

**Curriculum of the Manufacturing and Industrial Engineering Program – BSc  
Accreditation 2025-2028**

**YEAR I**

Semester I			Hours/Week		
No.	M/E	Subject	L	U	ECTS
1	M	Mathematics I	3	3	7.0
2	M	Physics	2	2	5.5
3	M	Engineering Graphics	2	2	6.5
4	M	Informatics and Programming	2	2	6.0
5.1 5.2 5.3	M	Foreign Language (ENG, GER, FRA)	2	1	5.0
<b>ECTS / Semester</b>					<b>30</b>
Semester II					
6	M	Mathematica II	3	3	6.5
7	M	Technical Mechanics I	2	2	6.0
8	M	Mechanical materials	2	2	6.0
9	M	CAD and product models	2	2	6.0
10	M	Applicative software's	2	2	5.5
<b>ECTS / Semester</b>					<b>30</b>

*Explanation: The total number of credits (ECTS) accumulated for a year is 60 ECTS - credits. Out of the 10 compulsory subjects, a total of 60 ECTS is awarded, out of 0 elective subjects the student is obliged to choose 0 courses or 0 ECTS credits.*

**YEAR II**

Semester III			Hours/Week		
No.	M/E	Subject	L	U	ECTS
11	M	Machine Elements	2	2	6.5
12	M	Hydraulics and thermodynamics	2	2	6.5
13	M	Technical Mechanics II	2	2	6.0
14	M	Introduction to production theory and enterprise organisation	2	2	6.0
15.1 15.2 15.3	E	Foreign Language II (ENG, GER, FRE)	2	1	5.0
15.4	E	Management information system in industry	2	1	5.0
15.5	E	Foundries Technology	2	1	5.0
15.6	E	Engineering statistics	2	2	5.0
<b>ECTS / Semester</b>					<b>30</b>

*The student chooses one Elective course.*

Semester IV			Hours/Week		
No.	M/E	Subject	L	U	ECTS
16	M	Electrotechnics	2	2	5.5
17	M	Industrial Engineering	2	2	6.5
18	M	Theory of metal forming	2	2	7
19	M	Theory of cutting processes	2	2	6
20.1	E	Environmental Management	2	1	5.0
20.2	E	Tools and devices	2	1	5.0
20.3	E	Industrial Marketing	2	1	5.0
20.4	E	Composite materials	2	2	5.0
20.5	E	Programming with Matlab	2	2	5.0
<b>ECTS / Semester</b>					<b>30</b>

**Explanation:** The total number of credits (ECTS) accumulated for a year is 60 ECTS - credits. Out of the 8 compulsory subjects a total of 50 ECTS are awarded, out of elective subjects students is obliged to choose 2 subjects (1 semester III + 1 semester IV) or 10 ECTS credits.

After electing the elective course, it becomes a compulsory subject, the student will not be able to change the subject or the Professor.

### YEAR III

Semester V			Hours/Week			
No.	M/E	Subject	L	U	ECTS	
21	M	Manufacturing System Design	2	2	6.0	
22	M	Production management	2	2	5.0	
23	M	Rapid Prototyping	2	2	6.0	
24	M	Heat Treatment	2	2	5.0	
25.1	E	Machine Automation	2	2	4.0	
25.2	E	Joining of plastics	2	2	4.0	
25.3	E	Production Metrology	2	2	4.0	
25.4	E	CAD/CAM	2	2	4.0	
25.5	E	Testing of materials	2	2	4.0	
25.6	E	Technology of wood processing	2	2	4.0	
<b>ECTS / Semester</b>					<b>30</b>	
Semester VI						
26	M	Quality management	2	2	5.0	
27	M	Automatic control	2	2	5.0	
28	M	Hydraulics and pneumatics systems	2	2	5.0	
29	M	Welding and similar processes	2	2	5.0	
30.1	E	Terotechnology and Reliability Engineering	2	2	5.0	
30.2	E	Technical Logistics	2	2	5.0	
30.3	E	Polymer processing	2	2	5.0	
30.4	E	Automation of production	2	2	5.0	
30.5	E	Computer Control of Machining System	2	2	5.0	
	M	Professional internship				2.0
	M	Diploma thesis				3.0
<b>ECTS / Semester</b>					<b>30</b>	

**Explanation:** The total number of credits (ECTS) accumulated for a year is 60 ECTS - credits. Out of the 8 compulsory subjects, a total of 42 ECTS is awarded, out of 11 elective students the student is obliged to choose 3 (2 semester V + 1 semester VI) or 13 ECTS credits. The Professional Practice with 2 ECTS and the Diploma Thesis with 3 ECTS.

After electing the elective course, it becomes a compulsory subject, the student will not be able to change the subject or the Professor.