UCLouvain

wpmtx2005

2026

Integrative work 1

3.00 credits	0 h + 15.0 h	Q1

This learning unit is not open to incoming exchange students!

Teacher(s)	. SOMEBODY ;Elens Laure (coordinator) ;Hermans Emmanuel ;
Language :	English
Place of the course	Bruxelles Woluwe
Main themes	The course features practical sessions where students will apply fundamental concepts in PK-PD, including pattern recognition and both non-compartmental and compartmental analysis with PK parameter calculations and interpretation. These sessions will also involve PKPD modeling using Pkanalix, covering various case studies such as direct Emax, compartment effect, and turnover. Additionally, coaching sessions are planned to support students in their group work on a PKPD database, encompassing contextualization, data handling, and basic non-compartmental and compartmental analysis of PKPD data.
Learning outcomes	

Evaluation methods	Students will receive a data set per group of 2-6 students. The work will be evaluated through a **written report** and an **oral defense**
	Data will relate to a PK-PD study, we ask them to
	1. Contextualize the data set:
	2. How my dataset integrates in drug life cycle?
	3. Describe the molecule/drug
	  1. PD aspects
	  1. pharmacological class
	  2. Indication(s)
	  3. Mode of action and notion of receptor
	  4. Biomarkers
	  2. PK aspects of the work
	  1. Route(s) of administration
	  2. ADME pathway
	  3. Influencing factors
	  4. Special populations
	  5. Clinical PK: TDM, PK markers, steady state…
	4. Handle the data:
	  1. Exploring, cleaning, normalizing, visualizing, summarizing & reporting
	5. Draft a DMP
	6. NCA of PK data
	7. PK/PD pattern recognition and basic CA modeling

Teaching methods	This course is part of Block I and is composed of Practical sessions that integrate the competencies acquired through all Bloc 1 Teaching units 1. WPMTX2001: Drug life cycle 2. WPMTX2002 and WPMTX2003: Stat and PK-PD basics 3. WPMTX2004: Data handling 4. Practical sessions of WPMTX2005
Content	This course will be divided in different hands-on and case series sessions to familiarize the students with: • PK pattern recognition • PD pattern recognition • Non compartimental analysis • Bioequivalence and bioavailibility study analysis Additionnally, the schedule will intergatre supervised coaching sessions to let the students working on their datasets with support from teachers and teaching assistants.
Other infos	Slide decks available on **Moodle**

Faculty or entity in charge	FARM

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Advanced master in pharmacometrics	PMTX2MC	3		