

CURRICULUM

“AL. I. CUZA” UNIVERSITY OF IASI

FACULTY OF CHEMISTRY

UNDERGRADUATE STUDIES: *CHEMISTRY*

SPECIALIZATION: *TECHNOLOGICAL BIOCHEMISTRY*

Duration: 3 years

Structure of the academic year (in weeks)

	Didactic activities		Examinations		Holidays		
	I st sem.	II nd sem	I st sem.	II nd sem	Dec-Jan	Feb	Summer
I st year	14	14	2	2	2	2	14
II nd year	14	14	2	2	2	2	14
III rd year	14	14	2	2	2	2	-

The disciplines contained in the curriculum

Ist YEAR

No.			<i>Course name</i>	I st Semester				II nd Semester				Evaluation form	
				C	S	L	ECTS credits	C	S	L	ECTS credits		
1.	M_1101	M	Mathematics (Mathematical analysis; Linear algebra and differential equations)	4	3		5					E	
2.	P_1101; P_1202	Ph	Physics (sem. I – Mechanics. Molecular physics; sem. II – Waves (electric, optical))	2		1	5	2		1	5	E	E
3.	CN1101	CG	Fundamentals of chemistry	2		4,5***	5					E	
4.	CN1102	CA	Fundamentals of inorganic chemistry	2		3	5					E	
5.	CF1101	CF	Communication techniques and programming languages	1		1	5					C	
6.	L_1101; L_1202	L	Modern languages (optional)	1	0,5		5	1	0,5		5	C	C
7.	CO1201	CO	Basic organic chemistry					1,5		3	5		E
8.	CN1203	CA	Nonmetal chemistry					2		2	5		E
9.	CF1202	CF	Chemical thermodynamics					3		3	5		E
10.	CA1201	Ana.	Fundamentals of analytical chemistry (practical abilities)					3		3	5		E
Hours per week / ECTS credits				12	3,5	9,5	30	12,5	0,5	12	30		
				25				25					

Elective courses

1.	SP1101; SP1202		<i>Physical education</i>			1	5			1	5	C	C
2.	CF1103	CF	<i>Computer use by chemistry (practical abilities)</i>	1		1	5					V.P.	
3.	M_1102	M	Complemente de matematici		1		5					V.P.	
4.	CA1202	Ana.	<i>Practical abilities in analytical chemistry</i>							1	5		V.P.
5.	L_1103; L_1204	L	<i>Modern languages</i>	1	0,5		5	1	0,5		5	C	C
Hours per week / ECTS credits				2	1,5	2	20	1	0,5	2	15		
				5,5				3,5					

IInd YEAR

No.			Course name	I st Semester				II nd Semester				Evaluation form	
				C	S	L	ECTS credits	C	S	L	ECTS credits		
1.	CO2302	CO	Chemistry of hydrocarbons and single functional group compounds	4		3	5					E	
2.	CF2304	CF	Chemical kinetics	3		2,5	5					E	
3.	CN2304	CA	Chemistry of s- and p- block metals	2		1.5	5					E	
4.	CA2303	Ana	Practical abilities in instrumental analysis	2		1.5	5					E	
5.	CB2301	B	Biochemistry	2		2	5					C	
6.	L_2305; L_2406	L	Modern languages (optional)	1	0,5		5	1	0,5		5	C	C
7.	CN2405	CA	Chemistry of d-block metals					3		2	5		E
8.	CF2405	CF	Quantum chemistry and structure					3		3	5		E
9.	CM2401	CM	Materials chemistry					2		2	5		E
10.	CO2403	CO	Organic chemistry of multiple functional group compounds					3		3	5		E
11.	CA2404	Ana	Instrumental analysis					1.5		1	5		E
Hours per week / ECTS credits				14	0,5	10,5	30	13,5	0,5	11	30		
				25			25						

Elective courses

1.	CO2304	CO	<i>Practical skills in organic chemistry</i>			1*	5					V.P.	
2.	CN2306; CN2406	CA	<i>Practical skills in inorganic chemistry</i>			1	5			1*	5	V.P.	V.P.
3.	CM2402	CM	<i>Materials chemistry</i>							1	5		V.P.
4.	L_2307; L_2408	L	<i>Modern languages</i>	1	0,5		5	1	0,5		5	C	C
5.	CF2306	CF	<i>Numerical applications in physical chemistry</i>			0.5	5					V.P.	
Hours per week / ECTS credits				1	0,5	2,5	20	1	0,5	2	15		

IIIrd YEAR

No.			Course name	I st Semester				II nd Semester				Evaluation form	
				C	S	L	ECTS credits	C	S	L	ECTS credits		
1.	CF3507	CF	Electrochemistry and physical chemistry of interfaces	4		2.5	5					E	
2.	CO3509	CO	Chemistry of heterocyclic and reaction intermediates	3		2.5	5					E	
3.	CB3503	B	Nucleic acids and proteins	1		0.5	5					E	
4.	CN3511	CA	Coordination compounds with biomimetic properties	3		2,5	5					E	
5.	CM3504	CM	Biomaterials	2		1,5	5					C	
6.	CA3507	Ana	Analytical control of biotechnological processes	1.5		1	5					E	
7.	CO3610	CO	Organic structural analysis					2		2	5		E
8.	CN3612	CA	Bioinorganic chemistry; Medical applications					4	1	2	5		E
9.	CA3608	Ana	Clinical analysis					2		1	5		E
10.	OF3601	CO+CF	Biotechnologies and membrane transport					4		2	5		C
11.	CB3604	B	Enzymology					1		1	5		E
12.	CF3610	CF	Quantum biochemistry					2		1	5		E

Elective courses

1.	CO3508	CO	<i>Reaction intermediates</i>			1	5					V.P.	
2.	CF3509	CF	<i>Colloid chemistry- numerical applications</i>			0.5	5					V.P.	
Hours per week / ECTS credits						1,5	10						
				1,5									

Elective courses within the Department of Didactic Personnel Training

No.		Course name				Hours per week					Evaluation form	ECTS credits
			Year	Semester	No. of weeks	C	A	C	A	Total		
1	RR1101	<i>Educational Psychology</i>	I	1	14	2	2	28	28	56	E	5
2	RR1202	<i>Pedagogy I:</i> - <i>Fundamentals of pedagogy</i> - <i>Curriculum theory and methodology</i>	I	2	14	2	2	28	28	56	E	5
3	RR2303	<i>Pedagogy II:</i> - <i>Learning theory and methodology</i> - <i>Evaluation theory and methodology</i>	II	3	14	2	2	28	28	56	E	5
4	RR3604	<i>The management of student classes</i>	III	6	14	1	1	14	14	28	E	3
5	CN2410	<i>Teaching chemistry</i>	II	4	14	2	2	28	28	56	E	5
6	RR3505	<i>Computer-aided teaching</i>	III	5	14	1	1	14	14	28	C	2
7	C_3501	<i>Teaching practicum in compulsory preuniversity education (chemistry)</i>	III	5	14	-	3	-	42	42	C	3
8	C_3602	<i>Teaching practicum in compulsory preuniversity education (chemistry)</i>	III	6	12	-	3	-	36	36	C	2
TOTAL – Level I			-	-	-	-	-	140	218	358	5E+3C	30
		<i>Graduation examination: Level I</i>	III	6	2	-	-	-	-	-	E	5