



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Cardiovascular Diseases A

2425-3-H4101D257-H4101D043M

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#### Aims

The Medical-Surgical Pathology Course 1 focuses on pathologies of the Cardiovascular and Respiratory systems. It is aimed at achieving the following objectives:

1. acquisition of the various methods of patient assessment with particular attention to the collection of the anamnesis, physical examination and laboratory tests with a view to their subsequent application in the specialist field;
2. knowledge of the main symptoms and signs of the pathologies considered and their pathophysiological bases. The topics of the Course constitute the necessary tools for understanding the semeiological bases and the pathophysiology of the main morbid conditions, in order to allow an adequate approach to their management in the clinical field. The notions provided represent the indispensable basis for the acquisition of a scientific method applicable to all the fields in which students will be engaged in the course of their professional growth.

#### Contents

In relation to the cardiovascular and respiratory systems:

- History collection
  - General and specific physical examination
  - Laboratory tests

Diagnostic reasoning of symptoms, Main clinical signs and symptoms related to medical and surgical pathologies of the cardiovascular and respiratory systems, with guidance in their diagnosis and understanding of their pathophysiology. Role, limitations and purpose of laboratory tests. Differential diagnosis of symptoms of major diseases of the two systems, with guidance on their diagnostic/prognostic evaluation.

## Detailed program

*Rationale for the correct prescription of instrumental investigations*

*Measuring blood pressure*

-Measurement techniques and modalities

*Epidemiology, cardiovascular risk factors and prevention*

-Primary and secondary arterial hypertension

Management of the hypertensive patient

Correct interpretation of instrumental investigations

Therapeutic goals in the hypertensive patient

International guidelines

-Main Congenital Heart Diseases

-Physiological and haemodynamic aspects of structural alterations of the heart muscle and valves

*Diseases of the pericardium, endocardium and myocardium*

Pathophysiological mechanisms of pericarditis, endocarditis and myocarditis

Signs and symptoms of the disease, its evolution and aggravation

Management of pathology based on current international guidelines

Follow-up and interpretation of instrumental and laboratory examinations

-Ischaemic heart disease

Stable and unstable angina

Myocardial infarction

Pathophysiological mechanisms

Signs and symptoms of the disease, its evolution and aggravation

Acute and chronic management of the patient

Planning and interpretation of instrumental and laboratory examinations

\*\*\*Pulmonary embolism\*\*

Pathophysiology

Main aetiological factors

Clinical picture

Diagnostic procedure and follow-up

-Pulmonary hypertension

Pathophysiology

Main aetiological factors

Clinical picture

Diagnostic procedure and follow-up

-Valvulopathies

Congenital and acquired valvulopathies

Etiopathogenetic and physiological mechanisms

Signs and symptoms of the disease, its evolution and aggravation

Follow-up, indications and interpretation of instrumental examinations

-Cardiac rhythm disorders

Hypokinetic arrhythmias

Hyperkinetic arrhythmias

Principles of electrophysiology and electrostimulation

Indications for PM and ICD implantation

*-Cardiac insufficiency*

Pathophysiological mechanisms and aetiology of heart failure

Symptoms and signs: from development to disease progression

Acute pulmonary oedema

NYHA classification

Planning and interpretation of laboratory and instrumental examinations

Management of the patient with acute and chronic heart failure in the light of the latest international guidelines

*-Syncope and lipotimia*

Mechanisms and pathophysiological diagnosis of the various forms of syncope

Patient management and follow-up

*-Shock*

Physiology and aetiopathogenesis of the different forms of shock

Clinical presentation, instrumental diagnostic framework and management of the patient in shock

\*Cardiovascular effects of sleep disorders and of sleep related breathing disorders \*

## **Prerequisites**

Knowledge of the propedeutic courses specified in the degree course regulations

## **Teaching form**

Lectures and training at patients' bedside

## **Textbook and teaching resource**

Lectures content

Harrison's: "Principles of Internal Medicine" Ed. McGraw Hill

other textbooks

HURST- The Heart 12th Ed. McGraw Hill

Dioguardi – Sanna: Moderni aspetti di semeiotica medica - Segni sintomi e malattie Ed.Seu

Sabiston: "Textbook of surgery" Ed. Saunders

Zanussi: "Il metodo in medicina clinica" Ed. Mattioli

McPherson RA, Pincus MR Henry's Clinical Diagnosis and Management by Laboratory Methods, 23a edizione in lingua inglese. Ed. Elsevier, 2016

Antonozzi - Gulletta Medicina di Laboratorio - Logica e Patologia Clinica. Ed. Piccin 2019

**Semester**

First Semester

**Assessment method**

see main course syllabus

**Office hours**

By appointment (through email)

**Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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