UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Microbiology

1920-3-H4102D019-H4102D064M

Aims

To provide students with the fundamental knowledge and competences 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. Microrganisms 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 microrganisms associated with soft tissue and musculoskeletal infections. Laboratory investigations for the diagnosis of musculoskeletal infections: isolation of the microrganisms 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 with active participation of students. Problem-based learning with discussion of clinical cases, including differential diagnosis, laboratory investigations and interpretation of microbiological findings.

During the Covid-19 emergency these interactive sessions lessons will be held online by Webex platform.

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 of the third year of the course.

Assessment method

Students individual and/or group discussion of clinical cases to evaluate the skills and competences acquired according to the objectives of the course.

During the Covid-19 emergency these discussions will take place online via WebEx.

Office hours

Appointments on request via e-mail.