

COURSE DESCRIPTION

University: Comenius University in Bratislava	
Faculty: Faculty of Pharmacy	
Course ID: FaF.KFChL/16-Mgr/20	Course title: Pharmacokinetic Modelling and Drug Development
Educational activities: Type of activities: lecture / seminar Number of hours: per week: 2 / 1 per level/semester: 28 / 14 Form of the course: on-site learning	
Number of credits: 3	
Recommended semester: 8.	
Educational level: I.II.	
Prerequisites:	
Recommended prerequisites: Recommended prerequisites: Pharmaceutical Chemistry (1), Pharmacology and Toxicology (1), Clinical pharmacology and pharmacotherapy	
Course requirements: At the exam, students will present the assigned seminar paper on the topic of scientific literature (max. 40 points) and at the oral interview the student will answer questions from the lectured issues (max. 20 points). A total of at least 55 points must be obtained to obtain an A rating, at least 51 points to obtain a B rating, a minimum of 47 points for a C rating, a minimum of 42 points for a D rating and a minimum of 37 points for an E rating. Scale of assessment (preliminary/final): Seminar work and exam interview: a maximum of 60 points	
Learning outcomes: After completing the course, students will be acquainted with mathematical models of the kinetics of the disposition of chemical substances in the body and will master the physicochemical principles of the relationship between the pharmacokinetic profile and the molecular structure of substances. They will learn the methods of modeling and determining the transport properties of potential drugs. Students will gain a broader picture of the complex issues of research and optimization of the properties of drugs. They will use this knowledge in practice to research new drugs.	
Class syllabus: Phenomenological view of the transport and fate of the drug in the body. Principles and mathematical models of drug kinetics, disposition and effect. Pharmacokinetic compartmental distribution models based on human physiology. Kinetic parameters and their importance for drug design. Methods for predicting physicochemical properties and kinetic parameters from the molecular structure of biologically active substances. Optimization of biological tests and interpretation of measured activities.	
Recommended literature:	
Languages necessary to complete the course: Slovak language	

Notes:

The capacity of the course is limited to 10 to 15 students. Priority is given to students with good grades (weighted study average determined according to the rules of the FaF UK study regulations). Therefore, a consultation with the teacher is required before enrolling in the course.

Past grade distribution

Total number of evaluated students: 1

A	B	C	D	E	FX
100,0	0,0	0,0	0,0	0,0	0,0

Lecturers: doc. Ing. Vladimír Frečer, DrSc., Mgr. Mária Klacsová, PhD.

Last change: 29.11.2021

Approved by: