



Beni-Suef University
Faculty of Dentistry
Quality Assurance Unit
Course Specification



University: **Beni-Suef** Faculty: **Dentistry**
Course Title: **Microbiology** Course code: **Mmb 3**
Program on which the course is given: **Bachelor's degree in Dentistry, Graduate Program**
Department offering the course: **Microbiology, Faculty of Medicine**
Academic year: **second year**
Date of specification approval: **9/2023**

A-Basic Information

Academic Year:	2023-2024
Course Code:	Mmb 3
Lecture hours:	1hr*30w
Practical hours:	2hr *30 w
Total Hours:	3hours

B-Professional Information

1-Overall aims of course

By the end of the course, the student should be able to emphasize the general characteristics of eukaryotes and prokaryotes, structure and function of bacterial cell wall, the internal and external structures of bacteria and their different functions. In addition to important information about pathogens that cause human diseases. Also, the importance of normal bacterial flora in different body sites including the oral cavity and will introduce the students to the field of immunology, innate and acquired. They are also introduced to immune response and certain immunologically associated phenomena such as hypersensitivity reactions and autoimmunity. Also, by the end of the course, the students should be able to viral structure and types and be able to differentiate between different ones and knowledge about antiviral drugs.

a- Knowledge & understanding:

a1- Define different types of microorganisms and infectious agents, including bacteria, fungi (Candida sp.), and viruses.

- a2- Describe the different internal and external bacterial structures.
- a3- Identify bacterial genetics: Structure and function of the genetic material. Genotype and phenotype. Acquisition of new genes, antibiotic resistance and PCR.
- a4- Define the different diseases caused by Streptococci, Staphylococci, Neisseria and Mycobacterium tuberculosis.
- a5- Describe the general properties of viruses, viral disease pathogenesis, viral replication, and antiviral drugs.
- a6- Define the different types of viruses.
- a7- State the characteristics of innate and adaptive immunity, antigen, antibody, and complement system.
- a8- Describe the immune response, hypersensitivity reaction, and autoimmunity

b-Intellectual skills:

- b1- Analyze the different disciplines of microbiology in the medical and dental fields.
- b2- Compare between the different microorganisms.
- b3- Assess the general properties of viruses, blood-borne viruses, HIV, and Herpes Viruses.
- b4- Contrast between innate and acquired immunity.
- b5- Evaluate immunological disorders, hypersensitivity reactions, and autoimmunity.

c- Professional and practical skills:

- c1- Use different staining techniques to identify different microorganisms.
- c2- Apply the methods of sterilization and disinfection.

d-General and transferable skills:

- d1- Work effectively as part of a team to produce reports.
- d2- Study independently.

3- Contents:

Topic	<u>Lectures</u> (1hr)	<u>Practical</u> (2hrs)	<u>weighting</u>
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Introduction to microbiology	3	3	11.5%
Morphology of bacteria and different species	10	10	38.5%
Structure and classification of viruses (2of them online)	8	8	30%
Immunity and hypersensitivity reaction	5	5	19.2%

4- Teaching and learning methods

a-Small group discussion / Brain storming.
b- Interactive lecture
c- Demonstrations.
d- online activities

5- Student assessment methods

a. Written and short answer questions
b. Written and long essay.
c. Multiple choice questions (MCQ)
d. True or false question with justifying answer.
e. Practical / OSPE.

6- Assessment schedule

Assignment	Time
Midterm exam	January 2024
Practical exam	May 2024
Oral exam	June 2024
Final exam	June 2024

Weighting of assessments

	Written	Practical	Oral Exam	course work	Total
Final Exam	40	20	20	20	100

- List of reference;

1- Course notes

2- Essential books: Microbiology: An introduction, 13th edition. GerardJ.Tortora.

Brock Biology of Microorganisms (14th ed.). Madigan, M. and Martinko, J.

Course coordinator: Dr MostafaElsheemy

Head of Department:Dr Mostafa Elsheemy

Date: September 2023