

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

Code	43037
Name	Experimental pharmacokinetics
Cycle	Master's degree
ECTS Credits	3.0
Academic year	2021 - 2022

Study (s)

Degree	Center	Acad. year	Period
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

Subject-matter

Degree	Subject-matter	Character
2138 - M.D. in Research in and Rational Use of Medicines	13 - Experimental pharmacokinetics	Optional
3103 - Biomedicine and Pharmacy	1 - Complementos Formación	Optional

Coordination

Name	Department
PERIS RIBERA, JOSE ESTEBAN	358 - Pharmacy, Pharmaceutical Technology and Parasitology
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
TOTAL	75,00	

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

Continuous assessment
Practical exam

Minimum score to pass the course: 5 points

Distribution of scores:

Activity	%
Assistance to classroom	50
Problems and questions	25
Practical examination	25



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

ADDENDUM COVID-19

This addendum will only be activated if the health situation requires so and with the prior agreement of the Governing Council

Face-to-face teaching is planned, but if attendance is not possible due to the establishment of new sanitary measures, the following addendum will be applied:

1. Contents

All the contents initially programmed in the teaching guide will be kept.

2. Loadwork

The weight of the different activities will be maintained.

3. Teaching methodology

Upload the necessary materials to the virtual classroom, which will be adapted to the materials provided in the original guide for non-face-to-face teaching, incorporating annotations and explanatory phrases so that the student can access them at any time. Synchronous or asynchronous videoconferences by BBC will also be used, respecting the same dates and times originally programmed.

The tasks derived from the work carried out individually and in groups must be delivered through the "Task" option of the virtual classroom. If the oral presentation of the papers is required to be non-face-to-face, it will be done by BBC videoconference at the time established for the sessions.

For the Tutorials that are carried out at the request of the student, the email or virtual classroom forum will be used and if necessary by videoconference.

4. Evaluation



The evaluation will be carried out in a similar way to that indicated in the teaching guide. If attendance is not possible, the relative weight of each block will be maintained as indicated in the Teaching Guide for the subject, adapting the activities to the use of the virtual classroom platform if necessary.

5. Bibliography

The bibliography recommended in the teaching guide is maintained