



Direzione Ricerca,
Innovazione e
Internazionalizzazione

**UNIVERSITÀ
DI TORINO**

ID

VP_160_SCB

Visiting Professor Program Academic Year 2025/2026

TEACHING COMMITMENT: 12 hours

COURSE TITLE

Cardiac Physiology and Physiopathology through Imaging

TEACHING PERIOD

I semester

SCIENTIFIC AREA

Physiology

LANGUAGE USED TO TEACH

English

COURSE SUMMARY

The course aims to illustrate how cardiovascular imaging contributes to the understanding and assessment of pathological conditions improving clinical and therapeutic approaches. It provides an overview of cardiac physiology and the alterations that lead to major cardiovascular diseases (such as myocardial infarction, heart failure, arrhythmias, valvulopathies, etc.). An introduction to the main cardiac imaging tools, along with an explanation of how the pathophysiology of cardiovascular diseases is represented through imaging techniques. Imaging in coronary assessment: study of atherosclerosis, coronary stenosis, and the use of coronary angiography (CT and MRI) for visualizing coronary arteries. Cardiac Magnetic Resonance Imaging (MRI): applications in assessing myocardial function, cardiomyopathies, and in characterizing ischemic versus non-ischemic myocardium. Innovative techniques and future developments: emerging modalities such as molecular imaging and advanced visualization techniques.

LEARNING OBJECTIVES

Understanding and explaining the physiological and pathological basis of the major cardiovascular diseases. Analyzing the role of cardiac MRI in evaluating myocardial health and coronary artery disease. Identifying appropriate imaging techniques for diagnosing and assessing cardiovascular conditions. Understanding when to integrate imaging into clinical practices.

OTHER ACTIVITIES BESIDE THE COURSE

VISITING PROFESSOR PROFILE

The candidate should hold a biomedical degree and possess experience in university-level teaching.

CONTACT REFERENT

Raffaella Rastaldo
raffaella.rastaldo@unito.it