

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

Code	34479
Name	Pathology of the circulatory system
Cycle	Grade
ECTS Credits	6.0
Academic year	2023 - 2024

Study (s)

Degree	Center	Acad. year	Period
1204 - Degree in Medicine	Faculty of Medicine and Odontology	3	Second term

Subject-matter

Degree	Subject-matter	Character
1204 - Degree in Medicine	14 - Human clinical training III	Obligatory

Coordination

Name	Department
MIRALLES HERNANDEZ, MANUEL	40 - Surgery
SANCHIS FORES, JUAN	260 - Medicine

SUMMARY

This subject involves the content related with the prevention, diagnosis and treatment of the cardiovascular diseases based on the scientific knowledge of these diseases. It has as the main goal the obtaining, by the student, a general training in this pathology, focused on the preparation for the fulfillment of activities with professional nature in the field of Medicine. The subject involves the knowledge of the clinical symptoms related with the diseases of the circulatory system and the acquisition of skills and abilities that allow the student to diagnose properly the cardiovascular diseases and to develop a proper action in the management of the patients with these diseases.

PREVIOUS KNOWLEDGE



Relationship to other subjects of the same degree

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

Other requirements

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.
- Understand the importance and the limitations of scientific thinking in the study, prevention and management of diseases.
- Organizar y planificar adecuadamente la carga de trabajo y el tiempo en las actividades profesionales.
- Capacidad para trabajar en equipo y para relacionarse con otras personas del mismo o distinto ámbito profesional.
- 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.
- Recognises, diagnoses, and guides the management of the main cardiocirculatory pathologies.
- Recognises, diagnoses, and guides the management of vital risk situations.



- Knows how to perform a complete anamnesis, focused on the patient and orientated to various pathologies, interpreting its meaning.
- Knows how to perform a physical examination of the body organs and systems, as well as a psychopathological exploration, interpreting their meanings.
- Knows how to evaluate modifications in clinical parameters at different ages.
- Knows how to set an action plan, focused on the patient's needs and the family and social environment, which should be coherent regarding the patient's symptoms and signs.

- To recognize the main clinical characteristics of the syndromes related with the circulatory system and the pathological entities, their pathogenic mechanisms and their physiopathology, as well as their importance and their prevalence in the population.
- To know how to perform the differential diagnosis and to lead the initial treatment of the patients with circulatory system diseases.
- To know the diagnosis techniques used dealing with patients with cardiovascular diseases, the bases by which they are founded, their characteristics, utility, main indications and limitations.
- To know the main therapeutic options available for the treatment, both medical and surgical, of the circulatory system diseases and for their prevention, as well as the bases by which their application is founded.
- To assess the prognosis and to know how to transmit this information to the patient and his/her family.

DESCRIPTION OF CONTENTS

1. THEORETICAL LESSONS

- 1.-Electrical activity of the heart. The normal electrocardiogram. Classification of cardiac arrhythmias.
- 2.- Bradyarrhythmias. Atrial fibrillation and flutter.
- 3.-Supraventricular tachycardias. Wolff-Parkinson-White syndrome.
- 4.-Ventricular arrhythmias. Differential diagnosis of syncope.
- 5.-Heart failure: Definition. Classification. Epidemiology. Pathophysiology.
- 6.-Heart failure: Clinical manifestations. Complementary test. Diagnosis. Risk stratification.
- 7.-Heart failure: Treatment. Reduced ejection fraction. Preserved ejection fraction. Acute heart failure.
- 8.-Risk factors. Hypertension.
- 9.- Chronic coronary syndromes: angina pectoris
- 10.-Acute coronary syndromes without persistent ST-segment elevation.
- 11.-Acute myocardial infarction with persistent ST-segment elevation.
- 12.-Aortic valve diseases.
- 13.-Mitral valve diseases. Other valve diseases. Congenital heart diseases in adults.
- 14.- Endocarditis. Myocarditis.
- 15.-Pericardial syndromes.
- 16.-Cardiomyopathies.



- 17.-Surgical indications for valve diseases.
- 18.-Surgical indications for ischemic heart disease.
- 19.-Acute peripheral ischemia syndromes. Arterial injuries
- 20.-Chronic peripheral ischemia syndromes.
- 21.-Carotid stenosis. Supra-aortic trunk alterations.
- 22.-Acute aortic syndromes. Aortic dissection.
- 23.-Arterial aneurysms.
- 24.-Venous insufficiencies. Varicose veins.

2. PRACTICAL CLASSES - SEMINARS

- 1.-Syncope.
- 2.-Palpitations.
- 3.-Patient with dyspnea.
- 4.-Patient with anasarca (generalized edema).
- 5.-Stable angina.
- 6.-Patient with acute chest pain.
- 7.-Cardiac auscultation.
- 8.-Electrocardiogram.
- 9.-Cardiac imaging.
- 10.-Interventional cardiology in structural heart disease.
- 11.-Patient with venous thrombosis.
- 12.-Patient with diabetic foot.
- 13.-Arteriovenous fistulas.
- 14.-Vascular examination. Diagnostic techniques.
- 15.-Extracorporeal circulation. Circulatory assistance.
- 16.-Heart transplantation.

3. CLINICAL PRACTICES AND WORKSHOPS IN HOSPITALS

Anamnesis, exploration, diagnostic orientation, prognostic evaluation and therapeutic approach in the patient with:

- 1.- Cardiac insufficiency.
- 2.- Ischemic cardiopathology.
- 3.- Cardiac valve disease.
- 4.- Invasive and non-invasive diagnostic techniques.

Electrocardiography workshops:

- 1.- Abnormalities in the waves, axis and intervals of the ECG. Systematic interpretation of the ECG.
- 2.-Atrial enlargement and ventricular hypertrophy. Bundle branch blocks. Atrioventricular blocks.
- 3.- Ischemia, lesion and necrosis.
- 4.- Supraventricular and ventricular arrhythmias.

**WORKLOAD**

ACTIVITY	Hours	% To be attended
Seminars	26,00	100
Theory classes	26,00	100
Clinical practice	23,01	100
Development of individual work	5,00	0
Study and independent work	55,00	0
Readings supplementary material	5,00	0
Preparation of evaluation activities	5,00	0
Preparation of practical classes and problem	3,00	0
Resolution of case studies	2,00	0
TOTAL	150,01	

TEACHING METHODOLOGY

- Theoretical lessons, 23 thematic units.
- Seminar practical lessons, 18 thematic units.
 - Clinical cases evaluation.
 - Seminars about the diagnosis techniques.
 - Seminars about therapeutic techniques.
- Hospital clinical practices.

The gender perspective and the Sustainable Development Goals (SDGs) will be incorporated into the development goals (SDGs) into teaching, whenever possible.

EVALUATION

Only students who have completed the clinical practice sessions will be eligible to take the exam.

A) Continuous evaluation:

It takes place throughout the semester and is related to the topics already covered in the course, divided into blocks that group topics based on their content. Two blocks will cover the medical part of the subject, and one block will cover the surgical part.



It is conducted through questionnaires with multiple-choice questions (four possible answers, one correct answer that adds 1 point, and incorrect answers deduct 0.33 points).

Continuous assessment represents 30% of the final grade.

B) Final exam:

Which carries a weight of 70% in the final grade. It consists of an exam with 70 multiple-choice questions. Each question has 4 possible answers, one correct answer that adds 1 point, and incorrect answers deduct 0.33 points. Forty-two questions will be from the medical part, and 28 questions will be from the surgical part.

The duration of the exam is 90 minutes, and the dates for both the first and second exams are scheduled by the institution. The exam format is in-person. The final grade consists of the sum of the continuous assessment result (30%) plus the final exam result (70%). A passing grade is achieved by reaching 50% of the maximum score.

Attendance to practice sessions is mandatory. Unjustified absence from more than 20% of the sessions will result in the inability to pass the subject.

Students are reminded of the importance of completing evaluation surveys for all teaching staff of the degree subjects.

REFERENCES

Basic

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 - Guía ESC/EACTS 2021 sobre el diagnóstico y tratamiento de las valvulopatías. Alec Vahanian, Friedhelm Beyersdorf, Fabien Praz, Milan Milojevic, Stephan Baldus, Johann Bauersachs, et al. 10.1016/j.recesp.2021.11.023. Rev Esp Cardiol. 2022;75(6):524.e1-524.e69
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Additional

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