COURSE DATA

DATA SUBJECT

Code: 34104
Name: Clinical Parasitology
Cycle: Undergraduate Studies
ECTS Credits: 4.5
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1201 - Degree in Pharmacy	Facultat de Farmàcia i Ciències de L'alimentació	5	First quarter

SUBJECT-MATTER

Degree	Subject-matter	Character
1201 - Degree in Pharmacy	Clinical parasitology	ELECTIVES

COORDINATION

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SUMMARY

The course is mainly oriented to provide more specific knowledge of parasitic diseases caused by protozoa, helminths (Trematodes, Cestodes, Nematodes and Acanthocephala) and arthropods that affect human beings. Such knowledge is aimed at clinical and epidemiological aspects, with special emphasis on the clinical characterization, the therapeutic update and the prophylactic guidelines of the different parasitic diseases. All of this is meant to generate students' own conclusions for practical application, using individual case studies. Consequently, Clinical Parasitology fits perfectly within some of the sustainable development goals (SDGs) established in the United Nations Agenda 2030. Concretely, six of these SDGs are part of the repercussions parasitic diseases have within the context of the world population. In general, countries, but particularly those in tropical and subtropical zones, present a series of parasitic diseases very much implicated in some of the objectives contemplated in the SDGs. Specifically, a reduction of poverty is aimed at (with consequences such as hunger, malnutrition, the lack of a life in dignity, the impossibility of having access to erducation, as well as diseases) putting an end to hunger and achieving food security together with improved nutrition; guaranteeing and promoting health and welfare; guaranteeing inclusive, equitative and quality education; and guaranteeing the availability of water and its sustainable management, with sanitation for everybody. All of this is fundamental in order to face parasitic diseases and, thus, achieve a more sustainable world, with a better future for all. Therefore, students will be able to draw relevant conclusions with regard to their future professional role. Consequently, the entire subject is divided in two parts:

A) General part: on the importance of parasitological laboratory procedures and its problems;

B) Special part: further subdivided into 3 groups (protozoa, helminths and arthropods) encompassing the epidemiological and clinical aspects of the Parasitic Diseases produced by the relevant species of each of the groups referred to and their impact on humans.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

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

OTHER REQUIREMENTS

It is recommended to have studied the subjects of "Parasitology" and Microbiological and Parasitological Analysis. The student should also have completed the subject "Immunology" to facilitate the study of the subject.

COMPETENCES / LEARNING OUTCOMES

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Acquire and develop the skills necessary for appropriate epidemiological and clinical management.

Act with autonomy in learning, making informed decisions in different contexts, issuing judgements based on experimentation and analysis, and transferring knowledge to new situations.

Address clinical problem-solving in an interdisciplinary manner with other professionals.

Collaborate effectively in work teams, assuming responsibilities and leadership roles and contributing to collective improvement and development.

Contribute to the design, development and implementation of solutions that respond to social demands, taking into account the Sustainable Development Goals as a reference.

Demonstrate critical and self-critical thinking in the field of the degree programme, considering aspects such as professional ethics, moral values and the social implications of the different activities carried out.

Develop future professional awareness of the relevance of diagnosis, treatment and prophylaxis to be carried out.

Develop reasoned argumentation and rational criticism.

Know and critically manage documentary sources of all kinds within the clinical field of parasitic diseases.

Know and understand, within the field of the degree programme, gender inequalities in society; integrate different needs and preferences based on sex and gender into the design of solutions and problem solving.

Know how to communicate effectively, both orally and in writing, adapting to the characteristics of the

situation and the audience.

Master parasitological terminology at clinical level.

Master the techniques necessary for proper parasitological processing of any biological sample suitable for analysis in a parasitology laboratory.

Propose creative and innovative solutions to complex situations or problems within the field of knowledge, to respond to diverse professional and social needs.

Reinforce the acquisition of the general competences of the curriculum.

Understand the practical usefulness of the therapeutic arsenal available in Spain and abroad for the treatment of each human parasitic disease.

DESCRIPTION OF CONTENTS

1. Part I

Lessons 1 to 3: These first three lessons address, in a general manner, the appropriate protocol of treatment diagnosis of each biological material that is likely to be discussed from a parasitological perspective, as well as all the problems which could later appear in each diagnostic protocol.

2. Part II

The remainder of the lessons examines epidemiological aspects and clinical of parasitic diseases caused by Protozoa, Helminths (Trematodes, Cestodes, Nematodes and Acanthocephala) and Arthropods affecting humans, in response to the different parasitological microhabitats.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Tutorials	1,00
Theory	30,00
Seminar	1,00
Laboratory	13,00
Total hours	**45,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00

Individual or group project	4,50
Independent study and work	0,00
Preparation of lessons	63,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Total hours	**67,50**

TEACHING METHODOLOGY

• ***Lectures.*** In these classes the professor will give an overview of the topic under study with special emphasis on new aspects or special complexity and making use of new teaching tools. During these contact hours of theory, the professor explained Parasitic Diseases caused by Protozoa, Helminths (trematodes, cestodes, nematodes and Acanthocephala) and by arthropods that affect human beings. Such knowledge is aimed at clinical and epidemiological aspects, with special emphasis on the clinical, therapeutic and updating prophylactic regimens for each of the different parasitic diseases. Meanwhile, students should take note of the information they receive, while they should try to raise any doubts and questions that arise at the time.

• ***Practical classes***. In the contact hours of practical activity in the lab focuses on two parts: the teacher will present the objectives, report on material handling, will oversee the job done and help the interpretation of results, by contrast, students conducted on an individual recognition of parasite species in different biological samples, viewing control slides and the resolution of practical cases.

• ***Tutoring***. During this time, the student must present their needs, while Professor proceed to guide and resolve any doubts, all in order to achieve an adequate knowledge of the matter. Students will come to them in small groups.

• ***Seminars***. Students, in groups of up to four students, develop and expose a work on some of the issues proposed by the teacher. These seminars will be exercised to find information, the ability to outline and speaking. Also encourage teamwork.

OBSERVATION: The agenda contemplated in the academic year 2020-2021 (with health situation maintained by Covid-19) will only be activated if the health situation requires it and with prior agreement of the Governing Council.

EVALUATION

To evaluate the student's progress, i.e. his/her level acquired, the total number of hours present together with the daily work carried out are considered, which enables the teacher to obtain a dynamic image of the development of each student along the course.

However, the numerical qualifications of his/her knowledge and acquired skills is based on methods which are a comparable and are an objective measure, with recorded results, implying the assessment of written tests.

In this sense, and by means of a theoretical/practical exam of **theoretical classes**, questions, clinical cases and tests are given with the aim to assess the acquired knowledge, i.e. 5 out of 10 points have to be obtained to pass the exam (constituting 85% of the final mark).

The **practical content** is considered as well, i.e. the student has to attend all practical classes (in justifiable cases, an alternative group will be allocated), at the same time, the practical notebook has to be filled in correctly. In order to pass this exam, 6 out of 10 points have to be obtained (4 for attendance and 6 for the contents of the notebook) which constitutes 10% of the final mark.

The student's attitude and dedication in **tutorials** are also considered, requiring his/her obligatory presence, which constitutes 5% of the final mark.

Students who participate in the **seminar** are specifically assessed, i.e. a special qualification is obtained, constituting 5% of the final mark.

Those students who are not present in the first call for the theoretical exam are officially considered absent and will have to be present for the second call.

Finally, student assessment of theory as well as practice of those students who do not pass the subject during the academic year will be kept for the next two academic years.

OBSERVATION: The agenda contemplated in the academic year 2020-2021 (with health situation maintained by Covid-19) will only be activated if the health situation requires it and with prior agreement of the Governing Council.

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