

**COURSE DATA****Data Subject**

<b>Code</b>	43037
<b>Name</b>	Experimental pharmacokinetics
<b>Cycle</b>	Master's degree
<b>ECTS Credits</b>	3.0
<b>Academic year</b>	2023 - 2024

**Study (s)**

<b>Degree</b>	<b>Center</b>	<b>Acad. year</b>	<b>Period</b>
2138 - M.D. in Research in and Rational Use of Medicines	Faculty of Pharmacy and Food Sciences	1	First term
3103 - Biomedicine and Pharmacy	Doctoral School	0	First term
3170 - Programa de Doctorado en Biomedicina y Farmacia	Doctoral School	0	First term

**Subject-matter**

<b>Degree</b>	<b>Subject-matter</b>	<b>Character</b>
2138 - M.D. in Research in and Rational Use of Medicines	13 - Experimental pharmacokinetics	Optional
3103 - Biomedicine and Pharmacy	1 - Complementos Formación	Optional
3170 - Programa de Doctorado en Biomedicina y Farmacia	1 - Complementary Training	Optional

**Coordination**

<b>Name</b>	<b>Department</b>
USACH PEREZ, IRIS	358 - Pharmacy, Pharmaceutical Technology and Parasitology

**SUMMARY**

This course addresses the planning and development of pharmacokinetic studies, beginning with targets of the same subject and the selection of experimental and analytical method. It then examines the available models and methodologies for the processing of data and, finally, the interpretation of results. This is a theoretical-practical classes predominantly related practical analytical method and calculation and data processing. The student must have prior knowledge of basic pharmacokinetics.



## PREVIOUS KNOWLEDGE

### Relationship to other subjects of the same degree

There are no specified enrollment restrictions with other subjects of the curriculum.

### Other requirements

There is no registration restriction

## OUTCOMES

### 2138 - M.D. in Research in and Rational Use of Medicines

- Students should apply acquired knowledge to solve problems in unfamiliar contexts within their field of study, including multidisciplinary scenarios.
- Be able to access to information tools in other areas of knowledge and use them properly.
- Be able to apply the research experience acquired to professional practice both in private companies and in public organisations.

## LEARNING OUTCOMES

At the end of the teaching-learning process the student should be able to:

1. Using HPLC-based analytical techniques to quantify drug levels in biological fluid.
2. Plan, perform and interpret a pharmacokinetic study.

## DESCRIPTION OF CONTENTS

### 1. Pharmacokinetic studies and analytical methods

Pharmacokinetic and experimental designs for the application in pharmacokinetics. Introduction to high performance liquid chromatography (HPLC). Procedures for the preparation of biological samples. Quality control of the analytical method.

### 2. Pharmacokinetic data processing

Methods for pharmacokinetic data processing. Winnonlin program introduction

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Computer classroom practice	18,00	100
Laboratory practices	8,00	100
Theory classes	4,00	100
Preparing lectures	6,00	0
Preparation of practical classes and problem	12,00	0
Resolution of case studies	27,00	0
<b>TOTAL</b>	<b>75,00</b>	

**TEACHING METHODOLOGY**

During the activities, both theoretical and practical, the applications of the subject contents in relation to the Sustainable Development Goals (SDG) will be indicated. This is intended to provide knowledge, skills and motivation to understand and address these SDGs, while promoting reflection and criticism.

Lectures, participatory lecture  
Resolution of case studies  
Problems

**EVALUATION****REFERENCES****Basic**

- Doménech Berrozpe, J., Martínez Lanao J., Plá Delfina J.M. Biofarmacia y Farmacocinética. Volumen I y II. Ed. Síntesis, S.A. 1998.
- Bourne, D.W.A. 1995 Mathematical Modeling of Pharmacokinetic Data, Technomic Publishing Co., Lancaster, PA

**Additional**

- Artículos y revisiones en revistas especializadas en el tema