

**Department of Environmental Health
Faculty of Health Science
American University of Beirut
ENHL 227 (3crs): Environmental Microbiology
Spring Semester 2019-2020
Lab Syllabus**

1. Course Instructor:

Name: Antoine Abou Fayad, PhD

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Office: Diana-Tamari Sabbagh (DTS)-2nd Floor room 215-b

Ext: 4938

Office Hours: Mondays & Wednesdays from 12:00 to 13:00 or by appointment

2. Class Time and Location:

Friday from 15:00 to 17:00, Room #418

3. ENHL 227 Course Description:

This course aims at introducing students to the microbial world and covers environmental issues related to Microbiology. It emphasizes in its first part on fundamental aspects of microbiology in relation to environmental health. In its second part the course covers infectious diseases of man and animals transmitted through air, fresh and saline water, food, soil, municipal solid wastes, and waste water.

The Laboratory sessions cover basic microbiological techniques and applications including: isolation, microscopy, media preparation, cultivation techniques, microbial growth requirements, biochemical profile, and antibiotic susceptibility testing and expose students to principles of quality assessment of environmental samples by applying standard analytical techniques and emphasizing quality control protocol.

4. Course Learning Objectives

By the end of this lab, the students will be able to:

LO1: Develop a basic knowledge and understand the basic microbiological techniques and applications

LO2: Conduct Microbiological quality assessment of environmental samples (food, water, air, soil...)

5. Course Content

Week	Date	Topic
1	Jan 31	Introduction, Laboratory Safety Rules
2	Feb 7	Microscopy and Staining Techniques
3	Feb 14	Media Preparation and Cultivation Techniques 1
4	Feb 21	Cultivation Techniques 2: Serial Dilution
5	Feb 28	Biochemical Activities of Microorganisms
6	Mar 6	Rinse and Swab Tests
7	Mar 13	Exam I
8	Mar 20	Food Microbiology I
9	Mar 27	Food Microbiology II: Milk and Milk Products (Ice Cream)
10	Apr 03	Water & Wastewater Microbiology
11	Apr 24	Soil Microbial population and Air Microflora
12	TBA	Exam II

6. Attendance:

Attendance is a must, based on AUB rules. Missing one fifth of the sessions of any course during the semester and without valid reasons would result in course withdrawal. However, missing any of the Lab. Sessions is not acceptable except when cleared with the Lab instructor (AUB Catalogue P. 43).

7. Code of Conduct:

Based on the rules and regulations of AUB, any attempt of cheating and plagiarism or moral misconduct would result in disciplinary actions against the student.

<http://www.aub.edu.lb/pnp/generaluniversitypolicies/Documents/StudentCodeConduct/StudentCodeConduct.pdf>

8. Dress Code

Students will be expected to follow a dress code at the laboratory that follows the safety measures.

9. Laboratory Evaluation:

Lab represents 30% of the Final grade of the course

1- Lab Exam I: 10%

2- Lab Exam II: 10%

3- Quizzes: 5%

3- Attendance, Lab Work & Discipline: 5%

Good Luck and Enjoy the Course.