

Incoming student mobility**Name of UNIOS University Unit: Department of Chemistry****COURSES OFFERED IN FOREIGN LANGUAGE
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS**

Department or Chair within the UNIOS Unit	Department of Chemistry
Study program	Graduate university study of Chemistry-research program
Study level	Graduate
Course title	Advanced Analytical Chemistry Laboratory
Course code (if any)	KD1103
Language of instruction	English
Brief course description	<p>This course consists of laboratory exercises focused on the analysis of various natural and synthetic samples using classical and instrumental chemical methods. Through hands-on experience, students will develop skills in qualitative and quantitative analysis, employing titrimetric, gravimetric, and spectrophotometric techniques. Laboratory exercises include:</p> <ul style="list-style-type: none"> a) water analysis (determination of physicochemical parameters of water); b) determination of nitrogen compounds in fertilizers (analysis of urea, ammonium, and nitrate nitrogen); b) Quinoline method (application of the quinoline method for specific compound analysis); c) determination of water content and mineral matter (sample drying and ash analysis); d) Luff-Schoorl method (volumetric sugar analysis); e) photometric determination of phosphorus in ash (quantification of phosphorus in samples); f) vitamin C analysis (determination of ascorbic acid by acid-base and iodometric titration); g) determination of caffeine and quinine in real samples h) determination of HNO_3 and H_3PO_4 in mixtures (titrimetric analysis of nitric and phosphoric acids); i) soil analysis.
Course entry requirements (Preceding courses)	Passed Analytical Chemistry 1 and Analytical Chemistry 2 courses

Form of teaching	Practical work in the laboratory, keeping a laboratory notebook and writing and presentation of experimental results.
Form of assessment	The student is obliged to pass the partial (entrance) colloquia before each laboratory exercise. If the student is not satisfied with the final result, with the grade of the colloquium, he/she can take the final written exam. The final grade consists of: 100% success in partial (entrance) colloquia or 50% success in entrance exams and success in the final written exam 50% (if the student wants to take the final exam).
Number of ECTS	5
Class hours per week	4 (exercises)
Minimum number of students	-
Period of realization	Summer semester
Lecturer	Mateja Budetić