



Universitat de Lleida

DEGREE CURRICULUM  
**NUTRIENT AND DRUG  
INTERACTION**

Coordination: TABERNER BONASTRE, PILAR

Academic year 2023-24

## Subject's general information

<b>Subject name</b>	NUTRIENT AND DRUG INTERACTION			
<b>Code</b>	100639			
<b>Semester</b>	2nd Q(SEMESTER) CONTINUED EVALUATION			
<b>Typology</b>	Degree	Course	Character	Modality
	Bachelor's Degree in Human Nutrition and Dietetics	3	COMPULSORY	Attendance-based
<b>Course number of credits (ECTS)</b>	3			
<b>Type of activity, credits, and groups</b>	<b>Activity type</b>	PRAULA		TEORIA
	<b>Number of credits</b>	1.5		1.5
	<b>Number of groups</b>	2		1
<b>Coordination</b>	TABERNER BONASTRE, PILAR			
<b>Department</b>	MEDICINE AND SURGERY			
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
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## Subject's extra information

Drug-nutrient interactions are a problem of great importance in clinical practice, since they can alter the nutritional status of the individual or the pharmacological response. These interactions are difficult to detect and identify, and their importance will depend on the characteristics of the drug and the patient.

The topics to be dealt with in this subject are highly topical since drugs are increasingly more specific, and the population is older and uses a greater number of drugs and for longer periods of time. In addition, it must be taken into account that the consumption of functional foods, phytotherapy and food supplements is increasing, which in most cases are perceived as harmless by patients and, however, can give rise to important interactions. Likewise, we must also take into account the possible interactions of drugs with artificial nutritional support both at the hospital and home level.

Drug-nutrient interactions are bidirectional. On the one hand, the nutritional status of the individual can be altered and, on the other, the efficacy or safety of pharmacological treatment.

Therefore, it is necessary for the students of the Degree in Human Nutrition and Dietetics to be aware of the possible interactions, to try to avoid them or detect them in the event that they occur.

This subject requires knowledge of Pharmacology, and since it is the first time that the student of the Degree comes into contact with this subject, concepts of said discipline will be treated so that the student can achieve a better understanding of the subject.

## Learning objectives

Students who pass this course should have achieved the following teaching objectives:

- Know the general principles of pharmacology
- Know the possible interactions between drugs and nutrients, and the influence of One and the Other in the absorption, distribution and elimination of both.
- Know the pharmacological treatments that cause or can cause situations of malnutrition in patients
- Know the populations at risk in drug-food interactions
- Know the interactions between artificial nutrition and drugs
- Know the possible interactions of food and physiotherapy or natural products
- Adapt the diet the drugs that I can return the patient

## Competences

- Understand clinical pharmacology and the interaction between drugs and nutrients.
- Recognize the essential elements of the dietitian-nutritionist profession, including ethical principles, legal responsibility and the exercise of the profession, applying the principle of social justice to professional practice and developing it with respect to people, their habits, beliefs and cultures.
- Develop the profession with respect to other health professionals, acquiring skills to work as a team.
- Recognize one's own limitations and the need to maintain and update professional competence, giving special importance to autonomous and continuous learning of new knowledge, products and techniques in nutrition and food, as well as motivation for quality.
- Communicate effectively, both orally and in writing, with people, health or industry professionals and the media, knowing how to use information and communication technologies, especially those related to nutrition and life habits.
- Know, critically assess and know how to use and apply information sources related to nutrition, food, lifestyles and health aspects.
- Know the limits of the profession and its competencies, identifying when interdisciplinary treatment or referral to another professional is necessary.
- That student knows how to apply their knowledge to their work or vocation in a professional way and possess the skills that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.
- That students have the ability to gather and interpret relevant data (normally within their area of study) to make judgments that include a reflection on relevant issues of a social, scientific or ethical nature.
- That student can transmit information, ideas, problems and solutions to both a specialized and non-specialized audience.
- That student has developed those learning skills necessary to undertake further studies with a high degree of autonomy.
- Have correct oral and written expression.
- Acquire essential notions of scientific thought.

## Subject contents

### THEORETICAL CONTENT

Chapter	Description	Hours	Teacher
1	Introduction to Pharmacology	1	
2	Pharmacokinetics (Absorption, distribution, metabolism and elimination of drugs) and pharmacodynamics	1	
3	Pharmaceutical forms. Routes of administration	1	
4	Adverse reactions. Pharmacovigilance	1	
5	Pharmacological interactions: pharmacokinetics and pharmacodynamics	1	
6	Pharmacokinetic and pharmacodynamic drug-food interactions	1	
7	Drugs and electrolytes (sodium, magnesium, potassium)	1	
8	Most prevalent pathological interactions: heart disease (hypertension, heart failure...), diabetes, dyslipidemia, Central Nervous System	1	
9	Drug-food interactions in anorexia and obesity: androgens and anabolics. Estrogens and progestins. contraceptives	1	
10	Drug-food interactions in special situations: pediatrics, pregnancy, lactation, geriatrics, AIDS, cancer and organ transplants	1	
11	Interactions of drugs with additives, contaminants, tobacco and alcohol	1	
12	Interactions of drugs with medicinal plants	1	
13	Drug interactions with artificial nutrition	1	

14	Effects of drugs on nutritional status	1	
15	Effects of nutritional status on the effect of drugs	1	

14 hours of seminars are scheduled, in 7 seminars of 2 hours each. Students are divided into groups.

## PRACTICAL CONTENT

- Seminar 1: Sources of drug information and interactions
- Seminar 2: Resolution of pharmacokinetic type problems related to the topics taught
- Seminar 3: Interactions with grapefruit juice and other juices
- Seminar 4: Interaction of anticoagulants and drugs
- Seminar 5: Interaction of antibiotics and drugs
- Seminar 6: Interaction of medicinal plants, food and drugs
- Seminar 7: Interactions in cancer patients

## Methodology

To achieve the objectives and acquire the assigned skills, the following activities are scheduled:

- Master classes

They are carried out with all students and are not compulsory. Their purpose is to provide an overview of the educational content related to the specific knowledge of the subject, highlighting those aspects that are related to the acquisition of skills. The transmission of information will be carried out through oral presentations and the support of presentations in pdf format (which the student will have at their disposal on the virtual campus). Classes may be face-to-face or virtual (through the virtual campus).

- Seminars

Seminars are scheduled in two groups and will be mandatory. These consist of carrying out complementary activities in order to delve into the aspects dealt with in the matter. The student must solve problems through personal and team work.

- Tutorials

They will have the purpose of sharing the thematic contents, guiding learning, clarifying doubts and establishing a conceptual diagram. It is an activity that will be carried out at the request of the students after previously contacting the corresponding teacher by email.

## Evaluation

Continuous evaluation will be carried out through 2 controls of the theoretical contents (multiple tests), which will account for 40% of the first part and 40% of the second. Each of the partials will be approved separately. The sum of the two will account for 80% of the final grade.

The final mark will be the sum of the different aspects evaluated:

- The conceptual and theoretical knowledge evaluated by test will constitute 80% of the final grade.
- The completion and participation in the scheduled seminars will represent 20% of the final grade. The evaluation of the seminars will be carried out through controlled attendance and the evaluation of the directed works with presentation in class. Failure to attend more than 3 seminars will mean a 0 in this part.

Theoretical content 80% of the final grade	Practical contents 20% of the final grade
Multiple choice test	Controlled attendance and works

1st control: 40%	Seminars: 20 %
2on control: 40%	

## Bibliography

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