

**CURRICULUM – 1st year
2022-2023**

UNIVERSITY	„GEORGE EMIL PALADE” UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE AND TECHNOLOGY OF TÂRGU MUREȘ	SPECIALISATION	TECHNOLOGICAL CHEMISTRY
FACULTY	FACULTY OF PHARMACY	TITLE	CHEMICAL TECHNOLOGIST
FIELD OF STUDY	CHEMISTRY	DURATION	3 YEARS
LEVEL OF REGULATION	GENERAL	ECTS	60 (MANDATORY - OPTIONAL)

No.	Educational activities Disciplines	Code/ Type of disciplines */**	1 st Semester								2 nd Semester								Total per academic year			
			1 st Module (7 weeks)				2 nd Module (7 weeks)				3 rd Module (7 weeks)				4 th Module (7 weeks)				Lect.	PA/ Sem.	Indiv. study	ECTS
			Lect.	PA/ Sem.	ECTS	Type of Assess- ment	Lect.	PA/ Sem.	ECTS	Type of Assess- ment	Lect.	PA/ Sem.	ECTS	Type of Assess- ment	Lect.	PA/ Sem.	ECTS	Type of Assess- ment				
1.	General chemistry	CHT 101/ FD/MD	4	4	6	E	-	-	-	-	-	-	-	-	-	-	-	-	28	28	80	6
2.	General physics	CHT 102/ CD/MD	4	4	4	V	-	-	-	-	-	-	-	-	-	-	-	-	28	28	30	4
3.	Mathematics and informatics	CHT 103/ CD/MD	6	4	5	V	-	-	-	-	-	-	-	-	-	-	-	-	42	28	37,5	5
4.	Inorganic chemistry	CHT 104/ FD/MD	-	-	-	-	4	4	6	E	-	-	-	-	-	-	-	-	28	28	80	6
5.	Structure and properties of molecules	CHT 105/ FD/MD	-	-	-	-	4	4	4	E	-	-	-	-	-	-	-	-	28	28	30	4
6.	Fundamentals of organic chemistry	CHT 106/ FD/MD	-	-	-	-	4	2	3	V	-	-	-	-	-	-	-	-	28	14	22,5	3
7.	Organic chemistry I - compounds with simple functions	CHT 107/ FD/MD	-	-	-	-	-	-	-	-	4	4	6	E	-	-	-	-	28	28	80	6
8.	Thermodynamics and electrochemistry	CHT 108/ FD/MD	-	-	-	-	-	-	-	-	4	4	5	E	-	-	-	-	28	28	55	5
9.	Chemical kinetics	CHT 109/ FD/MD	-	-	-	-	-	-	-	-	4	4	4	E	-	-	-	-	28	28	30	4
10.	Organic Chemistry II - multifunctional and heterocyclic organic compounds	CHT 110/ FD/MD	-	-	-	-	-	-	-	-	-	-	-	-	4	4	6	E	28	28	80	6
11.	Qualitative analytical chemistry	CHT 111/ FD/MD	-	-	-	-	-	-	-	-	-	-	-	-	4	4	6	E	28	28	80	6
12.	Physical education	CHT 112/ CD/MD	-	4	2	-	-	-	-	-	-	-	-	-	-	4	3	V	-	56	-	5
13.	Modern languages	CHT 113/ CD/MD	-	-	-	-	-	-/4	2	-	-	-/4	3	V	-	-	-	-	-	56	55	5
GRAND TOTAL			14	16	17	1E; 2V	12	10/4	15	2E; 1V	12	12/4	18	3E; 1V	8	12	15	2E; 1V	322	350/56	660	60+5
TOTAL HOURS/CREDITS			28 hours/ week; 30+2 ECTS								24 hours/ week; 30+3 ECTS								728			

Ratio theory / practical activity – 1 : 1,26

***FD**– fundamental discipline; **SD** – specialty discipline; **DD** – domain discipline; **CD** – complementary discipline- **9 FD + 4 CD**

****MD** – mandatory discipline; **OD** – optional discipline

E – exam; **V** – verification; **Lect.**- Lecture; **P** – project presentation; **PA** – practical activities, **Sem.** – seminar, **Ind. study** – independent study, **ECTS** – Transferable European Credits

RECTOR,
Prof. univ. dr. Leonard Azamfirei

VICERECTOR,
Prof. univ. dr. Klara Brînzaniuc
Prof. univ. dr. Cristina-Oana Mărginean

DEAN,
Prof. univ. dr. Daniela-Lucia Muntean

CHIEF SECRETARY,
Ec. Simona Biriș

**CURRICULUM – 2nd year
2023-2024**

UNIVERSITY	„GEORGE EMIL PALADE” UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE AND TECHNOLOGY OF TÂRGU MUREŞ	SPECIALISATION	TECHNOLOGICAL CHEMISTRY
FACULTY	FACULTY OF PHARMACY	TITLE	CHEMICAL TECHNOLOGIST
FIELD OF STUDY	CHEMISTRY	DURATION	3 YEARS
LEVEL OF REGULATION	GENERAL	ECTS	60 (MANDATORY - OPTIONAL)

No	Educational activities Disciplines	Code/ Type of disciplines */**	1 st Semester								2 nd Semester								Total per academic year			
			1 st Module (7 weeks)				2 nd Module (7 weeks)				3 rd Module (7 weeks)				4 th Module (7 weeks)				Lect.	PA/ Sem.	Indiv. study	ECTS
			Lect.	PA/ Sem.	ECTS	Type of Assessment	Lect.	PA/ Sem.	ECTS	Type of Assessment	Lect.	PA/ Sem.	ECTS	Type of Assessment	Lect.	PA/ Sem.	ECTS	Type of Assessment				
1.	Physico-chemical bases of chemical technology	CHT201/ FD/MD	4	4	6	E	-	-	-	-	-	-	-	-	-	-	-	-	28	28	80	6
2.	Bases of chemical technology	CHT202/ SD/MD	-	-	-	-	4	6	7	E	-	-	-	-	-	-	-	-	28	42	87,5	7
3.	Quantitative analytical chemistry	CHT203/ FD/MD	-	-	-	-	4	6	7	E	-	-	-	-	-	-	-	-	28	42	87,5	7
4.	Biochemistry	CHT204/ CD/MD	-	-	-	-	4	6	7	E	-	-	-	-	-	-	-	-	42	28	55	6
5.	General biotechnology	CHT205/ SD/MD	-	-	-	-	-	-	-	-	4	6	6	E	-	-	-	-	28	42	30	6
6.	Instrumental analysis	CHT206/ FD/MD	-	-	-	-	-	-	-	-	4	4	5	E	-	-	-	-	28	28	70	5
7.	Organic chemistry technology	CHT207/ SD/MD	-	-	-	-	-	-	-	-	-	-	-	-	4	6	7	E	28	42	80	7
8.	Equipments for chemical industry	CHT208/ SD/MD													4	4	4	E	28	28		4
9.	Optional pack 1	CHT.2.P1/ CD/OD	4	4	4	C	-	-	-	-	-	-	-	-	-	-	-	-	28	28	30	4
10.	Optional pack 2	CHT.2.P2/ SD/OD	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	C	28	28	30	4
11.	Practical abilities (4 weeks) 30 hours (6 hours x 5 days)/week	CHT209/ SD/MD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	C	-	120	-	4
GRAND TOTAL			12	12	16	2E; 1V	10	10	14	2E; -V	8	8	9	2E; -V	14	14	21	2E; 2V	308	428	630	60
TOTAL HOURS/CREDITS			22 hours/ week; 30 ECTS								22 hours/ week.; 30 ECTS								736			

Ratio theory / practical activity – 1 : 1 (calculated without specialized practice)

***FD**– fundamental discipline; **SD** – specialty discipline; **DD** – domain discipline; **CD** – complementary discipline - **3 FD + 6 SD + 1 DC**

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**CURRICULUM – 3rd year
2024-2025**

UNIVERSITY	„GEORGE EMIL PALADE” UNIVERSITY OF MEDICINE, PHARMACY, SCIENCE AND TECHNOLOGY OF TÂRGU MUREŞ	SPECIALISATION	TECHNOLOGICAL CHEMISTRY
FACULTY	FACULTY OF PHARMACY	TITLE	CHEMICAL TECHNOLOGIST
FIELD OF STUDY	CHEMISTRY	DURATION	3 YEARS
LEVEL OF REGULATION	GENERAL	ECTS	60 (MANDATORY - OPTIONAL)

No	Educational activities Disciplines	Code/ Type of disciplines */**	1 st Semester								2 nd Semester								Total per academic year			
			1 st Module (7 weeks)				2 nd Module (7 weeks)				3 rd Module (7 weeks)				4 th Module (7 weeks)				Lect.	PA/ Sem.	Indiv. study	ECTS
			Lect.	PA/ Sem.	ECTS	Type of Assess ment	Lect.	PA/ Sem.	ECTS	Type of Assess ment	Lect.	PA/ Sem.	ECTS	Type of Assess ment	Lect.	PA/ Sem.	ECTS	Type of Assess ment				
1.	Industrial organic chemistry	CHT301/ SD/MD	4	6	7	E	-	-	-	-	-	-	-	-	-	-	-	-	28	42	70	7
2.	Chemical processes control	CHT302/ SD/MD	-	-	-	-	4	6	6	E	-	-	-	-	-	-	-	-	28	42	70	6
3.	Green chemistry and sustainability in chemical industry	CHT303/ SD/MD	-	-	-	-	4	4	5	E	-	-	-	-	-	-	-	-	28	28	65	5
4.	Chemistry of chemical fertilizers	CHT304/ SD/MD	-	-	-	-	-	-	-	-	4	6	6	E	-	-	-	-	28	42	45	6
5.	Quality management in chemical industry	CHT305/ SD/MD	-	-	-	-	-	-	-	-	-	-	-	-	4	-/2	6	E	28	14	80	6
6.	Elaboration of the bachelor's thesis	CHT306/ SD/MD	-	-	-	-	-	-	-	-	-	6	-	-	-	6	6	P	0	56	-	6
7.	Optional pack 1	CHT.3.P1/ CD/OD	4	-/4	6	V	-	-	-	-	-	-	-	-	-	-	-	-	28	28	80	6
8.	Optional pack 2	CHT.3.P2/ SD/OD	-	-	-	-	4	4	6	E	-	-	-	-	-	-	-	-	28	28	80	6
9.	Optional pack 3	CHT.3.P3/ SD/OD	-	-	-	-	-	-	-	-	4	4	6	E	-	-	-	-	28	28	80	6
10.	Optional pack 4	CHT.3.P4/ SD/OD	-	-	-	-	-	-	-	-	-	-	-	-	4	4	6	E	28	28	80	6
GRAND TOTAL			10	10	13	2E; -V	12	10/2	17	2E; 1V	14	18	18	2E; 1V	4	8	12	1E; 1P	280	322/14	650	60
TOTAL HOURS/CREDITS			22 hours/week; 30 ECTS								22 hours/week; 30 ECTS								616			

Ratio theory / practical activity – 1 : 1 (calculated without specialized practice)

***FD**– fundamental discipline; **SD** – specialty discipline; **DD** – domain discipline; **CD** – complementary discipline - **3 DF + 7 DS + 1 DC**

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OPTIONAL DISCIPLINES PACKAGES

2 nd year of study, Academic year 2022-2023	3 rd year of study, Academic year 2023-2024
Pack 1 – Code: CHT.2.P1	Pack 1 – Code: CHT.3.P1
1. Pollution prevention and environmental protection – Code: CHT.2.P1.1	1. Professional ethics and intellectual property – Code: CHT.3.P1.1
2. Water treatment and purification – Code: CHT.2.P1.2	2. Scientific and professional writing and communication – Code: CHT.3.P1.2
Pack 2 – Code: CHT.2.P2	Pack 2– Code: CHT.3.P2
1. Chemistry and technology of polymeric materials– Code: CHT.2.P2.1	1. Computer Aided Graphics – Code: CHT.3.P2.1
2. Materials science and advanced materials– Code: CHT.2.P2.2	2. Artificial intelligence with application in chemistry – Code: CHT.3.P2.2
	Pack 3 – Code: CHT.3.P3
	1. Natural compounds – Code: CHT.3.P3.1
	2. Biosynthetic compounds – Code: CHT.3.P3.2
	Pack 4 – Code: CHT.3.P4
	1. Pharmaceutical technologies – Code: CHT.3.P4.1
	2. Bioinorganic chemistry – Code: CHT.3.P4.2

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