COURSE DATA

DATA SUBJECT

Code: 33950
Name: Food Parasitology
Cycle: Undergraduate Studies
ECTS Credits: 6
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1205 - Degree in Human Nutrition and Dietetics	Facultat de Farmácia i Ciències de L'alimentació	3	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1205 - Degree in Human Nutrition and Dietetics	Food parasitology	COMPULSORY

COORDINATION

TRELIS VILLANUEVA MARIA

SUMMARY

The subject **Food Parasitology** (33950) is a compulsory subject in the third year of the Degree in Human Nutrition and Dietetics, which is taught at the Faculty of Pharmacy of the University of Valencia. In the current curriculum, there are 6 ECTS credits for semesters.

Parasitosis, especially when suffered repeatedly throughout life, has a negative effect on people's physical and cognitive development because it is associated with nutritional deficiencies, and in cases of malnutrition parasitosis are more frequent, more severe and longer-lasting. The parasite-malnutrition binomial is the most important, common and persistent health problem in developing countries.

The main objective of the course is to show students the importance of the relationship between parasites and malnutrition, making them aware of the mechanisms by which parasitic infections can affect human growth and nutritional status, through the study of taxonomic groups of human parasites and the harmful actions related to parasitosis. Likewise, together with the study of each parasitic disease or groups of parasitic diseases, students will reflect on the impact that the control of these diseases has on the achievement of the Sustainable Development Goals (SDGs) and the 2030 Agenda.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

There are no specified enrollment restrictions with other subjects of the curriculum.

OTHER REQUIREMENTS

In order to study Food parasitology, the students would need to have basic knowledge of General Biology and General Physiology taught in the basic module of this degree.

COMPETENCES / LEARNING OUTCOMES

1205 - Degree in Human Nutrition and Dietetics

Acquire basic training for the research activity, be able to formulate hypotheses, collect and interpret information for problem solving using the scientific method, and understand the importance and the limitations of scientific thought in the field of health and nutrition.

Be familiar with the hygiene and health measures for the prevention and control of foodborne parasitic diseases.

Capacidad de trabajar en grupo.

Communicate effectively, both orally and in writing, with people, with health or industry professionals and with the media, knowing how to use information and communication technologies, especially those related to nutrition and lifestyles.

Have an adequate knowledge of food-spoiling and food-contaminating parasites.

Know, judge and know how to use and apply the sources of information related to nutrition, food, lifestyles and health.

Know and understand the different types of biological cycles related to foodborne parasites.

Know and understand the epidemiology of foodborne microbial diseases.

Know parasitic groups with an impact on growth and human nutritional status.

Know the basic concepts of parasitology.

Know the parasites specific of meat products, fish products and by-products.

Know the specific concepts of food parasitology.

Master the techniques for sampling, diagnosing and identifying parasites in food.

DESCRIPTION OF CONTENTS

1. FOOD PARASITOLOGY INTRODUCTION

Basics of Parasitology. Concept and significance of parasitic infections in human nutrition. Concept of parasitism, parasites, parasite and host. Gradations or patterns of parasitism.
Specifics of Parasitology. Parasitic specificity. Anthroponoses and zoonoses. Carrier and reservoir. Types of hosts.
Harmful actions of parasites and diseases associated with parasitic infections. Diarrhea, malabsorption, liver dysfunction, duct obstruction, loss of appetite, anemia.
Impact of parasitism on growth and human nutritional status.
Classification and general study of parasites of importance in human nutrition.

2. PROTOZOAN PARASITES AND NUTRITIONAL DISORDERS

Classification, Epidemiology, Morphology, Biology and prophylaxis of human protozoan parasites of importance in human nutrition.

Harmful actions and pathologies related to human parasitic protozoa of importance in human nutrition. Repercussions of parasitosis:
- Intestinal dysfunctions: diarrhea (types), loss of nutrients, malabsorption syndromes (macro- and micronutrients).
- Hepatic dysfunctions: ectopic foci.
- Anemias of parasitic origin.

3. HELMINTHIASIS: FLUKES AND NUTRITIONAL DISORDERS

Classification, Epidemiology, Morphology, Biology and Prophylaxis of helminths, human parasitic trematodes of importance in human nutrition.

Harmful actions and pathologies related to human flukes of importance in human nutrition. Repercussions of parasitosis:
- Intestinal dysfunctions: diarrhea (types), loss of nutrients. Intestinal polyps.
- Hepatic dysfunctions: cell damage, compression, and duct obstruction. Cholangicarcinoma.
- Ectopic foci.
- Anemias of parasitic origin.

4. HELMINTHIASIS: CESTODIASIS AND NUTRITIONAL DISORDERS

Classification, Epidemiology, Morphology, Biology and prophylaxis of helminthes, cestodes, important in human nutrition.

Harmful actions and pathologies related to human parasitic tapeworms of importance in human nutrition. Repercussions of parasitosis:
- Gastrointestinal dysfunctions: loss of nutrients (competition) and hunger disorders.
- Hepatic dysfunctions: compression and obstruction of ducts.
- Nervous dysfunctions: nervousness, insomnia, bruxism, seizures.
- Anemias of parasitic origin.

5. HELMINTHIASIS: NEMATODIASIS AND NUTRICIONAL DISORDERS

Classification, Epidemiology, Morphology, Biology and prophylaxis of helminthes, nematodes, parasites of importance in human nutrition.

Harmful actions and pathologies related to human parasitic nematodes of importance in human nutrition. Repercussions of parasitosis:
- Gastrointestinal dysfunctions: diarrhea and loss of nutrients (malabsorption syndromes, lactose intolerance). Obstruction. Appendicitis.
- Löffler syndrome the eosinophilic pneumonia
- Natural canal obstruction and appendicitis.
- Anemias of parasitic origin.

6. ARTHROPODS OF INTEREST IN HUMAN NUTRITION

Classification and general characterization of the morphology and biology of arthropods important in human nutrition.
- Arthropod vectors of parasitic diseases of importance in human nutrition.
- Arthropod parasites responsible of human nutritional disorders. Myasis.

7. LABORATORY PRACTICS

- 1. Classification and anatomical-morphological study of arthropods of importance in human nutrition;
-2. Classification and anatomical-morphological study of trematodes and cestodes of importance in human nutrition;

-3. Classification and anatomical-morphological study of nematodes of importance in human nutrition;
-4. Classification and anatomical-morphological study of protozoa of importance in human nutrition.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	2,00
Theory	38,00
Seminar	2,00
Laboratory	15,00
Total hours	**57,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	17,00
Independent study and work	63,00
Preparation of lessons	10,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**90,00**

TEACHING METHODOLOGY

Theory sessions. They will be distributed in four hours a week in which the teacher will explain the theoretical program, focusing on the key concepts to understand the contents of the subject. In these classes, the student is encouraged to search for accessory or complementary information, guiding him or her in the use of the necessary bibliographic sources. To follow the class, the student is recommended to review the material available in the virtual classroom beforehand.

Practical laboratory sessions. They take place over four days in 4-hour sessions, in small groups and their attendance is mandatory. The student's work is directed step by step, to ensure that he acquires manual dexterity in the laboratory and solves the problems that are posed to him by himself. For repeaters, once the internship has been completed, the grade is kept for two subsequent years.

Group tutoring sessions. They will be organized in small groups in order to guide students and review content. It will be the ideal means for students to raise doubts or questions that arise throughout the development of the syllabus. Attendance is mandatory on the first enrolment.

Seminars/papers. These are seminars coordinated between the subjects of the first semester, which will be presented at the Seminar Day at the end of the semester. The regulations for coordinated seminars

available on the bachelor's degree website will be followed. All students must take the seminar, even if they are repeaters.

EVALUATION

The evaluation of the knowledge, competencies and skills acquired is based on the assessment of the following sections:

- Completion of a written test, to guarantee knowledge and understanding of the **theoretical contents** established by the subject. This section will contribute to the final grade with a percentage of **70%.** The grade in this section will have to be equal to or greater than 5 out of a total of 10 in order to pass it and make an average with internships and seminar.

- Evaluation **of laboratory work** by supervising the work carried out during the days of laboratory practice. This section will contribute to the final grade with a percentage of **20%.** Attendance is mandatory. The written test for the evaluation will be done on the last day of practice. There will be an extra written test to make up the practices before the theoretical exam. The test may not be repeated to raise the grade. The grade in this section will have to be equal to or greater than 5 out of a total of 10 in order to pass it and make an average with theory and seminars.

- Preparation, presentation and discussion of collective reports (**seminars**) on topics related to the contents explained in the classroom. The level of understanding of the contents, as well as the skills of presentation and discussion, will be assessed. This section will contribute to the final grade with a percentage of **10%.** Attendance is mandatory. The grade in this section will have to be equal to or greater than 5 out of a total of 10 in order to pass it and make an average with practice and theory.

- The student's attitude in theoretical, practical classes and tutorials **will be positively valued**. In this evaluation, participatory attendance in the discussions raised, ability to raise doubts and solve problems, critical spirit and attitude of respect for others will be considered.

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