

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

Code	34479
Name	Pathology of the circulatory system
Cycle	Grade
ECTS Credits	6.0
Academic year	2022 - 2023

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
CHORRO GASCO, FRANCISCO JAVIER	260 - Medicine
MIRALLES HERNANDEZ, MANUEL	40 - Surgery

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

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.
- Understand the importance and the limitations of scientific thinking in the study, prevention and management of diseases.
- 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.
- 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 patients needs and the family and social environment, which should be coherent regarding the patients symptoms and signs.

LEARNING OUTCOMES

- 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 asses the prognosis and to know how to transmit this information to the patient and his/her family.

DESCRIPTION OF CONTENTS

1. THEORETICAL LESSONS

1. Heart failure: aetiology, clinical manifestations and diagnosis.
2. Heart failure: treatment.
- 3.- Acute heart failure: pulmonary edema. Cardiogenic shock.
- 4.- Risk factors. Arterial hypertension.
- 5.- Chronic ischemic heart disease: angina pectoris.
- 6.- Ischemic heart disease: acute coronary syndromes without persistent ST segment elevation.
- 7.- Ischemic heart disease: acute myocardial infarction with ST segment elevation.
- 8.- Classification of cardiac arrhythmias. Bradiarhythmias.
- 9.- Fibrillation and atrial flutter.
- 10.- Supraventricular tachycardias. Wolff-Parkinson-White syndrome.
- 11.- Ventricular arrhythmias. Sudden death.
- 12.- Diseases of the aortic valve
- 13.- Mitral valve diseases. Other valve diseases. Cardiac congenital diseases in adults.
- 14.- Endocarditis.
- 15.- Diseases of the pericardium. Myocarditis
- 16.- Cardiomyopathies
- 17.- Surgical indications of heart valve diseases.



- 18.- Surgical indications of ischemic heart disease.
- 19.- Acute peripheral ischemia syndromes.
- 20.- Chronic peripheral ischemia syndromes.
- 21.- Carotid stenosis. Alterations in supra-aortic trunks.
- 22.- Acute aortic syndrome. Aortic dissection.
- 23.- Arterial aneurysms
- 24.- Venous insufficiency. Varicose veins.

2. PRACTICAL CLASSES - SEMINARS

- 1.- Syncope of cardiac origin.
- 2.- Interventionism in structural heart disease.
- 3.- Patient with dyspnea and edema of cardiac origin.
- 4.- Patient with chest pain of coronary origin.
- 5.- Patient with tachyarrhythmia / atrial fibrillation.
- 6.- Patient with bradyarrhythmia. Cardiac pacemaker.
- 7.- Clinical case of sudden death.
- 8.- Patient with cardiomyopathy.
- 9.- Patient with valve disease.
- 10.- Patient with pericardial 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 transplant.

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.

EVALUATION

Only students who have completed the clinical practices of the subject may take the exam.

A) Continuous evaluation:

It is developed throughout the semester and in relation to the contents of the subject already taught, divided into three blocks:

1) Acute and chronic heart failure. Supraventricular and ventricular arrhythmias. Sudden death. Myocardial diseases.



2) Acute and chronic ischemic heart disease. Heart valve diseases. Endocarditis. Diseases of the pericardium.

3) Vascular pathology.

It is done through questionnaires with multiple-choice questions (four possible answers, a correct one that adds 1 point and the incorrect ones subtract 0.33 points).

Continuous evaluation represents 30% of the final grade.

B) Final exam whose weight in the grade is 70%. It consists of an exam with 70 multiple choice questions. Each question has 4 possible answers, a correct one that adds 1 point and the incorrect ones subtract 0.33 points.

Theory:

- 35 questions:

- 21 of the medical part of the subject
- 14 of the surgical part of the subject

Clinical practices and seminars:

- 35 questions:

- 21 of the medical part of the subject
- 14 of the surgical part of the subject

The duration of the exam is 90 minutes and the dates, both for the first and second calls, are those scheduled by the center. The modality of the exam is face-to-face.

In the case of supervening circumstances in relation to the pandemic, the exam modality will be modified in accordance with the guidelines of the UV rectorate.

The exam grade consists of the sum of the result of the continuous evaluation (30%) plus the result of the final exam (70%). The pass is obtained by reaching 50% of the maximum value.

Attendance at practices is mandatory. The unjustified non-attendance to more than 20% of them, will mean the impossibility of passing the subject.

Students are reminded of the importance of carrying out evaluation surveys on all the teaching staff of the degree subjects

REFERENCES



Basic

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- Chorro Gascó FJ, Bodí Peris V (eds.). Imagen Cardíaca. Publicaciones Universitat de València, 2015. ISBN: 978-84-370-9711-4.
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- Guía ESC 2020 sobre el diagnóstico y tratamiento del síndrome coronario agudo sin elevación del segmento ST. Jean-Philippe Collet, Holger Thiele, Emanuele Barbato, Olivier Barthélémy, Johann Bauersachs, Deepak L. Bhatt, et al. 10.1016/j.recesp.2020.12.024. Rev Esp Cardiol. 2021;74:544.e1-544.e73
- 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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