

25432 - Physiological bases of nutrition and drugs

Syllabus Information

Academic year: 2023/24

Subject: 25432 - Physiological bases of nutrition and drugs

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

275 - Escuela Universitaria de Enfermería de Huesca

375 - Escuela Universitaria de Enfermería de Teruel

Degree: 559 - Degree in Nursing

560 - Degree in Nursing

561 - Degree in Nursing

ECTS: 6.0

Year: 2

Semester: Annual

Subject type: Basic Education

Module:

1. General information

This subject aims at acquiring knowledge that allows the safe administration of drugs, as well as assessing changes in health, determining whether they are due to the treatments administered, allowing an appropriate decision making. Likewise, nutritional needs may be compromised by pathological situations. Its knowledge allows an early approach in such situations, adapting the diet to the different nutritional needs, taking into account the different social and cultural contexts of the people.

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. The student should demonstrate that they can explain the behaviour of drugs in the body taking into account pharmacokinetic and pharmacodynamic aspects.
2. The student should demonstrate knowledge of the different drug forms, as well as the different patterns of drug administration.
3. The student must demonstrate that they can correctly interpret the prescription.
4. The student should demonstrate recognition of the influence of age, pregnancy and lactation on drug response.
5. The student should demonstrate that they can establish energy and nutrient requirements.
6. The student must demonstrate that they can individually elaborate the individual's diet, taking into account the factors that may influence its monitoring.

3. Syllabus

Thematic block I: Physiological basis of pharmacology

Introduction to pharmacology: History and basic concepts for the study of pharmacology

Pharmacodynamics: mechanisms of action of drugs

General concepts of pharmacokinetics

Drug delivery and absorption

Drug distribution

Drug metabolism

Elimination of pharmaceuticals

Adverse reactions, pharmacovigilance and drug dependence

Thematic block II: Basic clinical pharmacotherapy

Pharmacology of the vegetative nervous system

Adrenergic drugs

Antiadrenergic drugs

Parasympathomimetic drugs

Parasympatholytic drugs

Pharmacology of cellular mediators: histamine

Pharmacology of cellular mediators: serotonin
Pharmacology of pain: local anaesthetic drugs
Pharmacology of pain: opioid drugs
Pharmacology of pain: non-steroidal anti-inflammatory drugs

Thematic block III: Physiological basis of nutrition

Historical development of Nutrition and Dietetics, the concept and importance as well as the interest of their study in the training of Nursing
Energy requirements
Nutrient Study
Study of food as a source of energy and nutrients
Food Safety
Nutritional Status Assessment
Study of nutrition in the different moments of the life cycle.
Study of nutrition in healthy people: Balanced diet. Mediterranean Diet.

4. Academic activities

Lectures (45 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.

Work (27h): hours dedicated to the realization of the subject work and tutorials **Individual student work (60h):** hours dedicated to the study of the theoretical contents of the subject **Evaluation activities (3h) :** hours dedicated to summative evaluation activities

The dates and schedules of the activities of the subject will be informed at the beginning of the subject, and will be published in the digital teaching ring.

5. Assessment system

1- The evaluation of the theoretical contents of the subject will be carried out by means of written tests, each of them divided in two parts, one part of multiple choice questions and another part of development questions, being necessary to pass both parts to pass each test. The first part consists of 50 multiple choice questions, with 4 options of answer of which only 1 is valid. Each correct answer adds 1 point, and each wrong answer subtracts 1/3, (i.e., 1 and 2 wrong answers do not subtract; 3, 4 or 5 wrong answers subtract 1; 6, 7 or 8 wrong answers subtract 2; 9, 10 or 11 wrong answers subtract 3; and so on) This first part of the exam is passed with 30 points. If not passed, the second part will not be corrected, and in this case the final grade of the test will correspond to the grade obtained in this first part.

The second part consists of developing a topic to choose from among three proposals. In this section, knowledge, synthesis capacity and adequacy of the written expression to the professional language will be assessed, valuing both the use of technical terminology and the spelling and grammatical correctness. In terms of qualification, and always provided it is passed, this second part has the exclusive purpose of qualifying the grade obtained in the first part of the test. Therefore, this part does not generate a numerical grade by itself, but will be graded as "pass" or "fail".

Since it is mandatory to pass both parts to pass each test, a grade of "not passed" in this section inevitably leads to the failure of the test, regardless of the grade obtained in the first part of the same. For the same reason, in no case may the grade of "pass" in this section be used to turn a "failure" in the first part into a "passed".

A first midterm exam will be held in January/February, with the thematic content of the first four-month period. If this first midterm is passed in this call, its grade will be kept during the whole academic year (1st and 2nd official calls). If the exam is not passed, it must be retaken together with the second midterm (corresponding to the theoretical content of the second four-month period), in the official calls. If only the first part of the subject is passed in the first call, only the second part of the subject must be passed in the second call. In other words, the grade of a first midterm passed is saved during the corresponding academic year. Only grades (final grade of 5) from "passed" onwards will be saved for a first midterm. Failed grades in the first midterm (lower than 5) will not be saved between different call in any case. The grades of the second midterm passed in case of a failed first midterm will not be saved between calls either. To pass the subject, the average of both midterms must be equal to or higher than 5, averaging between them only from a grade of 4.5. This section of the evaluation will account for 55% of the final summative grade of the subject.

2- For the evaluation of specific competencies in nutritional assessment and recommendations, a diet will be developed for a proposed case on a voluntary basis between February and March, which will be evaluated in two phases: A first phase including a face-to-face exam with multiple choice questions and development through the exchanges method assessing the following parts: correct calculation of the caloric value (2), proper use of the table of exchanges and correct adjustment of the FCF (2), daily distribution of exchanges (1), elaboration of a day's diet (3), proper distribution of fats and establishment of nutritional and dietary recommendations (1); and a second phase oral presentation-exposition of the diet presented and once the exam is passed, to justify and reason the nutritional and dietary decisions according to the case. This second one will have a grade of "pass" or "fail". In official calls, it will be evaluated only through a multiple-choice exam and development, without the need to make the oral presentation. Passed with 5 points. This section of the evaluation will represent 30% of the final grade of the subject.

3- For the evaluation of transversal and specific competences related to the integration of pharmacological and nutritional knowledge in the nursing discipline, an essay will be writing on a topic related to the contents of the subject. It will be carried out in groups of 4 to 6 people, with an approximate length between 1500 and 3000 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. It is passed with 5 points and will represent 15% of the final 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 the student pass the subject with a grade lower than 5 in any of its parts. In the evaluation and activities, the characteristics of the center where the degree is taught will be taken into account for Huesca and Teruel, always ensuring the acquisition of competencies.