

SCHEDULE OF MASTER DEGREE – APPLIED CHEMISTRY

from the academic year 2026/2027

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-AS2-1IMC
2.	Advanced analytical chemistry	10		20	30	E	3	310-AS2-1AAC
3.	Advanced organic chemistry	10		20	30	E	3	310-AS2-1AOC
4.	Physical aspects of advanced techniques & processes	10		20	30	E	3	310-AS2-1PAT
5.	Molecular spectroscopy	10		20	30	Z	3	310-AS2-1MSP
6	Electives subject from block I - specialization	40		110	150	Z	15	310-AS2-1SBI
	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-AS2-1SBI - 1
2.	Advanced instrumental methods for material analysis			30	30	Z	3	310-AS2-1SBI – 2
3.	Chemistry of nanomaterials	10		20	30	Z	3	310-AS2-1SBI - 3
4.	Structural Chemistry	10		20	30	Z	3	310-AS2-1SBI - 4
5.	Polymers	10		20	30	Z	3	310-AS2-1SBI - 5
6.	Current methods in the chemistry of materials			30	30	Z	3	310-AS2-1SBI - 6
Specialization: Chemical analysis								
1.	Sampling and sample preparation	10		20	30	Z	3	310-AS2-1SBI – 7
2.	Atomic spectrometry	10		20	30	Z	3	310-AS2-1SBI – 8
3.	Process analysis in chemistry	10		20	30	Z	3	310-AS2-1SBI – 9
4.	Toxicological analysis	10		20	30	Z	3	310-AS2-1SBI – 10
5.	Methods for surface analysis			30	30	Z	3	310-AS2-1SBI – 11
6.	Current methods in the chemical analysis			30	30	Z	3	310-AS2-1SBI - 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-AS2-1CEL
2.	Sustainable chemistry and technology for the circular economy	10			10	Z	1	310-AS2-1SCT
3.	Good laboratory practice	10		20	30	E	3	310-AS2-1GLP
4.	Specialization laboratory			150	150	Z	10	310-AS2-1SL1
5.	Foreign language		30		30	Z	2	310-AS2-1FLA
6.	Electives subject from block II - specialization	20		40	60	Z	6	310-AS2-1SBII
	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-AS2-1SBII - 1
2.	Nanostructural materials in chemical analysis	10		20	30	Z	3	310-AS2-1SBII - 2
3.	Conducting polymers	10		20	30	Z	3	310-AS2-1SBII - 3
Specialization: Chemical analysis								
1.	Bioanalysis	10		20	30	Z	3	310-AS2-1SBII - 4
2.	Ecoanalysis	10		20	30	Z	3	310-AS2-1SBII - 5
3.	Environmental chemistry	10		20	30	Z	3	310-AS2-1SBII - 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-AS2-2ENT
2.	Subject in humanities or social sciences		30		30	E	3	310-AS2-2HUM
3.	Specialistic linguistic workshop		30		30	Z	2	310-AS2-2SLW
4.	Master seminar		30		30	Z	4	310-AS2-2MS1
5.	Specialization laboratory			150	150	Z	10	310-AS2-2SL2
	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-AS2-2MLE	
Introduction to intellectual property management	10			10	Z	1	310-AS2-2IPM	
Master seminar		30		30	Z	3	310-AS2-2MS2	
Specialization laboratory			150	150	Z	10	310-AS2-2SL3	
Total	25	30	150	205		15		