

## 25661 - Pharmacology and Nutritional Principles in Physiotherapy

### Syllabus Information

**Academic year:** 2023/24

**Subject:** 25661 - Pharmacology and Nutritional Principles in Physiotherapy

**Faculty / School:** 127 - Facultad de Ciencias de la Salud

**Degree:** 605 - Degree in Physiotherapy

**ECTS:** 6.0

**Year:** 4

**Semester:** First semester

**Subject type:** Compulsory

**Module:**

### 1. General information

This subject aims at acquiring knowledge of both theoretical content and translation to the usual clinical practice of the actions of drugs, interactions and adverse reactions that may have beneficial or harmful impacts for patients and that the professional must be able to detect and prevent. At the same time, the knowledge of nutritional needs should allow an assessment of the adequacy of the nutrition of the people served, taking into account their different clinical, social and cultural contexts.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations Agenda 2030 (<https://www.un.org/sustainabledevelopment/es/>), so that the acquisition of the learning results of the subject provides training and competence to contribute to some extent to their achievement, and more specifically that related to Goal 3: Health and wellness.

### 2. Learning results

1. Explain the behaviour of drugs in the body taking into account pharmacokinetic and pharmacodynamic aspects.
3. Know the different drug forms, as well as the different drug administration patterns.
4. Correct interpretation of drug prescriptions.
5. Recognize the influence of age, pregnancy and lactation on drug response.
6. Demonstrate the ability to adequately monitor therapeutic, adverse, toxic effects and drug interactions.
8. Demonstrates that they can educate the patient and family on the proper use of medications.
9. Demonstrate the ability to adequately record incidents related to medication administration.
10. Establish energy and nutrient requirements.
11. Know the assessment of the patient's nutritional status.
12. Describe the characteristics of nutrition in the different stages of life.

### 3. Syllabus

#### **Thematic block I: Pharmacology**

Concepts of pharmacology, drug and medication.

Mechanisms of drug action, pharmacological receptors and pharmacological actions.

General concepts of pharmacokinetics: ADME processes.

Routes of drug administration.

Toxic effects of drugs: concept of adverse reaction, intoxication and drug dependence.

Pharmacotherapy of the different organs and systems.

Pharmacology of pain

#### **Thematic block II: Nutrition**

Concepts of nutrients and energy, as well as their physiological functions, factors that determine energy requirements, nutritional needs and recommendations for a balanced diet.

Food as a source of energy and nutrients, modifications that these undergo with processing.

The nutrition of healthy people, and in the different moments of the life cycle.

Assessment of nutritional status.

Nutrition in healthy people: The dietary pattern Mediterranean Diet, as a healthy pattern.

#### 4. Academic activities

**Lectures (40 h):** face-to-face sessions consisting of explanations of the theoretical content of each topic, orienting for the subsequent study and individual work of the students.

**Problems and case resolution/Seminars (15 h):** to be carried out in split groups (half of each group). In these sessions the participants will work in a practical way on cases related to the content of the theoretical sessions.

**Laboratory practices (5h):** hours of laboratory practices in small groups

**Work (18h):** hours dedicated to the realization of the subject work and tutorials **Individual student work (68h):** hours dedicated to the study of the theoretical contents of the subject **Evaluation activities (4h) :** hours dedicated to summative evaluation activities

#### 5. Assessment system

1- Individual written tests, consisting of 40 multiple choice questions, with 4 answer options of which only 1 is valid. Each correct answer adds 1 point, and each wrong answer subtracts 1/3, adjusting the subtraction to the whole number . Each exercise will be passed with 24 points, and will account for 50% of the grade for the subject.

2- For the evaluation of specific nutrition contents, a diet will be elaborated for a proposed case linked to the health education program. It will be carried out in groups of 4-6 people. For evaluation it will be sent through the Moodle platform on the scheduled dates. The grading of the exercise is as follows: correct calculation of the energy requirements (2), correct use of the exchange table and correct adjustment of the FCR (2), distribution of the exchanges (1), elaboration of a one-day diet (4), nutritional and dietary recommendations (1). This exercise is passed with a grade of 5. The grade will account for 30% of the grade for the subject.

3- Essay of a health education program integrating the contents of the participating subjects. It will be carried out in groups of 4 to 6 people, proposing an approximate length between 1,500 and 3,000 words. For the realization of the work, the students will have available in the Moodle platform a guide with the main aspects of its realization and grading, as well as the contacts of the teacher responsible for each subject. It is passed with 5 points and will represent a 20% of the grade of the subject.

It is a compulsory condition to pass all the evaluation sections in order to pass the subject. In no case will it be possible to pass the subject with a grade lower than 5 in any of its parts.