

CURRICULUM

“A.I. CUZA” UNIVERSITY OF IASI
FACULTY OF CHEMISTRY

MASTER STUDIES: **CHIMIE**

SPECIALIZATION: **DYNAMICS OF CHEMICAL SYSTEMS APPLIED IN ENVIRONMENTAL CHEMISTRY**

DURATION: 2 years

Structure of the academic year (in weeks)

	Didactic activities		Examinations		Holidays		
	I st sem.	II nd sem	I st sem.	I st sem.	Dec-Jan	Feb.	Summer
I st year	14	14	2	2	3	2	12
II nd year	14	14	2	2	3	2	-

The disciplines contained in the curriculum

Ist YEAR

No.	Course name	I st Semester				II nd Semester				Evaluation form	
		C	S	L	ECTS credits	C	S	L	ECTS credits		
1.	Advanced physical chemistry	2		2	6					E	
2.	Advanced inorganic chemistry	2	2		6					E	
3.	Advanced organic chemistry	2		2	6					E	
4.	Thermodynamics of evolution and numerical signal processing	2		2	6					E	
5.	Optional 1	2		2	6					E	
6.	Methods of investigation for electrode processes					2		2	6		E
7.	Environmental chemistry					2		2	6		E
8.	Sampling and methodologies in environmental investigation					2		2	6		E
9.	Instrumental techniques applied in chemical systems analysis					0,5		3,5	6		C
10.	Optional 2					2		2	6		E
Hours per week / ECTS credits		10	2	8	30	8,5		11,5	30		
		20				20					

Elective courses

1.	Physical education			1	5			1	5	C	C
2.	Modern languages	1	1		5	1	1		5	C	C
Hours per week / ECTS credits		1	1	1	10	1	1	1	10		
		3				3					

IInd YEAR

No.	Course name	I st Semester				II nd Semester				Evaluation form	
		C	S	L	ECTS credits	C	S	L	ECTS credits		
1.	Nonlinear dynamics and dynamics of chemical systems	2	1	1	6					E	
2.	Physical chemistry of polymers	2		2	6					E	
3.	Monitoring and analytical control of environmental bio-recovery	2		2	6					E	
4.	Dynamics of intermolecular interactions	2		2	6					E	
5.	Optional 3	2		2	6					E	
6.	Analysis by applied speciation in					2		2	6		E

	<i>environmental investigation</i>											
7.	<i>Atmospheric processes in gaseous phase</i>					2		2	6			E
8.	<i>Special topics in physical chemistry</i>					2	1	1	6			E
9.	<i>Analytical chemistry of persistent chemical pollutants</i>					2		2	6			E
10.	<i>Optional 4</i>					2		2	6			E
Hours per week / ECTS credits		10	1	9	30	10	1	9	30			
		20				20						

Optional courses

No.	Course name	Sem	C	L	ECTS credits	Evaluation form
2	<i>Phase transformations in atmosphere, hydrosphere and litosphere</i> <i>Inorganic structural analysis</i> <i>Biosynthesized drugs with heterocyclic structure</i>	2	2	2	6	E
3	<i>Chemometrics and analytical signal processing</i> <i>(Nano)porous inorganic structures</i> <i>Molecular transpositions</i>	3	2	2	6	E
4	<i>Kinetics of chain reactions</i> <i>Catalysers and advanced catalytic processes/clean</i> <i>Utilisation of the organometallic compounds in organic synthesis</i>	4	2	2	6	E

Elective courses within the Department of Didactic Personnel Training

No.	Name of the discipline				Hours per week					Evaluation form	ECTS credits
		Year	Sem	Weeks	C	A	C	A	Total		
1	<i>Psyhopedagogy of teenagers and adults</i>			14	2	1	28	14	42	E	5
2	<i>Management of educational programs</i>			14	2	1	28	14	42	E	5
3	<i>Didactic of chemistry</i>			14	2	1	28	14	42	E	5
4	<i>Teaching practicum</i>			14	-	3	-	42	42	C	5
5	Optional package 1: - <i>Counselling and orientation</i> - <i>Educational communication</i> - <i>Methodology of educational research</i> - <i>Integrated education</i>	I	2	14	1	2	14	28	42	E	5
6	Optional package 2: - <i>Sociology of education</i> - <i>Management of scholar organization</i> - <i>Educational politics</i> - <i>Intercultural education</i> - <i>Contemporary pedagogical skilss</i>	II	3	14	1	2	14	28	42	E	5
TOTAL – Level II		-	-	-	-	-	112	140	252	5E+1C	30
<i>Graduation examination: Level II</i>		II	4	2	-	-	-	-	-	E	5