

**COURSE DATA****Data Subject**

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| Code | 34476 |
| Name | Infectious illnesses and clinical microbiology |
| Cycle | Grade |
| ECTS Credits | 4.5 |
| Academic year | 2023 - 2024 |

Study (s)

| Degree | Center | Acad. year | Period |
|---------------------------|------------------------------------|-------------------|---------------|
| 1204 - Degree in Medicine | Faculty of Medicine and Odontology | 5 | Second term |

Subject-matter

| Degree | Subject-matter | Character |
|---------------------------|---------------------------------|------------------|
| 1204 - Degree in Medicine | 13 - Human clinical training II | Obligatory |

Coordination

| Name | Department |
|-----------------------------|--------------------------------|
| ARTERO MORA, ARTURO | 260 - Medicine |
| NOGUEIRA COITO, JOSE MIGUEL | 275 - Microbiology and Ecology |

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

OUTCOMES

1204 - Degree in Medicine

- Obtain and elaborate a clinical history with relevant information.
- Perform a physical examination and a mental health assessment.
- Have the capacity to make an initial diagnosis and establish a reasonable strategy of diagnosis.
- Establish the diagnosis, prognosis and treatment, applying principles based on the best information available and on conditions of clinical safety.
- Indicate the most accurate therapy in acute and chronic processes prevailing, as well as for terminally ill patients.
- Plan and propose appropriate preventive measures for each clinical situation.
- 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.
- 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.
- Know how to use IT in clinical, therapeutic and preventive activities, and those of research.
- Proper organisation and planning of the workload and timing in professional activities.
- Team-working skills and engaging with other people in the same line of work or different.
- Criticism and self-criticism skills.
- Capacity for communicating with professional circles from other domains.
- Acknowledge diversity and multiculturality.
- Consideration of ethics as a fundamental value in the professional practise.
- Working capacity to function in an international context.
- Is aware of the main infectious agents and their mechanisms of action.
- Recognises, diagnoses, and guides the management of the main infectious pathologies affecting various organs and systems.
- Knows how to perform a complete anamnesis, focused on the patient and orientated to various pathologies, interpreting its meaning.
- Knows how to evaluate modifications in clinical parameters at different ages.
- 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.



LEARNING OUTCOMES

- Acquisition of clinical attitudes, abilities and skills that enable the approach to the learning of the medical-surgical pathology in these fields.
- Evaluating the seriousness of the patient and the information to be delivered to the patient and the family.
- Recognising, diagnosing and treating the infectious diseases. Prevention mechanisms of the infections.
- Capacity to set, within an infectious diseases, the differential diagnosis and to establish the procedures for the etiologic diagnosis.
- Knowledge of the procedures of the microbiological diagnosis. Capacity to develop determined basic methods of microbiological diagnosis.
- Acquiring the skill to maintain a critical analysis of the knowledge and publications.
- Knowing how to identify the complex symptoms that must be sent to a specialized centre.
- Communicating properly the information about the seriousness of the disease to the patient and the family.

DESCRIPTION OF CONTENTS

0. The program consists on 18 lessons lasting one hour of duration. Eight units correspond to Infectious Diseases and eight units to Clinical Microbiology.

1. Theoretical Teaching. Infectious Diseases.

1. Approach to the potentially infected patient.
2. HIV infection. Concept. Aetiology. Natural history of HIV infection and AIDS. Clinical picture. Diagnosis. Treatment. Prevention.
3. Nosocomial infections. Epidemiology. A etiology. Pathogenic aspects. Diagnosis. Prevention measures and treatment.
4. Fever of unknown origin. Concept. Defining criteria and main causes. Diagnosis. Clinical ways. Prognosis and treatment.
5. Infections by mycobacterium. Tuberculosis: concept. Etiology. Clinical symptoms of the pulmonary, ganglion and milliary ways and extra-pulmonary ways. Diagnosis. Prevention. Treatment of the pulmonary and extra-pulmonary ways. Infections by non-tuberculous mycobacterium.
6. Enfermedades causadas por hongos. Etiology and pathogenesis. Diagnosis. Prevention. Treatment.
7. Infections by Rickettsias, mycoplasmas and Chlamydias. Etiology. Epidemiology. Clinical manifestations. Diagnosis. Treatment. Prevention.
8. Infections by protozoa: malaria, amebiasis and leishmaniosis. Etiology. Epidemiology. Clinical manifestations. Diagnosis. Treatment. Prevention.



2. Theoretical teaching. Clinical microbiology.

1. Microbiology of the digestive system infections. Etiological aspects and microbiological diagnosis of I) oral and dental infections, II) esophagitis, III) gastritis and gastroduodenal ulcer, IV) diarrhea.
2. Microbiology of genitourinary infections (I). Etiological aspects and microbiological diagnosis of urinary tract infection, II) prostate, III) vaginal.
3. Etiological and microbiological aspects of sexually transmitted diseases (STD):
I) Differential diagnosis of acute anterior urethritis, II) genital ulcers. II) warts and exotic lesions. STD and acquired immunodeficiency syndrome (AIDS).
4. Microbiology of central nervous system infections. Etiological aspects and microbiological diagnosis of meningitis, encephalitis and brain abscesses.
5. Microbiology of systemic and cardiovascular infections. Etiological aspects and microbiological diagnosis of the microbial endocarditis. Sepsis and systemic inflammatory response syndrome (SIRS).
6. Microbiology of the respiratory system infections (I). Etiological aspects and microbiological diagnosis of upper respiratory tract infections: I) ocular and II) otorhinolaryngological.
7. Microbiology of the respiratory system infections (II). Etiological aspects and microbiological diagnosis of lower respiratory tract and pleural infections.
8. Microbiology of the cutaneous infections, soft tissues and locomotor system. Etiological aspects and microbiological diagnosis of: I) skin and skin appendages infections, II) exanthematous processes, III) cellulites, IV) muscle-skeletal and osteoarticular infections.

3. SEMINARS OF INFECTIOUS DISEASES

1. Urinary infection.
2. Endocarditis.
3. Central nervous system infections.
4. Passenger infections.
5. Sepsis.
6. Respiratory infections.
7. Osteoarticular and soft parts infection.
8. Immune-depressed patient infection.

4. CLINICAL CASES AND SEMINARS OF CLINICAL MICROBIOLOGY

CLINICAL CASES

- 1.- Microbiological diagnosis of pharynx-tonsillitis.
- 2.- Microbiological diagnosis of genital ulcers.
- 3.- Microbiological diagnosis of infectious diarrhea.
- 4.- Microbiological diagnosis of fever of unknown origin.

SEMINARS

- Seminar 1.-Evaluation of antimicrobial susceptibility testing results.
Seminar 2.- Evaluation of infectious serology results.



Seminar 3.- Evaluation of microbial culture results.

Seminar 4.- Evaluation of molecular biology testing results.

5. CLINICAL PRACTICES

They will be developed in the different university hospitals.

WORKLOAD

| ACTIVITY | Hours | % To be attended |
|---------------------------------|---------------|------------------|
| Seminars | 24,00 | 100 |
| Theory classes | 19,00 | 100 |
| Clinical practice | 13,02 | 100 |
| Study and independent work | 40,00 | 0 |
| Readings supplementary material | 16,00 | 0 |
| TOTAL | 112,02 | |

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 and the sustainable development goals (SDGs) will be incorporated into teaching, whenever possible.

EVALUATION



REFERENCES

Basic

- 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.
- Recursos-e Salut: ClinicalKey Student. Elsevier (Scopus, ScienceDirect)
uv-es.libguides.com/RecursosSalut/BibliotecaSalut

Additional

- 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