Technology, part 1	6				30		30		60	90	150	6
39	Reliability and Availability in Engineering Design		6			30		15		45	90	135	5
40	Specialized Practice				6						90	90	3
<b>Total for the 6 semester:</b>		<b>4</b>	<b>2</b>		<b>1</b>	<b>180</b>		<b>120</b>	<b>30</b>	<b>330</b>	<b>585</b>	<b>915</b>	<b>35</b>
41	Manufacturing Technology, part 2	7				30		30		60	90	150	6
42	Elective Subject			7					30	30	30	60	2
42a	Manufacturing Technology, project			7					30	30	30	60	2
42b	Cutting Tools, project			7					30	30	30	60	2
43	Elective Subject		7			30		30		60	90	150	6
43a	Design of Technology Equipment		7			30		30		60	90	150	6
43b	Manufacturing Engineering Processes Design		7			30		30		60	90	150	6
44	Programming for CIM and CNC	7				30		30		60	90	150	6
45	Elective Subject	7				15		15		30	75	105	4
45a	Manufacturing Process Management	7				15		15		30	75	105	4
45b	Optimal Design of Mechanical Elements	7				15		15		30	75	105	4
46	Process and Systems Risk Management	7				30		30		60	90	150	6
<b>Total for the 7 semester:</b>		<b>4</b>	<b>1</b>	<b>1</b>		<b>135</b>		<b>135</b>	<b>30</b>	<b>300</b>	<b>465</b>	<b>765</b>	<b>30</b>
47	Computer Integrated Technologies	8				30		30		60	90	150	6
48	Manufacturing Automation	8				30		15		45	105	150	6
49	Manufacturing Systems	8				30		30		60	90	150	6
50	Elective Subject			8					30	30	45	75	3
50a	Collaborative Product Development, project			8					30	30	45	75	3
50b	PDM Design, project			8					30	30	45	75	3
<b>Total for the 8 semester:</b>		<b>3</b>		<b>1</b>		<b>90</b>		<b>75</b>	<b>30</b>	<b>195</b>	<b>330</b>	<b>525</b>	<b>21</b>

No	Subject Name	Types of term control				Semester auditorium load					Unsuper vised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
<b>Total for all courses of education:</b>		<b>26</b>	<b>13</b>	<b>3</b>	<b>8</b>	<b>1035</b>	<b>75</b>	<b>930</b>	<b>210</b>	<b>2250</b>	<b>3955</b>	<b>6205</b>	<b>240</b>

### Facultative subjects

No	Subject Name	Types of term control				Semester auditorium load incl:					Unsuper-vised load	Total work hours	ECTS credits
		E	PA	CP	A	L	S	L	CP CPR	Total			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

Types of graduation	Semester	Unsupervised load	ECTS credits
Preparation of Diploma Thesis / Preparation for State Examination	8	300	10
Defence of Diploma Thesis / State Examination	8		

### Accepted from AU with

Protocol No 41 / 22.04.2019

Valid from the 2019 / 2020 academic year.

The weekly allocation of the classes is fixed according to the "Structure of the Learning Process" Academic Board adopted for the current academic year.

Head of Department TMTM:

/ Assoc. Prof. PhD Kirov K. /

Dean of Faculty FMET:

/ Assoc. Prof. PhD Antonov G. /