



INSTRUMENTAL ANALYSIS II

Bachelor:	CHEMISTRY	702G
Course title:	INSTRUMENTAL ANALYSIS II	541
Year/Semester:	3rd year/2nd semester	ECTS Credits: 6,0

DEPARTMENT

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CONTENTS

- UNIT 1. Mass spectrometry
- UNIT 2. Introduction to chromatography
- UNIT 3. Gas chromatography
- UNIT 4. Liquid chromatography
- UNIT 5. Electrophoresis
- UNIT 6. Chemometrics
- UNIT 7. Experimental design
- UNIT 8. Exploratory data analysis
- UNIT 9. Multivariate calibration
- UNIT 10. Classification and modelling techniques

Practical classroom/computer classroom agenda: Problems related to theoretical contents will be solved. Computer classroom practices on HPLC simulator, multivariate calibration, classification and experimental design.

Lab practices:

Determination of analysis in real samples using liquid and gas chromatography.

Gas chromatography: influence of temperature on chromatographic separations.

Liquid Chromatography: influence of mobile phase composition on the chromatographic separations

REFERENCES

Title
Analytical Chemistry
Mass Spectrometry: Principles and applications
The essence of chromatography
Basic gas chromatography
Chemometrics: Data Analysis for the Laboratory and Chemical Plant
A user-friendly guide to multivariate calibration and classification
Multivariate Statistical Methods



EVALUATION SYSTEM

Lab reports 10%

Self-assessment systems 5 %

Written test 0%

Portfolio 10%

Scales of attitudes 5 %