

# COURSE DETAIL

## INTRODUCTION TO BIOMEDICAL IMAGING

**Country**

Spain

**Host Institution**

Carlos III University of Madrid

**Program(s)**

Carlos III University of Madrid

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Bioengineering

**UCEAP Course Number**

150

**UCEAP Course Suffix****UCEAP Official Title**

INTRODUCTION TO BIOMEDICAL IMAGING

**UCEAP Transcript Title**

BIOMEDICAL IMAGING

**UCEAP Quarter Units**

5.00

**UCEAP Semester Units**

3.30

## Course Description

This course offers a study of image formation and how contrast, resolution, and signal to noise ratio affects image quality, including the quantitative information it may deliver and its interpretation. It explores the main aspects of imaging (resolution, contrast, and quantification) within different imaging modalities, either currently used in medical imaging or under development for future implementation. This course discusses which imaging modalities are more appropriate for a specific instance and why, based on what each imaging approach can deliver in terms of sensitivity, resolution, and quantitation.

Pre-requisites: Physics I and II. It is also very beneficial (not mandatory) to have taken Differential equations and Numerical Methods in Biomedicine

## Language(s) of Instruction

English

## Host Institution Course Number

15558

## Host Institution Course Title

INTRODUCCIÓN A LA IMAGEN BIOMÉDICA

## Host Institution Course Details

<https://aplicaciones.uc3m.es/cpa/generaFicha?est=257&anio=2025&plan=419&asig=15...>

## Host Institution Campus

Leganés

## Host Institution Faculty

Escuela Politécnica Superior

## Host Institution Degree

Grado en Ingeniería Biomédica

## Host Institution Department

Departamento de Bioingeniería

**Course Last Reviewed**

2025-2026

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