UCLouvain

wfarm1312
2024

Instrumental analysis applied to pharmaceutical sciences

3.00 credits	30.0 h	Q1

Teacher(s)	Herent Marie-France ;Muccioli Giulio (coordinator) ;
Language :	French > English-friendly
Place of the course	Bruxelles Woluwe
Prerequisites	*The prerequisite(s) for this Teaching Unit (Unité d'enseignement – UE) for the programmes/courses that offer this Teaching Unit are specified at the end of this sheet.*
Main themes	The teacher(s) will discuss the different kinds of spectroscopic techniques (UV, molecular fluorescence, atomic spectroscopy') ; and will then focus on the separation techniques such as HPLC and GC. They will also discuss the detectors that are used to detect the analytes following their separation (UV, FID, MS').

Learning outcomes	**At the end of this learning unit, the student is able to :**
	
	    At the end of the activity the student will be able to
	
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	    • Differentiate the different spectroscopic techniques (type of interaction with the light, nature of the measured signal, ')
	    • Describe the different separation techniques that have been discussed
	    • Explain the consequences of a change in the experimental conditions of a separation on the result of the separation.
	    • Propose, based on the elements discussed during the course, the optimal method allowing the quantification of a given analyte.

Evaluation methods	a written exam spanning from theoretical aspects to exercise resolution
Teaching methods	WFARM1312 teaching activities. The activity WFARM1313 (practical training in instrumental analysis) allows to approach the theoretical notions studied in WFARM1312 in a more practical way.

Content	This EU addresses the main instrumental techniques useful for the chemical analysis. The EU WFARM1243 is located in a learning continuum starting with the basics of analysis (WFARM1243) to the analysis of drugs (WFARM2117). The topics covered in this EU are listed below.
	
	    • Spectroscopic techniques
	        • UV-Visible
	        • Molecular fluorescence
	        • Atomic spectroscopy
	    • Introduction to the analytical separations
	    • Electrophoretic methods
	    • Liquid chromatograpy
	    • Gaz chromatography
	    • Introduction to the mass spectrometry

Inline resources	An adapted version of the material presented during the lessons is available on the "moodle" platform. The materials for the practical part of the activity is also available on the "moodle" platform.
Faculty or entity in charge	FARM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Bachelor in Pharmacy	FARM1BA	3	WFARM1243 AND WFARM1219	🔍