

## Course Description Form Principles of Microbiology

Course Name
Principles of Microbiology
Course Code
PRIM205
Semester / Year
Second / 2025
Date this description was prepared
15 January 2025
Available attendance forms
In-Person
Number of Credit Hours (Total)/ Number of Units (total)
5h / 3.5
Course administrator's name (if more than one name)
Dr. Mohamed Nadeem Kassem Abeer Najm Abdullah
Course Objective

- 1- Microbiology researches the identification of the most important beneficial and harmful microorganisms spread in various environments
- 2- How to distinguish between microorganisms
- 3- Identify the most important methods of feeding microorganisms
- 4- Following scientific methods in dealing with microbiology
- 5- Identify the risks and benefits of microorganisms

#### 1. Teaching and learning strategies

1-Explanation and clarification

Lecture method

3- Student groups

4- Self-learning method

2. Course Evaluation

#### EXAMINATIONS

Monthly and daily exams with discussion questions within the lecture

Degree of participation in questions related to the subject

<b>Week</b>	<b>Credits</b>	<b>Intended Learning Outcomes</b>	<b>Unit or Topic Name</b>	<b>Learning Method</b>	<b>Evaluation Method</b>
1	2	Microbiology, its definition, origin and development	Principles of Microbiology	Lecture and explanation by model presentation	Exam
2	2	Classification of microorganisms and their location from other sciences	Principles of Microbiology	Lecture and explanation View template	Exam
3	2	Bacteria, their forms, composition and classification	Principles of Microbiology	Lecture and explanation View template	Exam
4	2	Bacterial cell components	Principles of Microbiology	Lecture and explanation View template	Exam
5	2	Permeability and Transmembrane Transmission	Principles of Microbiology	Lecture and explanation View template	Exam
6	2	Feeding bacteria and their stages of growth and reproduction	Principles of Microbiology	Lecture and explanation View template	Exam
7	2	Bacteria nuclear material	Principles of Microbiology	Lecture and explanation View template	Exam
8	2	Fungi, their forms, classification, benefits and harms	Principles of Microbiology	Lecture and explanation View template	Exam
9	2	Fungal Cell Structure	Principles of Microbiology	Lecture and explanation View template	Exam
10	2	Fungal nutrition, growth and reproduction	Principles of Microbiology	Lecture and explanation View template	Exam

11	2	Algae, its problems and spread	Principles of Microbiology	Lecture and explanation View template	Exam
12	2	Species of algae and their nutrition	Principles of Microbiology	Lecture and explanation View template	Exam
13	2	Viruses. Its shapes, components and reproduction	Principles of Microbiology	Lecture and explanation View template	Exam
14	2	Microbiology of water and sewage	Principles of Microbiology	Lecture and explanation View template	Exam
15	2	Plant Pathogenic Microbiology	Principles of Microbiology	Lecture and explanation View template	Exam
<b>Week</b>			Principles of Microbiology		
1	3	Identify laboratory equipment and tools and follow safety instructions	Principles of Microbiology	Lecture and explanation by model presentation	Exam
2	3	Microscope, its types and how to use	Principles of Microbiology	Lecture and explanation View template	Exam
3	3	Agricultural media , their types and components	Principles of Microbiology	Lecture and explanation View template	Exam
4	3	Sanitization	Principles of Microbiology	Lecture and explanation View template	Exam
5	3	Forms of Bacteria	Principles of Microbiology	Lecture and explanation View template	Exam

6		Isolation and purification of microorganisms	Principles of Microbiology	Lecture and explanation View template	Exam
7			Principles of Microbiology	Lecture and explanation View template	Exam
8		Microorganism staining, simple staining	Principles of Microbiology	Lecture and explanation View template	Exam
9	3	Compound pigmentation	Principles of Microbiology	Lecture and explanation View template	Exam
10		Microbiology	Principles of Microbiology	Lecture and explanation View template	Exam
11		The Effectiveness of Antibiotics Microbiology	Principles of Microbiology	Lecture and explanation View template	Exam
12		Examination of molds	Principles of Microbiology		
13		Water Inspection	Principles of Microbiology	Lecture and explanation View template	Exam
14	3	Microbiology	Principles of Microbiology	Lecture and explanation View template	Exam
15	3	Methods of preserving bacteria and fungi	Principles of Microbiology	Lecture and explanation View template	Exam

### Course Evaluation

#### EXAMINATIONS

Daily exams with discussion questions within the lecture  
Degree of participation in questions related to the subject

### Learning and Teaching Resources;

Required textbooks ( methodology if any )	<p>1- Microbiology Dr. Faiz Aziz Al-Ani and Dr. Ami Suleiman Badawi 2000 . University of Al Mosul</p> <p>2- Mycology Formation of a committee of teachers the Department of Biology Sciences -University of Baghdad, Dar Al-Hikma for Printing and Publishing, 199</p>
Key References (Sources)	Microbiology (theoretical part). Adnan Ahmed Ali Niza Kamal Al-Ashqar (2008). Damascus University Publications – Faculty of Science.
Recommended supporting books and references (scientific journals, reports)	C/N H. Roldos de la Sovera, Montevideo
E-References , Websites	