SCHEDULE OF MASTER DEGREE – APPLIED CHEMISTRY

from the academic year 2025/2026

Symbols used in the tables: **L – lecture; S – seminar; LAB - laboratory; E-exam; Z - pass with a grade**

I year

Semester 1

Obligatory subject

No.	Subject	Hours				Z/E	ECTS points	COURSE USOS CODE
		L	S	LAB	Total			
1.	Inorganic & metalloorganic coordination chemistry	10		20	30	E	3	**310-CS2-1IMC**
2.	Advanced analytical chemistry	10		20	30	E	3	**310-CS2-1AAC**
3.	Advanced organic chemistry	10		20	30	E	3	**310-CS2-1AOC**
4.	Physical aspects of advanced techniques & processes	10		20	30	E	3	**310-CS2-1PAT**
5.	Molecular spectroscopy	10		20	30	Z	3	**310-CS2-1MSP**
6	Electives subject from block I - specialization	40		110	150	Z	15	**310-CS2-1SBI**
	Total	**90**		**210**	**300**		**30**	

Block I electives subject

No.	Subject	Hours				Z/E	ECTS points	COURSE USOS CODE
		L	S	LAB	Total			
Specialization: Chemistry of materials								
1.	Materials for energy storage	10		20	30	Z	3	**310-CS2-1SBI - 1**
2.	Advanced instrumental methods for material analysis			30	30	Z	3	**310-CS2-1SBI – 2**
3.	Chemistry of nanomaterials	10		20	30	Z	3	**310-CS2-1SBI - 3**
4.	Structural Chemistry	10		20	30	Z	3	**310-CS2-1SBI - 4**
5.	Polymers	10		20	30	Z	3	**310-CS2-1SBI - 5**
6.	Current methods in the chemistry of materials			30	30	Z	3	**310-CS2-1SBI - 6**
Specialization: Chemical analysis								
1.	Sampling and sample preparation	10		20	30	Z	3	**310-CS2-1SBI – 7**
2.	Atomic spectrometry	10		20	30	Z	3	**310-CS2-1SBI – 8**
3.	Process analysis in chemistry	10		20	30	Z	3	**310-CS2-1SBI – 9**
4	Toxicological analysis	10		20	30	Z	3	**310-CS2-1SBI – 10**
5.	Methods for surface analysis			30	30	Z	3	**310-CS2-1SBI – 11**
6.	Current methods in the chemical analysis			30	30	Z	3	**310-CS2-1SBI - 12**

Semester 2

Obligatory subject

No.	Subject	Hours				Z/E	ECTS points	COURSE USOS CODE
		L	S	LAB	Total			
1.	Chromatography and electrophoresis	10		20	30	E	3	**310-CS2-2CEL**
2.	Sustainable chemistry and technology for the circular economy	10			10	Z	1	**310-CS2-2SCT**
3.	Good laboratory practice	10		20	30	E	3	**310-CS2-2GLP**
4.	Specialization laboratory			150	150	Z	10	**310-CS2-2SL1**
5.	Foreign language		30		30	Z	2	**310-CS2-2FLA**
6.	Electives subject from block II - specialization	20		40	60	Z	6	**310-CS2-2SBII**
	Total	**70**	**30**	**210**	**310**		25	

Block II electives subject

No.	Subject	Hours				Z/E	ECTS points	COURSE USOS CODE
		L	S	LAB	Total			
Specialization: Chemistry of materials								
1.	Catalytic processing	10		20	30	Z	3	**310-CS2-2SBII - 1**
2.	Nanostructural materials in chemical analysis	10		20	30	Z	3	**310-CS2-2SBII – 2**
3.	Conducting polymers	10		20	30	Z	3	**310-CS2-2SBII - 3**
Specialization: Chemical analysis								
1.	Bioanalysis	10		20	30	Z	3	**310-CS2-2SBII – 4**
2.	Ecoanalysis	10		20	30	Z	3	**310-CS2-2SBII – 5**
3.	Environmental chemistry	10		20	30	Z	3	**310-CS2-2SBII - 6**

II year

Semester 3

Obligatory subject

No.	Subject	Hours				Z/E	ECTS points	COURSE USOS CODE
		L	S	LAB	Total			
1.	Entrepreneurship			10	10	Z	1	**310-CS2-3ENT**
2.	Subject in humanities or social sciences		30		30	E	3	**310-CS2-3HUM**
3.	Specialistic linguistic workshop		30		30	Z	2	**310-CS2-3SLW**
4.	Master seminar		30		30	Z	4	**310-CS2-3MS1**
5.	Specialization laboratory			150	150	Z	10	**310-CS2-3SL2**
	Total		**90**	**160**	**250**		**20**	

Semester 4

Obligatory subject

Subject	Hours				Z/E	ECTS points	COURSE USOS CODE
	L	S	LAB	Total			
Monographic lecture	15			15	E	1	**310-CS2-4MLE**
Introduction to intellectual property management	10			10	Z	1	**310-CS2-4IPM**
Master seminar		30		30	Z	3	**310-CS2-4MS2**
Specialization laboratory			150	150	Z	10	**310-CS2-4SL3**
Total	**25**	**30**	**150**	**205**		**15**	