Teaching guide

IDENTIFICATION DETAILS

Degree:	Biomedicine
Scope	Biology and Genetics
Faculty/School:	Experimental Sciences
Course:	PHARMACOLOGY II
Type:	Compulsory
ECTS credits:	4,50
Year:	4
Code:	2162
Teaching period:	Seventh semester
Subject:	Pharmacological Bases of Biomedicine Therapy
Module:	Therapeutic Principles of Biomedicine
Teaching type:	Classroom-based
Language:	Spanish
Total number of student study hours:	112,50

SUBJECT DESCRIPTION

Pharmacology is the science that studies the actions and properties of drugs in organisms, understanding as a drug any chemical substance used in the treatment, prevention or diagnosis of a disease, or to prevent the onset of an unwanted physiological process. This course will address the characteristics of drugs, from their pharmacokinetic properties that condition their form of administration and dosage regimen to their interactions with receptors or target sites, which are key to obtaining the pharmacological response on which their therapeutic indications will be based.

GOAL

Pharmacology is included in the Therapeutic Principles of Biomedicine module. The general objective is to address knowledge of preventive measures and treatments to promote recovery and maintenance of health, essential in a healthcare professional.

The specific aims of the subject are:

1. Know and understand the mechanisms of action of drugs in the sick organism
||2. Know the interactions of different drugs, the therapeutic and adverse effects of drugs, the therapeutic indications and possible contraindications||3. Know and understand the mechanisms of action and effects of drugs and relate them to their therapeutic indications, precautions and adverse effects||4. Extend the knowledge of Pharmacology to aspects not covered in the subject Pharmacology I

PRIOR KNOWLEDGE

For optimal use of the subject, students are recommended to have adequate knowledge of the subjects of Physiology, Biochemistry and Pharmacology I

COURSE SYLLABUS

THEORETICAL SYLLABUS

Block 1. Pharmacology of addiction to drugs of abuse. Use of drugs in sports
Block 2. General and local anaesthesia
Block 3. Drugs of biotechnological origin
Block 4. New lines of pharmacological research

EDUCATION ACTIVITIES

AF1) Theoretical classes: they will be based on master classes, supported by teaching resources and trying to promote student interest and involvement by posing brief questions.
AF2) Seminars: cross-cutting topics that integrate various concepts of Pharmacology will be discussed
AF3) Exhibition of scientific articles: at the beginning of the course, a series of scientific articles will be proposed that should be exhibited in small groups. The articles and instructions for the exhibitions will be published in the Virtual Classroom
AF4) Tutoring: they allow us to resolve any doubts that may have arisen during other teaching activities. The tutoring schedule can be consulted in the degree coordinator and will be informed by the teacher at the beginning of the course.
The Virtual Classroom platform will be very useful for monitoring and effective communication between students and the teacher. In the Virtual Classroom, the student will have information and material to support the classes to promote the study of the subject.
The teachers of the subject do not authorize the publication by the student of the material provided by the teachers of the subject in the Virtual Classroom, or by any other means.

DISTRIBUTION OF WORK TIME

TEACHER-LED TRAINING ACTIVITIES	INDIVIDUAL WORK
45 Horas	67,50 Horas

LEARNING RESULTS

Understand the principles of molecular pharmacology, the interactions of drugs with their receptors or target sites, which are key to obtaining pharmacological effects, and to know the methods of study in the laboratory, in order to be able to apply them to the research of new drugs at the preclinical level.

Know the principles of general pharmacology and relate the physico-chemical characteristics of drugs to their pharmacokinetic and pharmacodynamic properties.

Understand and identify the methodology used in the design and evaluation of drugs in preclinical and clinical trials.

Understand the different therapeutic strategies established for the treatment of diseases, with the combination of drugs and other non-pharmacological measures.

SPECIFIC LEARNING RESULTS

Define the terminology of interest in Pharmacology

Identify and distinguish the mechanisms, actions and effects of drugs, which justify both their therapeutic applications and their adverse reactions

Describe the chemical composition of drugs and the way in which they act on the different systems and apparatus of the human body and diseases of the human body

Understand and identify the techniques used in the design and evaluation of pre-clinical and clinical trials||Identify the different physical and chemical properties of medicines including any risks associated with their use

Differentiate and know how to evaluate the effects of substances with pharmacological activity

LEARNING APPRAISAL SYSTEM

The evaluation will take into consideration:
SE1) Evaluation of the theoretical content of the subject through oral or written tests with development, short answer or test-type questions (65%)
SE2) Seminar evaluation (10%)
SE3) Evaluation of the exposure of scientific articles (25%)
IT IS AN ESSENTIAL REQUIREMENT TO BE ABLE TO PASS THE SUBJECT TO OBTAIN AT LEAST 45% OF THE MAXIMUM GRADE OF THE THEORY EXAM AND OBTAIN AT LEAST A 5 IN THE OVERALL GRADE IN THE EXTRAORDINARY CALL. THE SAME EVALUATION SYSTEM IS MAINTAINED, KEEPING THE NOTES OF SEMINARS AND THE PRESENTATION OF SCIENTIFIC ARTICLES. STUDENTS WHO ENROLL FOR THE SECOND OR MORE TIMES IN THE SUBJECT MUST CONTACT THE TEACHER TO FIND OUT ABOUT THE EVALUATION CRITERIA SPECIFIC TO THEIR CASE. PLAGIARISM, AS WELL AS THE USE OF ILLEGITIMATE MEANS IN EVALUATION TESTS, WILL BE SANCTIONED IN ACCORDANCE WITH THE UNIVERSITY'S COEXISTENCE EVALUATION REGULATIONS

ETHICAL AND RESPONSIBLE USE OF ARTIFICIAL INTELLIGENCE

1.- The use of any Artificial Intelligence (AI) system or service shall be determined by the lecturer, and may only be used in the manner and under the conditions indicated by them. In all cases, its use must comply with the following principles:
a) The use of AI systems or services must be accompanied by critical reflection on the part of the student regarding their impact and/or limitations in the development of the assigned task or project.
b) The selection of AI systems or services must be justified, explaining their advantages over other tools or methods of obtaining information. The chosen model and the version of AI used must be described in as much detail as possible.
c) The student must appropriately cite the use of AI systems or services, specifying the parts of the work where they were used and describing the creative process followed. The use of citation formats and usage examples may be consulted on the Library website(https://www.ufv.es/gestion-de-la-informacion_biblioteca/).
d) The results obtained through AI systems or services must always be verified. As the author, the student is responsible for their work and for the legitimacy of the sources used.
2.- In all cases, the use of AI systems or services must always respect the principles of responsible and ethical use upheld by the university, as outlined in the Guide for the Responsible Use of Artificial Intelligence in Studies at UFV. Additionally, the lecturer may request other types of individual commitments from the student when deemed necessary.
3.- Without prejudice to the above, in cases of doubt regarding the ethical and responsible use of any AI system or service, the lecturer may require an oral presentation of any assignment or partial submission. This oral evaluation shall take precedence over any other form of assessment outlined in the Teaching Guide. In this oral defense, the student must demonstrate knowledge of the subject, justify their decisions, and explain the development of their work.

BIBLIOGRAPHY AND OTHER RESOURCES

Basic

Flórez, Jesús (1936-) Human Pharmacology [Electronic resource]/6th ed. Barcelona:Elsevier, 2013.

directors, Pedro Lorenzo Fernández... [et al.]. Velázquez: manual of basic and clinical pharmacology/19th ed. Madrid:Editorial Médica Panamericana, 2018.

H. P. Rang... [et al.]. Rang and Dale [Electronic Resource]: Pharmacology/8th ed. Madrid: Elsevier, 2016.