UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

dipartimento di farmacia-scienze del farmaco

General information		
Academic subject	***ANALYSIS OF MEDICINAL PRODUCTS***	
Degree course	***PHARMACY***	
Year of study	*2*	
European Credit Transfer and Accumulation System (ECTS)		7
Language	ITALIAN	
Academic Year	2022/23	
Academic calendar (starting and ending date)	Second semester (20 February 2023 – 16 June 2023)	
Attendance	yes	

Professor/ Lecturer Course A-E	
Name and Surname	**ANTONIO CARRIERI**
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Department and address	Pharmacy – Drug Sciences Department
Virtual headquarters	Microsoft Teams Platform
Tutoring (time and day)	Every day (in presence and/or online) by appointment

Professor/ Lecturer Course F-N	
Name and Surname	**ALESSIA CATALANO**
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Department and address	Pharmacy – Drug Sciences Department
Virtual headquarters	Microsoft Teams Platform
Tutoring (time and day)	Mon/Wed/Fri 10-11 am (in presence and/or online)

Professors/ Lecturer Course O-Z		
Name and Surname	**ALESSIA CATALANO**	**ANTONIO LAGHEZZA**
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Telephone	080.5442746	0805442745
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Virtual headquarters	Microsoft Teams Platform	Microsoft Teams Platform
Tutoring (time and day)	Mon/Wed/Fri 10-11 am (in presence and/or online)	Mon/ Fri 3-5 pm (in presence and/or online)

Syllabus	
Learning Objectives	Acquiring knowledge relative to quality control and drugs dosages
Course prerequisites	Basic knowledge of general chemistry, analytical chemistry, mathematics
Contents	Safety - Introduction to practical laboratory of analysis. Warnings and safety rules. CLP Regulation.

	General: Quantitative analysis, mass measurement Titrations: Alkalimetric and acidimetric titrations Precipitation titrations Complexometric titrations Redox titrations Main instrumental methods of analysis Electrochemical methods Potentiometry Conductometry Spettroscopic methods of analysis UV-visible and Atomic spectroscopy Experimental Errors and Analytical Data Evaluation
Books and bibliography	A. Carrieri: Manuale di Analisi Quantitativa dei Medicinali (EdiSES – Napoli)
Additional materials	Additional material provided by the teacher for laboratories

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
85	*40*	*45*	*90*
ECTS			
7	*4*	*3*	
Teaching strategy			
	Lessons, exercises in classroom and laboratory		
Expected learning outcomes			
Knowledge and understanding on:	○ use of glassware in the laboratory; ○ acid-base reactions; ○ precipitates and complexes formation; ○ red-ox reactions; ○ application of these principles to classical volumetric analyses; ○ instrumental techniques and statistical principles to be applied to the evaluation of the results.		
Applying knowledge and understanding on:	○ selecting a method and applying quantitative analysis to the determination of analytes as part of quality control; ○ critically evaluation of the results of an analysis by applying principles of statistical analysis.		
Soft skills	• *Making informed judgments and choices* ○ stand-alone evaluation of the results obtained from the tests studied; ○ indicating the relevant assays to obtain the desired result even though different from those indicated by the Pharmacopoea. • *Communicating knowledge and understanding* ○ working as a team; ○ being able to explain clearly, even to inexperienced people, the chemical procedures used in a quantitative analysis; ○ being able to draw up results reports appropriately, i.e. by providing the information necessary to understand how to apply it; ○ being able to explain the method of analysis and the causes of any errors, using an		

	appropriate technical language. • *Capacities to continue learning* ○ The student must learn the methodologies used during the course; • The student must be able to understand and use analytical methods described in texts and/or scientific articles.

Assessment and feedback	
Methods of assessment	Laboratory tests, exemption exams, written and oral exam
Evaluation criteria	• *Knowledge and understanding* ○ The student must be able to compare the different problems typical of the analytical methods of the Italian Pharmacopoeia, and critically discuss the resolution of the same • *Autonomy of judgment* ○ Ability to independently identify method or determination errors • *Communication skills* • Report of practical tests with presentation of data accompanied by graphs and equations
Criteria for assessment and attribution of the final mark	The final exam will take into account the unknown tests made in laboratory, exemptions and/or written exam and oral exam
Additional information	