UNIVERSITÀ DI PAVIA

Anno Accademico 2021/2022

FORENSIC METHODS -2

Enrollment year	2020/2021
Academic year	2021/2022
Regulations	DM270
Academic discipline	MED/43 (LEGAL MEDICINE)
Department	DEPARTMENT OF BIOLOGY AND BIOTECHNOLOGY "LAZZARO SPALLANZANI"
Course	EXPERIMENTAL AND APPLIED BIOLOGY
Curriculum	Bioanalisi
Year of study	2°
Period	(01/10/2021 - 14/01/2022)
ECTS	3
Lesson hours	24 lesson hours
Language	Italian
Activity type	ORAL TEST
Teacher	MORINI LUCA (titolare) - 3 ECTS
Prerequisites	A basic knowledge about separation techniques such as gas chromatography and liquid chromatography. Moreover, a good knowledge on human metabolism is important
Learning outcomes	requirements of acquiring chemical-toxicological results that have administrative and legal medical value. This regards the investigations concerning the volatile and non-volatile organic poisons to be searched / quantitatively determined in biological matrices pursuing the objectives of the absolute specificity of the laboratory data, as well as the correct measurement of the concentration of the drug / poison / drug in liquids and tissues subjected to control. A special attention will also be given to illustrating the legislative references currently in force in the specific areas, with a view to arriving at the correct interpretation of the results of the analyzes carried out in order to produce adequate responses to the questions / requests posed, first of all, by the Judiciary but also by other

	Bodies / Subjects (eg Ser.D, Local Medical Commissions for driving licenses, competent doctors), often specifically addressed to the documentation of drug use
Course contents	The course in The study program is divided into: a) lessons related to the forensic-toxicological discipline, illustrating the application fields and proposing the indispensable bases for the realization of laboratory investigations capable of giving rise to highly reliable results in terms of selectivity, sensitivity, accuracy and precision. A description will therefore be given of the main methods of extraction / purification, of the most effective chromatographic separation techniques (gas chromatography, high performance liquid chromatography), as well as the methods of acquiring results in terms of absolute specificity through the use of mass detection; b) lectures with theoretical and practical content aimed at illustrating in the laboratory field what has been described under a); c) Legislation on the subject of narcotic substances (areas: criminal law, Ser.D, workers assigned to jobs at risk, issue / renewal of driving licenses) and ethyl alcohol with particular reference to driving vehicles in conditions of ethyl alcohol intoxication.
Teaching methods	The course is organized in lectures not only theoretical but also accompanied by subsequent laboratory activities.
Reccomended or required readings	Elisabetta Bertol - TOXICOLOGICAL ANALYTICS - Technical, interpretative, juridical and deontological aspects. I Edition, 2011. Esculapio Publishing Company. Available for purchase online at € 23.00.
Assessment methods	Oral or written verification method, dependetly on the number of students. The oral will start with a discussion on an argument chosen by the student; then several questions on other issues will follow. The written exam will be performed through a multiple choice test.
Further information	Oral or written verification method, dependetly on the number of students. The oral will start with a discussion on an argument chosen by the student; then several questions on other issues will follow. The written exam will be performed through a multiple choice test.
Sustainable development goals - Agenda 2030	$lbl_legenda_sviluppo_sostenibile