

UNIVERSITY OF ORADEA
FACULTY OF INFORMATICS AND SCIENCES
Cycle's Master Degree
 Master's Degree Program: **APPLIED AND STRUCTURAL CHEMISTRY**
 Fundamental Field: **MATHEMATICS AND NATURAL SCIENCES**
 Master's Field: **CHEMISTRY**
 Secondary Master Field:
 Master Type:
 Duration of studies / no. of credits: **4 semestre/120 credits**
 Type of education: **Full-time learning (IF)**

Valid from academic year
 2024-2025
 Beginning with 1st year of study

CURRICULUM **
Year of study I

Code	Disciplines*	Type	Sem. I [hours / week]				Total of hours / sem.	Type of Exami- nation	Cre- dits	IS [hours / sem.]	Condi- tioning
			C	S	L	P					
	OBLIGATORII IMPUSE										
STII-0239	Inorganic Compounds Reactivity and Structure	THD	2	1	-	-	42	Cv	7	133	
STII-0780	Fundamental processes in organic synthesis	AKD	2	1	-	-	42	Ex	7	133	
STII-0658	Kinetics of complex reactions	SYD	2	1	1	-	56	Ex	7	119	
STII-0781	High Performance Chromatography Techniques	AKD	2	-	2	-	56	Ex	7	119	
STII-0766	Ethics and integrity in scientific research		1	-	-	-	14	Cv	2	36	
	TOTAL		9	3	3	-	210		30	540	

Code	Disciplines*	Type	Sem. II [hours / week]				Total of hours / sem.	Type of Exami- nation	Cre- dits	IS [hours / sem.]	Condi- tioning
			C	S	L	P					
	OBLIGATORII IMPUSE										
STII-0221	Technological chemistry	THD	2	-	1	-	42	Ex	6	108	
STII-0250	Enzyme Kinetic	THD	2	-	1	-	42	Ex	7	133	
STII-0247	Biocatalyst	SYD	2	-	2	-	56	Ex	7	119	
STII-0236	Spectral methods of analysis	SYD	2	-	2	-	56	Ex	7	119	
STII-0416	Practice	THD	-	-	-	-	60	Cv	3	15	
	TOTAL		8	-	6	-	256		30	494	

Legend: C - Course; S - Seminar; L - Practical (laboratory); P - Project; IS - Individual Study;
 THD - Thoroughgoing Disciplines; SYD - Synthesis Disciplines; AKD - Advanced Knowledge Disciplines; UO - University Choice;
 Type of Examination - Verification Form, Ex. - examination; Cv. - Colloquium, Vp. - Continuous Assessment, Pr - Project; A/R- Passed/Failed; Credits - number of ECTS credits; IS - Individual study.

Head of department ,

RECTOR,
 Professor Dr. BUNGĂU Constantin

DEAN,
 Professor Dr. MACOCIAN Eugen-Victor

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Year of study II

Code	Disciplines*	Type	Sem. III [hours / week]				Total of hours / sem.	Type of Exami- nation	Cre- dits	IS [hours / sem.]	Condi- tioning
			C	S	L	P					
	OBLIGATORII IMPUSE										
STII-0228	Inorganic technical compounds	THD	2	-	1	-	42	Ex	7	133	
STII-0229	Organic technical compounds	THD	2	-	1	-	42	Ex	7	133	
STII-0418	Environmental depollution techniques	SYD	2	-	2	-	56	Ex	8	144	
STII-0368	Research practical period I	SYD	-	-	4	-	56	Cv	8	144	
	TOTAL		6	-	8	-	196		30	554	

Code	Disciplines*	Type	Sem. IV [hours / week]				Total of hours / sem.	Type of Exami- nation	Cre- dits	IS [hours / sem.]	Condi- tioning
			C	S	L	P					
	OBLIGATORII IMPUSE										
STII-0782	Corrosion and corrosion protection	AKD	2	-	1	-	36	Ex	6	114	
STII-0201	Trace chemical analysis	THD	2	-	1	-	36	Ex	6	114	
STII-0369	Research practical period II	SYD	-	-	2	-	24	Cv	5	101	
STII-0637	Preparing the dissertation	SYD	-	-	2	-	24	A/R	5	101	
	TOTAL		4	-	6	-	120		22	430	
	OBLIGATORII OPȚIONALE										
	PACHET 1										
STII-0252	Experimental Data presentation and processing(O)	SYD	1	-	1	-	24	Ex	4	76	
STII-0245	Control and analysis methods evaluation validation	SYD	1	-	1	-	24	Ex	4	76	
	PACHET 2										
STII-0230	Quality control	SYD	1	-	1	-	24	Cv	4	76	
STII-0237	Lab Accreditation	SYD	1	-	1	-	24	Cv	4	76	
	TOTAL		2	-	2	-	48		8	152	

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VIII. DISTRIBUTION OF CREDITS ACCORDING TO COMPETENCES (TABLES NRQHE /ARACIS - Grid 1 *)

No.	Discipline**	Sem.	Number of credits	Professional Competences						Transversal Competences		
				C1	C2	C3	C4	C5	C6	CT1	CT2	CT3
1.	Structura și reactivitatea compușilor anorganici	I	7	2	1	1	1			1	1	
2.	Procese fundamentale în sinteza organică	I	7	2	1		1			1	1	1
3.	Cinetica reacțiilor complexe	I	7	2		1	1			1	1	1
4.	Tehnici cromatografice de înaltă performanță	I	7	1	1	1	1			1	1	1
5.	Etică și integritate în cercetarea științifică	I	2						1	1		
6.	Chimie tehnologică	II	6	1	1	1	1			1	1	
7.	Cinetică enzimatică	II	7	1	2	1	1			1	1	
8.	Biocatalizatori	II	7	1	1	1	1			1	1	1
9.	Metode spectrale de analiză	II	7	2	1	1	1				1	1
10.	Practică de specialitate	II	3		1	1				1		
11.	Compuși tehnici anorganici	III	7	2	1	1	1			1		1
12.	Compuși tehnici organici	III	7	1	1	1	1			1	1	1
13.	Tehnici de depoluare a mediului	III	8	1	1	1	1			2	1	1
14.	Practică de cercetare I	III	8	2	1	2	1				1	1
15.	Coroziune și protecție anticorozivă	IV	6	1	1	1	1			1	1	
16.	Analiză chimică în urme	IV	6	1	1	1	1			1		1
17.	Practică de cercetare II	IV	5	1		1	1			1		1
18.	Elaborarea disertației	IV	5	1	1	1				1		1
19.	Prezentarea și prelucrarea datelor experimentale(o)	IV	4			1	1			1		1
20.	Validarea metodelor de analiză și control	IV	4	1	1	1	1			1		
21.	Controlul calității	IV	4	1	1	1				1		
22.	Norme de acreditare a laboratoarelor de analiză	IV	4	1	1	1				1		

Legendă: C1 ÷ C5 sau C6 - Competențe profesionale; CT1 ÷ CT3 - Competențe transversale

* Se va utiliza Grila 1 (G1) care prezintă variantele: G1L și G1M corepunzătoare ciclurilor de studii de licență și masterat, în conformitate cu Ordinul MECS nr. 5703 / 18.10.2011.

** Se vor trece toate disciplinele din Planul de Învățământ