

PHARMACEUTICAL MICROBIOLOGY

Lesson code: NP18-12

Lesson level: undergraduate

Semester of studies: second

Lesson type:

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| X | General-background knowledge |
| | Scientific area (pharmaceutical) |

Educational credits (ECTS): 5

Lectures (hours): 2/week

Practical sessions (hours): 2/week (in groups)

Lesson coordinator: Anna Papa-Konidari, Professor

Tutors:

- 1) Anna Papa-Konidari, Professor, tel.: 2310 999006
- 2) Timoleon-Achilleas Vyzantiadis, Professor, tel.: 2310 999027
- 3) Maria Exindari, Associate Professor, tel.: 2310 999031
- 4) Georgia Gioula, Associate Professor, tel.: 2310 999121
- 5) Lemonia Skoura, Associate Professor, tel.: 2310 999156
- 6) Dimitrios Chatzidimitriou, Associate Professor, tel.: 2310 999155
- 7) Melania Kachrimanidou, Assistant Professor, tel.: 2310 999130
- 8) Efthimia Protonotariou, Assistant Professor, tel: 2310 994658

Assisting personnel (technical and laboratory):

- 1) Souzan Vergkizi-Nikolakaki (tutoring and technical assistance), tel: 2310 999169
- 2) Sofia Kotsinou (technical assistance), tel: 2310 999113

Place:

The First and Second Departments of Microbiology are located at the ground floor and the third floor of the building of the Medical School, in the main University Campus. All tutors and assisting personnel are present in their work places on a daily schedule.

Educational targets:

The targets of the lesson are to offer a general approach and understanding in the fields of microbiology and immunology, as well as the knowledge of

some of the most important bacteria, viruses and fungi that are responsible for infections in humans, the diseases that these pathogens are able to cause and the available specific laboratory diagnostic methodology and necessary therapeutic approach.

Educational skills:

The familiarisation with the concepts of the microbial invasion, the host defense, the laboratory diagnosis and the prevention and treatment of the infections.

Educational methods:

Lectures in the amphitheatre and practical laboratory sessions.

Lesson syllabus:

General microbial (bacteria, viruses, fungi, parasites) characteristics. Microbial physiological and chemical properties. Natural and chemical factors that act against microbes, antibiotics, antiviral and antifungal drugs. Basic concepts of immunology, relations between microbial and host organism. Ways of eliminating germs and how to be protected from them. Basic knowledge on pathogenesis, clinical manifestation, laboratory diagnosis, prevention and treatment of specific pathogenic microbes.

Educational (students') activities:

Attendance of lectures in the amphitheatres and practical sessions.

Evaluation methods and procedure:

Written exams based on multiple choice and/or essay questions at the end of the semester. Only the students that have followed all compulsory practical sessions (each session is of 2 hours) have the right to participate. Exams are organized according to the schedule and the places announced by the Department.

Use of computerised-electronic means:

All lessons are done by the use of an electronic presentation format (PowerPoint).

Tutorial (Lectures/Practical sessions):

The teaching is comprised of lectures and practical/laboratory sessions.

a) Lectures: One hour lectures are given twice a week, usually at the "Amphitheatres" of the Medical School and are indicatively as following:

1. Bacterial characteristics

2. General viral characteristics
3. Fungal characteristics-opportunistic mycoses
4. General parasitic characteristics
5. Host protective answers
6. Cellular immunity
7. Humoral immunity
8. Immunological disturbances
9. Natural flora
10. Pathogenetic mechanisms of microbial infections
11. Sterilization, disinfection, antisepsis
12. Antimicrobial drugs, sensitivity testing
13. Vaccines
14. Tetanus
15. *Enterobacteriaceae*
16. *Staphylococcus-Streptococcus*
17. Gram (-) cocci
18. *Herpesviridae* group
19. *Retroviridae*
20. Hepatitis
21. Measles-Mumps-Rubella
22. *Influenza* virus
23. *Mycobacteria*
24. *Corynebacterium, Bordetella*
25. Superficial mycoses
26. Laboratory diagnosis of microbial infections. Questions-Explanations

b) Practical-laboratory sessions: Students attend in groups, once a week, in the same group, the same hour, for two weeks, with compulsory presence. The courses take place in the practical session room of the First Department of Microbiology.

References

1. P.R. Murray, K.S. Rosenthal and M.A. Pfaller, Medical Microbiology (6th edition), Scientific Editions Parisianou S. A., Athens, 2019.

2. All the topics as they are presented at the relevant lectures and practical courses.
3. Relevant books and scientific journals that can be found in the Department. Reference sources from the University and Hospital Libraries or the Internet.