

CURRICULUM - 1st YEAR
2023-2024

UNIVERSITY			George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureş								PROGRAMME OF STUDY								Machine building technology																	
FACULTY			Faculty of Engineering and Information Technologies								TITLE AWARDED								Graduate engineer																	
FIELD OF STUDY			Industrial engineering								OFFICIAL LENGHT OF THE PROGRAMME OF STUDY								4 YEARS																	
LEVEL OF QUALIFICATION			6								NUMBER OF ECTS/SECT CREDITS								60																	
No.	Educational activities Courses		Code/Type of courses		1st semester												2nd semester												Total academic year							
					1st module (hours/week)						2nd module (hours/week)						3rd module (hours/week)						4th module (hours/week)													
					Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp					Pr	Stg	ECTS	Verif form
	Compulsory courses																																			
1	Mathematical analysis		TCM101	DF	4	4				5	E																					28	28	69	5	
2	Applied Informatics		TCM102	DF	4		4			3	C																					28	28	19	3	
3	Materials science and engineering I		TCM103	DD	4		2			5	E																					28	14	83	5	
4	English Language 1		TCM104	DC		4				2	C																					0	28	22	2	
5	Chemistry		TCM105	DF								4		2			5	E														28	14	83	5	
6	Descriptive Geometry		TCM106	DF								4	2				3	C														28	14	33	3	
7	Numerical Methods		TCM107	DF								2		4			4	E														14	28	58	4	
8	General Economy		TCM108	DC								4	2				3	E														28	14	33	3	
9	Physical Education I		TCM109	DC										2			1	A/R														0	14	11	1	
10	Linear algebra, analytical and differential geometry		TCM110	DF															4	4				5	E							28	28	69	5	
11	Technical drawing and infographics I		TCM111	DF															4		4			5	C							28	28	69	5	
12	Technical drawing and infographics I		TCM112	DF															4	2	2			4	E							28	28	44	4	
13	Physical Education II		TCM113	DC																	2			1	A/R							0	14	11	1	
14	Technology of Materials (1)		TCM114	DD																						4		4			5	E	28	28	69	5
15	Materials science and engineering II		TCM115	DD																						4		2			4	E	28	14	58	4
16	Mechanics I		TCM116	DD																						4	2	2			5	C	28	28	69	5
17	English Language 2		TCM117	DC																							4				2	C	0	28	22	2
TOTAL			8DF, 5DC, 4DD		12	8	6	0	0	15	2E/ 2C	14	4	8	0	0	16	3E/ 2C	12	6	8	0	60	15	2E/ 2C	12	6	8	0	0	16	2E/ 2C	350	378	822	62
Total hours/ECTS					26				26				86						26				728													

Formative categories **Activities**
DF Fundamental Course **c** Courses
DD Technical Course **s** Seminars
DS Specialized Course **lp** Practical exercises
DC Complementary Course **p** Project

**CURRICULUM 2nd YEAR
2023-2024**

UNIVERSITY			George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș										PROGRAMME OF STUDY						Machine building technology																					
FACULTY			Faculty of Engineering and Information Technologies										TITLE AWARDED						Graduate engineer																					
FIELD OF STUDY			Industrial engineering										OFFICIAL LENGHT OF THE PROGRAMME OF STUDY						4 YEARS																					
LEVEL OF QUALIFICATION			6										NUMBER OF ECTS/SECT CREDITS						60																					
Nr.	Educational activities Courses	Code/Type of courses		1th semester												2nd semester												Total academic year												
				1th module (hours/week)						2nd module (hours/week)						3rd module (hours/week)						4th module (hours/week)																		
				Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp					Pr	Stg	ECTS	Verif form	C	S,L,P,Stg	Indiv. Std.	ECTS	
	Compulsory courses																																							
1	Technical drawing and infographics II	TCM201	DF	2		4			4	C																							14	28	58	4				
2	Mechanics (2)	TCM202	DD	4	2				4	E																							28	14	58	4				
3	Mechanisms (1)	TCM203	DD	4		4			4	E																							28	28	44	4				
4	Strength of Materials (1)	TCM204	DD								4	4	2			5	E																28	42	55	5				
5	English Language 3	TCM205	DC									4				2	C																0	28	22	2				
6	Physical Education 3	TCM206	DC										2			1	A/R																0	14	11	1				
7	Basics of industrial engineering	TCM207	DD								4	2				4	C																28	14	58	4				
8	CAD Basics	TCM208	DD															2		4			4	C									14	28	58	4				
9	Strength of Materials (2)	TCM209	DD															2	4				4	E									14	28	58	4				
10	Technical Communcation (English Language)	TCM210	DC																2				1	C									0	14	11	1				
11	erances and Dimensional Control	TCM211	DD															4	2	4			4	E									28	42	30	4				
12	Physical Education 4	TCM212	DC																	2			1	A/R									0	14	11	1				
13	Ethics and academic integrity	TCM213	DC																														14	0	11	1				
14	Machine Elements (1)	TCM214	DD																														42	28	55	5				
15	Computer programming and programming languag	TCM215	DF																							4		4					28	28	44	4				
16	Practical training	TCM216	DD	90																															4	C	0	90	10	4
	Optional courses																																							
17	Heat Engineering and Heat Engines	TCM217/ TCM218	DD	4		2			4	E																								28	14	58	4			
18	Electronics and Automation	TCM219/ TCM220	DD								2		2			3	E																	14	14	47	3			
19	Fluid mechanics and hydraulic equipments	TCM221/ TCM222	DD																							4		2					28	14	33	3				
TOTAL		2DF, 5DC, 12DD		14	2	10	0	0		16	3E/ 1C	10	10	6	0	0		15	2E/ 3C	8	8	10	0	60		14	2E/ 3C	16	0	8	2	0		17	2E/ 3C	336	482	732		
TOTAL HOURS/ECTS				26						16	1C	26						15	3C	86						14		26						17	3C	818			62	

Formative categories		Activities	
DF	Foundamental Course	c	Courses
DD	Technical Course	s	Seminars
DS	Specialized Course	lp	Practical exercises
DC	Complementary Course	p	Project

**CURRICULUM 3rd YEAR
2023-2024**

UNIVERSITY				George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș								PROGRAMME OF STUDY								Machine building technology																	
FACULTY				Faculty of Engineering and Information Technologies								TITLE AWARDED								Graduate engineer																	
FIELD OF STUDY				Industrial engineering								OFFICIAL LENGHT OF THE PROGRAMME OF STUDY								4 YEARS																	
LEVEL OF QUALIFICATION				6								NUMBER OF ECTS/SECT CREDITS								60																	
No.	Educational activities Courses			Code/Type of courses		1th semester										2nd semester										Total academic year											
						1th module (hours/week)					2nd module (hours/week)					3rd module (hours/week)					4th module (hours/week)																
						Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS					Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form
						C	S,L,P,Stg	Indiv. Std.	ECTS																												
Compulsory courses																																					
1	Heat Treatments			TCM301	DD	4		2			4	E																						28	14	58	4
2	Fundamentals of surface generation on machine to			TCM302	DD	4		2			4	C																						28	14	58	4
3	Machine Elements (2)			TCM303	DD	4		4			4	E																						28	28	44	4
4	Project. Machine elements II			TCM304	DD				2		1	C																						0	14	11	1
5	Cold Pressing Technology			TCM305	DS									4		4				4	E													28	28	44	4
6	Probability theory and mathematical statistics			TCM306	DF									4	2				3	E														28	14	33	3
7	Industrial Design			TCM307	DD									4			2		4	C														28	14	58	4
8	Hydro-pneumatic actuation			TCM308	DD									4	2				4	C														28	14	58	4
9	Cold Pressing Technology			TCM309	DS																	4		2	2		4	E						28	28	44	4
10	Tehnologia construcțiilor de mașini I			TCM310	DS																4		2			4	E							28	14	58	4
11	Machine-Building Technology (1)			TCM311	DD																4		2			3	E							28	14	33	3
13	Scule așchietoare			TCM313	DD																4	2	2			3	E							28	28	19	3
12	Project. Machine manufacturing technology I			TCM312	DS																								2		1	C	0	14	11	1	
14	Machine tools			TCM314	DD																					4		4			5	E	28	28	69	5	
15	NC machine tools			TCM315	DD																				4		4			4	E	28	28	44	4		
16	On-site training			TCM316	DS	90																										4	C	0	90	10	4
Optional courses																																					
17	Finite element method			TCM317/ TCM318	DD	2		2			2	C																					14	14	22	2	
18	Electronics and Automation			TCM319/ TCM320	DD																				4		2			2	C	28	14	8	2		
TOTAL				1DF, 12DD, 5DS		14	0	10	2	0	15	2E/ 3C	16	4	4	2	0	15	2E/ 2C	16	2	8	2	0	14	4E/ 0C	12	0	10	2	0	16	2E/ 3C	406	412	682	60
TOTAL HOURS/ECTS						26				26				28					24				818														

Formative categories		Activities	
DF	Foundamental Course	c	Courses
DD	Technical Course	s	Seminars
DS	Specialized Course	lp	Practical exercises
DC	Complementary Course	p	Project

CURRICULUM 4th YEAR 2023-2024																																			
UNIVERSITY		George Emil Palade University of Medicine, Pharmacy, Science, and Technology of Târgu Mureș								PROGRAMME OF STUDY								Machine bulging technology																	
FACULTY		Faculty of Engineering and Information Technologies								TITLE AWARDED								Graduate engineer																	
FIELD OF STUDY		Industrial engineering								OFFICIAL LENGHT OF THE PROGRAMME OF STUDY								4 YEARS																	
LEVEL OF QUALIFICATION		6								NUMBER OF ECTS/SECT CREDITS								60																	
No.	Educational activities Courses	Code/Type of courses		1th semester												2nd semester												Total academic year							
				1th module (hours/week)						2nd module (hours/week)						3rd module (hours/week)						4th module (hours/week)													
				Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp	Pr	Stg	ECTS	Verif form	Cours	Sem	Lp					Pr	Stg	ECTS	Verif form
				C	S,L,P,Stg	Indiv. Std	ECTS																												
	Compulsory courses																																		
1	Technological devices 2	TCM401	DD	4		2	4		4	E																					28	42	30	4	
2	Servomechanisms, transducers, sensors	TCM402	DS	4		2			4	E																					28	14	58	4	
3	Machine Building Technology II	TCM403	DS	4	4	2			5	E																					28	42	55	5	
4	Project. Machine Building Technology II	TCM404	DS											2		3	C														0	14	61	3	
5	Quality Management	TCM405	DD								4	4				5	E														28	28	69	5	
6	Plastic and composite parts manufacturing I	TCM406	DS								4	4				5	E														28	28	69	5	
7	Risk management	TCM407	DS								4		4			4	C														28	28	44	4	
8	Ecology and environment protection	TCM408	DD															4	2				4	E							28	14	58	4	
9	Unconventional tehnologies	TCM409	DS															4		2			4	E							28	14	58	4	
10	Manufacturing technology optimization	TCM410	DS																					4	4					4	E	28	28	44	4
11	Diploma project practical training	TCM411	DS																								70	4	C	0	70	30	4		
12	Diploma project drafting	TCM412	DS																							8			4	C	0	56	44	4	
	Discipline optionale																																		
13	Functional design	TCM413/ TCM414	DS															2			4		3	E							14	28	33	3	
14	Production and operation management	TCM415/ TCM416	DS																					4	4		2		4	C	28	42	30	4	
15	Logistics	TCM417/ TCM418	DS															4	4				3	E							28	28	19	3	
TOTAL		3DD, 12DS		12	4	6	4	0	13	3E	12	8	4	2	0	17	2E/ 2C	14	6	2	4	0	14	4E/ 3C	8	8	8	2	0	16	1E/ 3C	322	476	702	60
TOTAL HOURS/ECTS				26							26							26							26							798			

Formative categories
DF Fundamental Course
DD Technical Course
DS Specialized Course
DC Complementary Course

Activities
c Courses
s Seminars
lp Practical exercises
p Project