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## Subject Description

### 1. Program information

1.1. Institution	University of Craiova
1.2. Faculty	Science
1.3. Department	Chemistry
1.4. Study field	Chemistry
1.5. Study level	Master
1.6. Type of education	Full-time
1.7. Study program	Advanced Chemistry

### 2. Subject information

2.1. Subject	Practical activities in Analytical chemistry						
2.2. Course coordinator	-						
2.3. Application coordinator	Lect.dr. Anca Ganescu						
2.4. Year of study	II	2.5. Semester	4	2.6. Type of evaluation	V	2.7. Subject type	DS/DOB

### 3. Total estimated time (hours/semester)

3.1. Number of hours per week	4	from which: 3.2 course	-	3.3. seminar/lab	4
3.4. Total hours in curriculum	48	from which: 3.5 course	-	3.6. seminar/lab	48
Time allocation – hours/week					
Study using textbooks, course materials, bibliographies, and notes					20
Additional documentation in the library, on specialized electronic platforms, and in the field					40
Preparation of seminars/labs, assignments, reports, portfolios, and essays					32
Tutoring					5
Examinations					5
Other activities.....					
<b>3.7. Total hours of individual study</b>					102
<b>3.8. Total hours per semester</b>					150
<b>3.9. Number of ECTS</b>					6

### 4. Preconditions (if the case)

4.1. of curriculum	•
4.2. of competences	•

### 5. Conditions (if the case)

5.1. for course	• -
5.2. for labs	• Laboratory equipped with the materials, equipment, and reagents necessary to carry out experimental work

### 6. Course objectives - expected learning outcomes achieved by completing and passing the course



5.GS-MS investigation of complex samples. Sample preparation	On site (week 5)	Experiment, explanation, discussion, debate, and questioning	4
6. GS-MS investigation of complex samples. Sample analysis	On site (week 6)	Experiment, explanation, discussion, debate, and questioning	4
7.XRD and Raman spectroscopy techniques for structural investigation of complex samples. Data collection	On site (week 7)	Experiment, explanation, discussion, debate, and questioning	4
8. XRD and Raman spectroscopy techniques for structural investigation of complex samples. Data analysis	On site (week 8)	Experiment, explanation, discussion, debate, and questioning	4
9. Morphological and elemental analysis of complex solids using SEM/EDXS analysis. Sample preparation	On site (week 9)	Experiment, explanation, discussion, debate, and questioning	4
10. Morphological and elemental analysis of complex solids using SEM/EDXS analysis. Sample analysis	On site (week 10)	Experiment, explanation, discussion, debate, and questioning	4
11. Correlation of elemental and structural data in complex sample analysis	On site (week 11)	Experiment, explanation, discussion, debate, and questioning	4
12.Lab Verification	On site (week 12)	Experiment, explanation, discussion, debate, and questioning	4
References:			
1. Lab work presentations, 2025.			

**8. Correlation of the discipline content with the expectations of representatives of the epistemic community, professional associations, and representative employers in the field related to the program**

The content of the course is in line with those of similar courses at universities in Romania and abroad, while also meeting the expectations of professional associations and representative employers in the field.

**9. Evaluation**

Activity	9.1. Evaluation criteria	9.2. Evaluation method	9.3. Contribution to final score
9.4. Course			

9.5. Lab	Correct application of laboratory safety rules; compliance with risk assessment and waste management procedures.	Continuous assessment during laboratory work.	10 %
	Correct execution of synthesis and characterization procedures; accuracy and reproducibility of experimental results.	Observation of practical skills; laboratory notebook; laboratory reports.	70 %
	Ability to analyze and interpret experimental data; quality and coherence of scientific reporting.	Project evaluation; written laboratory report.	20 %
9.6. Minimum performance standard			
<ul style="list-style-type: none"> <li>• Basic understanding of core concepts.</li> <li>• Elementary understanding of synthesis methods.</li> <li>• Completion of practical/project tasks</li> </ul>			

Date  
22.09.2025

Lab coordinator,  
Lect.dr. Anca Ganescu

Date of approval  
25.09.2025

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Head of Department,  
Conf.dr. Nicoleta Cioateră