



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Microbiology

2122-3-H4102D055-H4102D064M

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#### Aims

To provide students with the fundamental knowledge and competencies necessary to make a differential diagnosis of musculoskeletal infections, request appropriate laboratory investigations, undertake sample collection and interpretation of laboratory findings.

#### Contents

Microrganisms and pathogenesis associated with bone, joint, soft tissue, muscle and surgical wound infections. Biofilm formation. Microbiological diagnosis and interpretation of laboratory investigations. Prevention of musculoskeletal infections.

#### Detailed program

Pathogens associated with bone, joint, muscle, soft tissue and surgical wound infections. Microorganisms associated with haematogenous spread, direct extension of contiguous local infections, surgical and/or implant associated infections. Biofilm formation and infections associated with joint prosthesis and implants. Multi-drug resistant microorganisms associated with soft tissue and musculoskeletal infections. Laboratory investigations for the diagnosis of musculoskeletal infections: isolation of the microorganisms from tissue and/or blood cultures, antimicrobial susceptibility testing. Interpretation of microbiology laboratory results. Strategies for the prevention of infections.

#### Prerequisites

Basic knowledge of microbiology, pathology and immunology.

## **Teaching form**

Interactive sessions involving the active participation of students. Problem-based learning with discussion of clinical cases, including differential diagnosis, laboratory investigations, interpretation of microbiological findings and presentations of scientific publications relevant to the topics of bone, joint, muscle, soft tissue and surgical wound infections.

## **Textbook and teaching resource**

Sherris "Medical Microbiology ", EMSI.

Patrick R. Murray, Ken S. Rosenthal, Michael A. Pfaller "Medical Microbiology", Elsevier.

Mandell, Douglas, and Bennett's "Principles and Practice of Infectious Diseases", Elsevier.

Public Health England UK Standards for Microbiology Investigations  
(<https://www.gov.uk/government/publications/standards-for-microbiology-investigations-smi-searchable-index/uk-smi-searchable-index>)

Scientific papers and reviews.

## **Semester**

First Semester

## **Assessment method**

Evaluation as part of individual and/or group discussion of clinical cases as well as class presentations of scientific publications in order to evaluate the skills and competencies acquired according to the objectives of the course.

## **Office hours**

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