

Faculty of Medicine



FARM2183 Medical Microbiology

[22.5h]

Teacher(s): Michel Delmée
Language: French
Level: Second cycle

Aims

The course considers the micro-organisms which are pathogenic for human beings. It covers the following aspects : description of the main morphological and physiological characteristics, ecology, epidemiology, virulence mechanisms, prevention and treatment. To favour a global comprehension and a synthetic view, it is organized on the basis of the description of representative human infectious diseases. The main mechanisms of antimicrobial resistance are emphasized.

The following courses are considered as a prerequisite : general bacteriology, immunology, cellular biology and biochemistry.

Main themes

Host-pathogen relationship at the population and individual levels and overview of the human pathogenic micro-organisms.

Host-pathogen relationship at the cellular and molecular levels : virulence mechanisms.

Micro-organisms and immune system : antigens and vaccine design.

Micro-organisms (bacteria, parasites, fungi and helminths) implicated in systemic diseases or in the infectious diseases of :

- the upper and lower respiratory tract;
- the urinary tract;
- the central nervous system;
- the digestive tract;
- the skin and the sub-cutaneous tissues;
- the genital tract;

Hospital acquired infectious diseases.

Content and teaching methods

General part :

Host-pathogen relationship at the cellular and molecular levels : microbial ecology, virulence factors, genetic regulation.

Vaccines design. Epidemiology of infectious diseases.

Systematic part.

- general overview of human microbial pathogens.
- micro-organisms implicated in infection of the upper and lower respiratory tracts;
- micro-organisms implicated in infection of the urinary tract;
- micro-organisms implicated in infection of the central nervous system;
- micro-organisms implicated in infection of the digestive tract;
- micro-organisms implicated in infection of the skin and the sub-cutaneous tissues;
- micro-organisms implicated in infection of the genital tract;

Method

The course is made of a series of public lessons with a lot of illustrations.

A specific textbook (syllabus) is provided to the student.

The textbook as well as the main slides shown during the courses are available on iCampus.

(<http://www.icampus.ucl.ac.be/MBLG1130/>)

A forum is open on iCampus : it allows the student to ask questions about any problem encountered.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Evaluation : written examination with open questions of short type.

Other credits in programs

FARM21	Première année du grade de pharmacien	(2.5 credits)	Mandatory
SC3DA/B	Diplôme d'études approfondies en sciences (Biologie)	(2.5 credits)	Mandatory