

COURSE SYLLABUS FORM

**American University of Beirut
Faculty of Arts and Sciences
Department BIOLOGY**

Course Number and Title: 224 MICROBIOLOGY

1. Course Learning Outcomes

Students completing the course should be able to demonstrate their understanding/knowledge of the following: the variety within the microbial world with particular emphasis on bacteria; the structure of the bacterial cell and the differences from higher organisms; microbial growth and its control both in the laboratory and in the environment at large; the different groups of viruses and fungi; the relationship between micro-organisms and disease; the areas in which the knowledge of micro-organisms is applied to the benefit of humans.

Students completing the laboratory class should be able to: handle micro-organisms using aseptic techniques; isolate and maintain bacterial cultures; carry out a number of experiments independently to monitor bacterial morphology, growth and metabolic activities; assess the effectiveness of antimicrobial agents under laboratory conditions; and adhere to good laboratory practice

2. Resources Available to Students

Text book	Title:	Brock Biology of Microorganisms
	Authors:	Michael T Madigan, John M Martinko and Jack Parker
	Edition:	Latest
	Publisher:	Person Education, Inc.

Laboratory notes	Available on electronic reserve in AUB library
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3. Grading Criteria

3.1. Theory

First Exam	21%
Second Exam	21%
Final Exam	28%

3.2. Laboratory 25% comprised of

Drop Quizzes and Attendance 5%
Lab Reports and Evaluation 10%
Final Exam 10%

3.3 Evaluation 5%

4. Schedule

4.1. Course Schedule

Week	Topic	Activities
1	Introduction to Microbiology	Lectures
1-2	Cell Structure	Lectures
3-4	Microbial Growth	Lectures
4-6	Microbial growth control	Lectures
7-9	Major Classes of Bacteria	Lectures
10	Bacterial Genetics	Lectures
11	Introduction to viruses	Lectures
11	Introduction to Fungi	Lectures
12	Applied Microbiology	Lectures
13-14	Microbial Diseases	Lectures

4.2. Laboratory Schedule

Week	Topic/Activities	Assignments
1	The Gram Stain	Lab Report
2	Capsule and Endospore Stain	Lab Report + Drop Quiz
3	Microbiological Media and Pure Culture Method	Lab Report
4	Bacterial Growth	Lab Report + Drop Quiz
5	Antimicrobial Drug Action	Lab Report
6	Environmental Microbiology	Lab Report + Drop Quiz
7	Metabolic Activities of Bacteria	Lab Report
8	Identification of Bacteria	Lab Report + Drop Quiz
9	Bacterial Genetics: temperature-sensitive mutants	Lab Report
10	Bacterial Genetics: complementation Plus Review	Lab Report + Drop Quiz

5. Course Policy (if any)

- 5.1.** Students missing more than 1/5 of lectures or laboratory sessions are subject to being dropped out of the course.

- 5.2.** There will be no make-up exams as a matter of policy. A student who misses an exam forgoes their right to the percentage of the exam. Only in exceptional circumstances (only reports from the infirmary or the AUH are considered in case of ill-health), could an allowance be made. The nature of any alternative arrangement will be up to the tutor and in such a case the final grade of the student will be subject to evaluation by the tutor in the interest of fairness to all.