

**COURSE DATA****DATA SUBJECT****Code:** 34476**Name:** Infectious illnesses and clinical microbiology**Cycle:** Undergraduate Studies**ECTS Credits:** 4.5**Academic year:** 2025-26**STUDY (S)**

Degree	Center	Acad. year	Period
1204 - Degree in Medicine	Facultat de Medicina i Odontologia	5	Second quarter

**SUBJECT-MATTER**

Degree	Subject-matter	Character
1204 - Degree in Medicine	Human clinical training II	COMPULSORY

**COORDINATION**

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ARTERO MORA ARTURO

**SUMMARY**

The main objective of the subject is that the student acquires the theoretical knowledge, the clinical abilities and the attitudes and skills that make him/her able to guide rationally the diagnosis and the treatment of the most common infectious diseases in the field of the General Medicine.

**PREVIOUS KNOWLEDGE****RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE**

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

**OTHER REQUIREMENTS****COMPETENCES / LEARNING OUTCOMES****1204 - Degree in Medicine**



Acknowledge diversity and multiculturality.

Acquire proper clinical experience in hospitals, health care centres and other health institutions, under supervision, as well as basic knowledge of clinical management focused on the patient and the correct use of tests, medicines and other resources available in the health care system.

Capacity for communicating with professional circles from other domains.

Consideration of ethics as a fundamental value in the professional practise.

Criticism and self-criticism skills.

Establish the diagnosis, prognosis and treatment, applying principles based on the best information available and on conditions of clinical safety.

Have the capacity to make an initial diagnosis and establish a reasonable strategy of diagnosis.

Indicate the most accurate therapy in acute and chronic processes prevailing, as well as for terminally ill patients.

Is aware of the main infectious agents and their mechanisms of action.

Know how to use IT in clinical, therapeutic and preventive activities, and those of research.

Know how to use the sources of clinical and biomedical information available, and value them critically in order to obtain, organise, interpret and communicate scientific and sanitary information.

Knows how to evaluate modifications in clinical parameters at different ages.

Knows how to perform a complete anamnesis, focused on the patient and orientated to various pathologies, interpreting its meaning.

Knows how to set an action plan, focused on the patients needs and the family and social environment, which should be coherent regarding the patients symptoms and signs.

Obtain and elaborate a clinical history with relevant information.

Perform a physical examination and a mental health assessment.

Plan and propose appropriate preventive measures for each clinical situation.

Proper organisation and planning of the workload and timing in professional activities.

Reconocer, diagnosticar y orientar el manejo de las principales patologías infecciosas en los distintos órganos y aparatos.

Team-working skills and engaging with other people in the same line of work or different.

Working capacity to function in an international context.



## DESCRIPTION OF CONTENTS

The theoretical program consists of 17 one-hour lectures. Nine topics correspond to Infectious Diseases and 8 topics to Clinical Microbiology.

### 1. Theoretical Teaching. Infectious Diseases.

1. Approach to the potentially infected patient.
2. HIV Infection. Concept. Etiology. Natural history of HIV infection and AIDS. Clinical presentation. Diagnosis. Treatment. Prevention.
3. Nosocomial Infections. Epidemiology. Etiology. Pathogenic aspects. Diagnosis. Prevention and treatment measures.
4. Fever of unknown origin. Concept. Defining criteria and main causes. Diagnosis. Clinical forms. Prognosis and treatment.
5. Mycobacterial Infections. Tuberculosis: Concept. Etiology. Clinical presentation of the pulmonary, lymph node, miliary, and extrapulmonary forms. Diagnosis. Prevention. Treatment of pulmonary and extrapulmonary forms. Non-tuberculous mycobacterial infections.
6. Fungal diseases. Etiology and pathogenesis. Diagnosis. Prevention. Treatment.
7. Rickettsial, mycoplasmal, and chlamydial infections. Etiology. Epidemiology. Clinical manifestations. Diagnosis. Treatment. Prevention.
8. Protozoal infections: Malaria, amoebiasis, and leishmaniasis. Etiology. Epidemiology. Clinical manifestations. Diagnosis. Treatment. Prevention.
9. Respiratory viral infections. COVID-19. Influenza. Etiology. Epidemiology. Clinical manifestations. Diagnosis. Treatment. Prevention.

### 2. Theoretical teaching. Clinical microbiology.

1. Microbiology of digestive tract infections. Etiological aspects and microbiological diagnosis of: I) odonto-stomatological infections, II) esophagitis, III) gastritis and gastroduodenal ulcers, IV) diarrheal disease.
2. Microbiology of genitourinary infections (I). Etiological aspects and microbiological diagnosis of infections: I) lower and upper urinary tract, II) prostate, III) vaginal.
3. Etiological aspects and microbiological diagnosis of sexually transmitted diseases (STDs): I) differential diagnosis of acute anterior urethritis, II) differential diagnosis of genital ulcers, III) differential diagnosis of verrucous and/or exophytic lesions. STDs and acquired immunodeficiency syndrome (AIDS).
4. Microbiology of central nervous system infections. Etiological aspects and microbiological diagnosis of meningeal infections, brain abscesses, and encephalitis.
5. Microbiology of cardiovascular and systemic infections. Etiological aspects and microbiological diagnosis of microbial endocarditis. Sepsis and systemic inflammatory response syndrome (SIRS).
6. Microbiology of respiratory tract infections (I). Etiological aspects and microbiological diagnosis of upper respiratory tract infections: I) ocular, II) otorhinolaryngological.
7. Microbiology of respiratory tract infections (II). Etiological aspects and microbiological diagnosis of pleuropulmonary infections.
8. Microbiology of skin, soft tissue, and musculoskeletal infections. Etiological aspects and microbiological diagnosis of: I) skin and appendage infections; II) exanthematous processes; III) cellulitis; IV) musculoskeletal and osteoarticular infections.



### 3. SEMINARS OF INFECTIOUS DISEASES

1. Urinary tract infection.
2. Endocarditis.
3. Central nervous system infections.
4. Infection in travelers.
5. Sepsis.
6. Respiratory infection.
7. Osteoarticular and soft tissue infection.
8. Infection in an immunocompromised patient.

### 4. CLINICAL CASES AND SEMINARS OF CLINICAL MICROBIOLOGY

#### CLINICAL CASES

1. Microbiological diagnosis of pharyngotonsillitis.
2. Microbiological diagnosis of genital ulcers.
3. Microbiological diagnosis of infectious diarrhea.
4. Microbiological diagnosis of unexplained fever.

#### SEMINARS

1. Evaluation of antibiogram results.
2. Evaluation of infectious serology results.
3. Evaluation of culture results.
4. Evaluation of molecular biology tests.

### 5. CLINICAL PRACTICES

Students will carry out their clinical placements in several university hospitals. Attending practical sessions is mandatory.

## WORKLOAD

### PRESENCIAL ACTIVITIES

Activity	Hours
Theory	19,00
Seminars	24,00
Laboratory	0,00
In-class tutorials	0,00
Clinical practice	13,00
<b>Total hours</b>	<b>56,00</b>

### NON PRESENCIAL ACTIVITIES

Activity	Hours
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Attendance at other activities	0,00
Individual or group project	0,00
Independent study and work	56,00
Preparation of lessons	0,00
Preparation for assessment activities	0,00
Resolution of case studies	0,00
Preparation of supplementary reports	0,00
Preparation of the internship report and evaluation of the internship	0,00
<b>Total hours</b>	<b>56,00</b>

## TEACHING METHODOLOGY

In each lesson a synthesis of the main aspects of the most common infectious diseases will be made and the students' active participation will be encouraged.

The practical teaching will be taught in each of the four University Hospitals ensuring the homogeneity of the contents. The student will make in the hospitals: clinical training with patients, hospitalized and in outpatient clinic, and practices in the Clinical Microbiology services; and seminars with clinical cases discussion, diagnostic procedures and evaluation of the results of the microbiological tests.

The gender perspective, the respect for diversity, and the sustainable development goals (SDGs) will be incorporated into teaching, whenever possible.

## EVALUATION

Grading for the two subjects comprising the course, infectious diseases and clinical microbiology, will be done separately out of 10 points. A pass mark will be awarded for each part when the student completes 50% of the theoretical and practical content. Passing both sections is essential to obtain a pass mark. The final grade for the course is the sum of the grade for infectious diseases and the grade for clinical microbiology, divided by 2. To pass the course, a student must obtain a 5 in each part. If one of the two parts is passed in the first sitting, the grade obtained will be carried over to the second sitting of the current year.

**Assessment of Infectious Diseases:** A final written exam will be administered, which will be the same for all groups in the course. A multiple-choice written exam with 40 multiple-choice questions with 4 options, of which only one will be correct. For each correct answer, 0.25 points will be awarded, for each blank answer, zero points, and for each incorrect answer, -0.0833 points. Final grade for infectious diseases: Maximum grade 10, pass with 5.

Attendance at practical activities is mandatory. Students are considered to meet this requirement if they have attended at least 80% of these activities and have adequately justified their inability to attend the remaining sessions due to force majeure. This requirement is essential to pass the course.

Students are reminded of the importance of completing the evaluation surveys for all faculty members in the degree courses.

**Clinical Microbiology Assessment:** Theoretical assessment (25% of the final grade). 5 points. The content of the test will be the same for all groups and aims to assess the knowledge acquired on the contents of



the theoretical program. A final written multiple-choice exam will be administered (randomly correcting one correct answer for every four incorrect answers) with 20 questions with four options, of which only one will be correct. For each correct answer, 0.25 points will be awarded, for a blank answer, zero points, and for each error, -0.0625 points. Practical assessment (25% of the final grade). The content of the test will be the same for all groups. It is worth 5 points. It will be administered through a final written multiple-choice exam with 20 questions related to four practical cases of microbiological diagnostic problems, applying the same assessment criteria as the theoretical exam.

Final grade for Clinical Microbiology: Theory + Practice. Maximum grade 10, pass with 5. A grade of 20% (2 points) is required in each of the sections (theoretical assessment and practical assessment) to calculate the total and obtain a grade on the record.

- It is a requirement for the student to have completed all of their practical work to advance the call for this course.

- Attendance at practical activities is mandatory. A student is considered to have met this requirement if they have attended at least 80% of these activities and have adequately justified their inability to attend the remaining sessions due to force majeure. This requirement must be met to pass the course.

- Students are reminded of the importance of completing the evaluation surveys for all faculty members of the degree courses.

## REFERENCES

### BÁSICAS

- Kasper DL, Fauci AS, Hauser SL, Longo DL, Jameson JL, Loscalzo J, eds. Harrison: Principios de medicina interna. Vol 2. 19ª ed. México; McGraw-Hill; 2016. ISBN 978-607-15-1337-3
- Artero A, Eiros JM, Oteo JA, del Pozo JA. Manual de enfermedades infecciosas. 3ª edición. Valladolid: Ediciones Universidad de Valladolid; 2019. ISBN:978-84-84488988-6
- Ryan KJ, Ray CG. Sherris. Microbiología médica (2011). 5ª ed. McGraw-Hill Interamericana Editores SA. ISBN: 978-607-15-0554-5.
- Prats Pastor, G. (2013) Microbiología y parasitología médicas. Médica Panamericana SA. Madrid. ISBN: 978-84-9835-429-4.
- Carroll KC, Pfaller M, Carroll C, Landry M, McAdam A, Patel R, Richter, S, Warnock S. (2019). Manual of Clinical Microbiology. 2 vols. 12th ed., ASM Press. ISBN 9781555819835

### RECURSOS e-Salut

- ClinicalKey Student Medicina, Odontologia y Enfermería [ <https://uv-es.libguides.com/RecursosSalut> ]
- Acces Medicina [ [https://uv-es.libguides.com/Access\\_Medicina](https://uv-es.libguides.com/Access_Medicina) ]
- Médica Panamericana [ [https://uv-es.libguides.com/Medica\\_Panamericana](https://uv-es.libguides.com/Medica_Panamericana) ]