UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Clerkship 3

2223-2-H4102D017

Aims

The course aims to provide the student with the fundamental principles and knowledge for requesting microbiological investigations and for the interpretation laboratory results for the clinical mangement of patients and the treatmentì of infectious diseases.

Contents

Laboratory methods for the diagnosis of infectious diseases.

Laboratory methods for evaluating bacterial susceptibility to antimicrobial agents.

Phenotypic and genotypic methods for microbial characterization and typing.

Interpretation of Clinical Microbiology laboratory results.

Detailed program

Laboratory methods for the diagnosis of infectious diseases:

-different microbial “in vitro” growth characteristics and media requirements

-methods for microbial culture, isolation and identification

-microbial staining methods

-molecular methods for microbial and/or toxins detection

Laboratory methods for evaluating bacterial susceptibility to antimicrobial agents:

-Antibiogram / E-test

-Determination of Minimum inhibitory and/or bactericidal concentrations (MIC and/or MBC)

Methods for microbial characterization and typing:

-Phenotypic methods such microbial biochemical, plasmidic and/or antibiotic susceptibility profiles;

-Genotypic methods such restriction fragment length polymorphism (RFLP) analysis, Pulse-field gel electrophoresis (PFGE), multi-locus sequence typing (MLST).

Prerequisites

Knowledge on the content of the Microbiology and Virology module of the course on Basic Pathology.

Teaching form

Teaching in the laboratory and seminars in small groups for the discussion of clinical cases and relative laboratory results.

Textbook and teaching resource

Sherris “Microbiologia Medica”, EMSI.

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

Semester

Second semester of the 2° year of the degree course.

Assessment method

The assessment of the acquisition of the skills by the students will be based on:
-the evaluation of the activities in small groups during seminar sessions and laboratory practical teaching;
-indepth study with presentation in small groups of a scientific article on topics related to microbiological diagnostics.

Office hours

Appointment on request

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING