



**UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA**

SYLLABUS DEL CORSO

Malattie dell'Apparato Cardiovascolare

2627-2-I0101D011-I0101D035M

Aims

At the end of the course, students will be able to:

1. Knowledge and understanding:
Describe the characteristic signs and symptoms of selected major cardiovascular conditions. Explain the main underlying pathophysiological mechanisms. Recognize the essential stages of the diagnostic process and the most commonly used diagnostic tools. Describe the main therapeutic approaches and their clinical objectives.
2. Applying knowledge and understanding:
Relate observed clinical data (signs and symptoms) to the corresponding pathophysiological processes. Analyze the implications of diagnostic investigations for clinical and therapeutic decision-making.
3. Making judgements:
Critically reflect on diagnostic and therapeutic decisions and on the patient care pathway.
4. Communication skills:
Present key clinical, pathophysiological, and therapeutic content using appropriate technical language.
5. Learning skills:
Develop independent learning abilities by continuously expanding knowledge and competencies in line with the evolution of clinical practice and scientific evidence, promoting evidence-based care.

Contents

The course addresses the main clinical conditions within its scope, describing their signs and symptoms,

pathophysiological mechanisms, key elements of the diagnostic process, and therapeutic approaches.

Detailed program

Cardiovascular diagnostics: main signs and symptoms of heart diseases.

Diagnostic role of instrumental tests in cardiology: standard electrocardiogram (ECG), Holter ECG monitoring, exercise stress ECG, two-dimensional and Doppler echocardiography, 24-hour blood pressure monitoring, cardiac catheterization, and coronary angiography.

Ischemic heart disease. Chronic coronary syndromes. Acute coronary syndromes. Arrhythmias in acute and chronic ischemic heart disease. Overview of medical and interventional therapy.

Acute heart failure. Chronic heart failure. Arrhythmias in heart failure. Overview of medical and electrical therapies for heart failure.

Valvular heart diseases: aortic stenosis, mitral regurgitation, tricuspid regurgitation, aortic regurgitation, mitral stenosis.

Cardiac arrhythmias.

Pulmonary embolism.

Pericarditis, myocarditis, and endocarditis: clinical and diagnostic aspects. Overview of treatment.

Cardiomyopathies and inherited arrhythmogenic channelopathies.

Prerequisites

Defined by the academic regulations.

Teaching form

10 two-hour face-to-face lectures delivered in expository mode using a tele-teaching system.

Textbook and teaching resource

- Hinkle J.L., Cheever K.H. (2024) Brunner – Suddarth, Infermieristica Medico-Chirurgica, VI ed. Milano: Casa Editrice Ambrosiana, Vol. 1 e 2.
- Arbelo, E., Protonotarios, A., Gimeno, J.R., et al. (2023) 2023 ESC Guidelines for the management of cardiomyopathies. European Heart Journal, 44(37), pp. 3503–3626.

- Byrne, R.A., Rossello, X., Coughlan, J.J., et al. (2023) 2023 ESC Guidelines for the management of acute coronary syndromes. *European Heart Journal*, 44(38), pp. 3720–3826.
- Praz, F., Borger, M.A., Lanz, J., et al. (2025) 2025 ESC/EACTS Guidelines for the management of valvular heart disease. *European Heart Journal*, 46(44), pp. 4635–4736.
- Schulz-Menger, J., Collini, V., Gröschel, J., et al. (2025) 2025 ESC Guidelines for the management of myocarditis and pericarditis. *European Heart Journal*, 46(40), pp. 3952–4041.
- Vrints, C., Andreotti, F., Koskinas, K.C., et al. (2024) 2024 ESC Guidelines for the management of chronic coronary syndromes. *European Heart Journal*, 45(36), pp. 3415–3537.

Course materials provided by the lecturer.

Semester

2nd Year, 2nd Semester.

Assessment method

See the course homepage.

Office hours

Faculty members are available by appointment, which can be requested via email:

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Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY
