



Análise Química Ambiental 2025-26 LQ/LQT

TEACHERS

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1

1



Análise Química Ambiental 2025-26 LQ/LQT

OBJECTIVES

- Acquisition of basic knowledge about quality management of environmental chemical analyses
- Understanding the importance of chemical management and monitoring of environmental resources, in particular those that are legally regulated
- Provide skills in environmental monitoring, including sampling techniques, classical and instrumental methods of analysis, and interpretation of environmental information

2

2



**EVALUATION
CRITERIA**

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Assessment

- Final exam: 70% (Part I closed-book & Part II with open-book)
- Group work: 25% §
- Online questions asked at the end of some classes: 5% §

§ - The last two components are only considered if they increase the exam grade (i.e., students may not participate in class or do group work).

3

3



**EVALUATION
CRITERIA**

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Assessment | ● Group work: 25%

Group Work (Groups of three students)

Description of a chemical environmental monitoring program or technique, highlighting the analytical component, analysis quality requirements, and interpretation of results. Alternatively, the analytical monitoring of a real environmental incident may be described.

- » Five-page monograph
- » 15-minute presentation and 5-minute discussion

4

4



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PROGRAM

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Analytical Methodologies

- Introduction to Environmental Chemical Analysis
- Environmental Sampling
- Determination of Inorganic Parameters in Environmental Samples
- Determination of Organic Parameters in Environmental Samples
- Monitoring of Gaseous Environment
- Monitoring of the Aquatic Environment
- Monitoring of Soil and Biota

Assessment of the Quality and Interpretation of Analytical Information

- Measurement Traceability
- Validation of Analytical Methods
- Assessment of Measurement Uncertainty
- Measurement Quality Control

5

5



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Questions

6

6