



PATOLOGIA GENERALE, BIOCHIMICA CLINICA, MICROBIOLOGIA E IGIENE

10 CFU - 1° Semester

Teaching Staff

TEACHER NOT YET ALLOCATED - Module PATOLOGIA GENERALE - MED/04 - 2 CFU

VITTORIO CALABRESE - Module BIOCHIMICA CLINICA - BIO/12 - 3 CFU

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4

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ricevimento è possibile concordare giorni ed orari differenti previa richiesta per e-mail.

TEACHER NOT YET ALLOCATED - Module IGIENE - MED/42 - 3 CFU

LEARNING OBJECTIVES

▪ General and clinical microbiology

The student must learn the biological and pathogenic characteristics of microorganisms that play a role in human pathology, with reference to bacteria, viruses and fungi. He must acquire appropriate knowledge on the relationships between microorganisms and host in normal and pathological conditions, identify the transmission pathways, know the characteristics, the activity, the mechanism of action and resistance of the main antimicrobial drugs and vaccines. The student must also know the main methods for the cultivation and identification of microorganisms.

The course also aims to illustrate the various methods of prevention of microbial infections and the main causes of infection related to specific professional activity.

DETAILED COURSE CONTENT

▪ General and clinical microbiology

1. Essential characteristics and differences of bacteria, viruses, fungi, protozoa and other parasites known to infect humans.
2. The pathogenic mechanisms of microorganisms, microorganism-host relationships, basic concepts in the immune response.
3. The various possibilities of infection and spread of infection. Alimentary infections induced by microorganisms
4. The organization of the bacterial cell: structure and function of the cellular components and bacterial metabolism
5. Mechanisms of bacterial pathogenesis: role of bacteria in disease
6. Characteristics of fungi
7. Mechanisms of fungal pathogenesis
8. Characteristics of virus and their replication
9. Mechanisms of viral pathogenesis. Types of viral infection: acute and persistent infection
10. The antimicrobial chemotherapy: the main characteristic of principal groups of antimicrobial compounds and their mechanisms of resistance
11. Vaccines
12. General principles of laboratory diagnosis of infectious diseases
13. General principles of sterilization, disinfection, and antisepsis
14. Bacterial infections associated with gastroenteritis: *Helicobacter pylori*, *Enterobacteriaceae*, *Vibrio*. *Food-borne diseases and zoonosis*
15. Viral etiology of alimentary infections: Noroviruses, Rotaviruses, Adenoviruses
16. Alimentary infections induced by protozoa and helminths
17. Causative agents of alimentary toxicoses
18. Mycotoxin and mycotoxicosis
19. Human hepatitis viruses (HAV, HBV, HCV, HDV, HEV)

TEXTBOOK INFORMATION

▪ General and clinical microbiology

1. Harvey R. H., Champe P.C., Fisher B. D., *Le basi della Microbiologia, con approfondimenti clinici* - Ed. Zanichelli
2. Cevenini R., Sambri V., *Microbiologia e microbiologia clinica, Per i Corsi di Laurea in professioni sanitarie* - Ed. Piccin

All students can use didactic material downloadable from the Studium UniCt page.
