



Department of Anaesthesia
College of Health Sciences
University of Cihan- Sulaymaniyah

Subject: Microbiology

2nd Stage – 4th Semester

Course Book – Year 2024-2025.

Lecturer's name: Avin Salih Sidiq

Academic Year: 2024/2025

Course Book

1. Course name	Microbiology
2. Lecturer in charge	Avin Salih Sidiq
3. Department/ College	Anesthesia
4. Time (in hours) per week	4 Hrs Theory 8 Hrs Practical
5. Office hours	All days of the week from 9:00 to 14:00
6. Course code	
7. Teacher's academic profile	https://uni.sulicihan.edu.krd/qa/profile.php?id=13
8. Keywords	Microorganism, Microbial Growth Control, Microbial Physiology.
9. Course overview:	
<p>The Microbiology course consist of theory and practical sessions, it is prepared to direct ANS students to acquire an in-depth knowledge and strategies in General Microbiology. It is an exciting time for students, and offers unique experiences in the medical laboratory setting. For the practical side we will focus on several exercises on the basic concepts of microbiology and assists students to get necessary knowledge, skills, and practice in this field. In addition, students will learn how to work safely in microbiology labs. Each exercise composed of a short background about a specific topic followed by the principle, aims, required materials, and procedures needed to perform that exercise.</p>	
10. Course objective:	
<p>The aim of Microbiology course is to familiarize undergraduate students with the principle of microbiology, with an emphasis on microbial structure, function, growth and their physiology as well as basic principles and application relevance of clinical disease for students who are in preparation as technicians in anaesthesia. The course also concentrates on the diversity and activity of microorganisms in their natural environment, their mutual interactions and their survival adaptation strategies. The overarching goals for the laboratory portion of this course are to teach microbiological techniques and to show students the impact of microbes on our daily lives and their central roles in nature as well as aseptic and sterile techniques.</p>	

11. Student's obligation

A student has an obligation to respect the ethical standards of **Cihan University** in the following points:

A. Class Attendance and responsibilities:

1. Students are expected to attend each class for the entire semester.
2. If a student arrives more than 15 minutes late or leaves more than 15 minutes early, they will be marked as absent for the whole hour.
3. Students are responsible for material present in lectures.
4. Students will take several quizzes over the course and the quiz marks will be counted toward the final grade. So, try to prepare yourself for quiz every week.

B. Penalty and acceptable excuses for class and exam absence:

5. Only students with official absence, family crises, and illness are excused from class.
6. Three occasions of lateness count as one absence.
7. The student who misses 10 percent of the classes will be placed on probation.
8. Since all examination are announced in advance, **ZERO** grade will be given to any missed examination unless a student has an acceptable reason, such as illness, for not being able to take the examination during all those days when the examination was announced.

12. Forms of teaching

The way in which teaching is structured is in the form of lectures and laboratory exercises. Compulsory parts of the course include quizzes and final account. The lectures are added more detail through assignments, cooperative learning, videos and web tools.

13. Assessment scheme:

Session	No	Activities	Number or Quantity	Workload_ Hours	Mark %	Note
Theory	1	Report or Homework	1, 2	8	2.0	
	2	Quiz	3, 4	6	5.0	
	3	Participation	-	-	1.5	
	4	Attendance	-	-	1.5	
	5	Midterm Test	1	10	20.0	
Practice	6	Quiz	4, 6	6	5.0	
	7	Lab. Reports	4, 6	12	6.0	
	8	Lab. Reports Presentation	-	6	6.0	
	9	Attendance	-	-	1.5	
Class	10	Lab. attitude	-	-	1.5	
	11	Contact Hours	14 Weeks	56	-	
	12	Prepare for Classroom and Extra Reading	14 Weeks	28	-	
Exam	13	Final Practical Exam	1	8	20	
		Final Theoretical Exam	1	12	30	
Total				152	100	
			ECTS =	6		
Head of Department			Head of QA			

14. Student learning outcome:

The overall goal of this course is for the student to gain a basic knowledge on Microbiology. After participating in the course, students would achieve an understanding of the following:

The students will learn:

1. History and importance of microbiology
2. Measures or techniques to control microbial growth [Physical and chemical methods]
3. Culturing Microorganisms [Culture medium, sterile conditions, evaluation of growth]
4. Microbial genetics, genomes, DNA, RNA, Replication, transcription, and translation.

15. Course Reading List and References:

- a. Brown, A., & Smith, H. (2015). *Benson's Microbiological Applications: Laboratory Manual in General Microbiology* (Thirteenth E). McGraw-Hill Education,.
- b. Gwendolyn R. W. Burton, & Paul G. Engelkirk. (2003). *Microbiology for the Health Sciences* (Seventh Ed). Jones & Bartlett Learning
- c. Cappuccino, J. G., & Welsh, C. (2017). *Microbiology, A Laboratory Manual* (Eleventh E). Pearson Education

16. The Topics:

A. Theory Lecture

no.	Topic
1	Introduction to Microbiology: Historical Backgrounds
2	Microbial Taxonomy and nomenclature
3	Structure and Function of Prokaryotic Cell
4	Microbial Growth and Physiology I
5	Microbial Growth and Physiology II
6	Microbial Genetics
7	Principle of Disease and Epidemiology
8	Midterm exam
9	Gram-positive Cocci
10	Introduction to Virology

11	Introduction to Mycology
12	Introduction to Parasitology
13	Final Examination

B. Practical Lecture

no.	Topic
1	Introduction to Microbiology A: Lab Safety B: Microbiological material, tool, instrument and Equipment
2	Microbial Growth Control
3	Microbiological Culture Media and Their Preparation
4	Culturing of Microorganisms
5	Culture Characterization
6	Wet Mount and Smear Preparation (Simple Staining)
7	Differential Staining Technique
8	Midterm exam
9	Biochemical Tests used for Identification I
10	Biochemical Tests used for Identification II
11	Introduction to Virology
12	Introduction to Mycology
13	Introduction to Parasitology
14	Final Examination

17. Peer review: I certify that:

1. I read and verify all requirements of teaching quality assurance are respected in this course book.
2. The scientific contents are new, convenient and well organized for this stage.
3. The order of chapters is well done.

4. References are new and available for students.

That's why I signed on this course book and I take all responsibilities.

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Date: 16/ 01/ 2025

Signature:

Main Lecturer in charged
Avin Salih Sidiq

Head of The Department
Avin Salih Sidiq