UCLouvain

wfarm2513

2019

In view of the health context linked to the spread of the coronavirus, the methods of organisation and evaluation of the learning units could be adapted in different situations; these possible new methods have been - or will be - communicated by the teachers to the students.

3 credits	22.5 h	Q2

Teacher(s)	Elens Laure ;
Language :	French
Place of the course	Bruxelles Woluwe
Main themes	Applied Pharmacokinetics, theoretical basis and maths, pharmacokinetic models, compartments Population-based pharmacokinetics, basic principles in PK modeling, parametric and non parametric methods, statistical evaluation, intra- and inter-individual variabilities, inter occasion and residual variability. Fixed versus random effects, co-variables (selection and analysis) validation methods of models (internal and external). Model predictability and simulations.
Aims	1 - To master and integrate principles and knowledges in health and pharmaceutical sciences - To perceive a concrete solution to a pharmaceutical problematic through a scientific approach by using new knowledges and by adopting a critical attitude - To communicate efficiently, rigorously and in a respectable way with colleagues and other health professionals To evaluate and to update student knowledge and the applications - - - - *The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".*
Evaluation methods	**Due to the COVID-19 crisis, the information in this section is particularly likely to change.** Evaluation is assessed through seminar presented by the students by presenting a recent peer-reviewed international article related to the teaching unit. The student will be evaluated through his/her ability of integrating complex knowledges and their application to a concrete problematic. More particularly, the students will have to demonstrate that he/she has understood the relevance of the chosen article in the pharmaceutical field and medical research. Furthermore, he/she would have to show that the theory exposed during courses has been assimilated by integrating those general concepts in the discussion related to the analysis of the results reported in the selected article. After the presentation, a discussion will be opened with the teacher in order to test his/her knowledge and its ability to apply the principles that he/she exposed.
Content	This teaching unit is mostly axed on the presentation and the application of theoretical principles of population-based pharmacokinetics. During the courses, the core existing models will be presented. We will linger on testing methods and selection strategies for modeling in population pharmacokinetics to obtain the best fit with a set of observed (real) data. We will also tackle the issue of data collection and missing information. In a second time, we will focus on the notion of pharmacokinetic variabilities and how to explain those variabilities by taking into account some co-variables. Finally, the predictive value and the potential of generating simulation sets thanks to those PK models for a personalized medicine constitute important themes that will be addressed as well.
Faculty or entity in charge	FARM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Aims
Master [120] in Pharmacy	FARM2M	3		
Master [120] in Statistic: Biostatistics	BSTA2M	3		