

Course E-Syllabus

1	Course title	Applied Microbiology
2	Course number	5501434
3	Credit hours	3 hours lecture
	Contact hours (theory, practical)	3 hours
4	Prerequisites/corequisites	5501331
5	Program title	Bachelor degree in Biological Sciences
6	Program code	550
7	Awarding institution	University of Jordan-Aqaba Branch
8	School	Basic and Marine Sciences
9	Department	Marine Biology
10	Level of course	Fourth Year
11	Year of study and semester (s)	First Semester 2020/2021
12	Final Qualification	B.Sc.
13	Other department (s) involved in teaching the course	none
14	Language of Instruction	English
15	Teaching methodology	<input type="checkbox"/> Blended <input checked="" type="checkbox"/> Online
16	Electronic platform(s)	<input checked="" type="checkbox"/> Moodle <input type="checkbox"/> Microsoft Teams <input type="checkbox"/> Skype <input checked="" type="checkbox"/> Zoom <input type="checkbox"/> Others.....
17	Date of production/revision	20/09/2020

18 Course Coordinator:

Dr. Zeinab H. Arabeyyat
Office number: 342
Office hours: 10:00 – 11:00 am (Sunday and Monday)
Phone numbers: 032090450 ext. 36051
Email address: z.arabeyyat@ju.edu.jo

19 Other instructors:

N/A

20 Course Description:

As stated in the approved study plan.

This course focused on the basic applications of Microbiology. The fundamentals of bacterial genetics and techniques in genetic engineering as well as the role of microbiology in the environment, industry, and food microbiology.

21 Course aims and outcomes:

A- Aims:

Knowing the basic applications of Microbiology and the fundamentals of bacterial genetics and techniques in genetic engineering as well as the role of microbiology in the environment, industry, and food microbiology.

B- Intended Learning Outcomes (ILOs): Upon successful completion of this course students will be able to ...

1. Knowing what is microbiology.
2. Describing why microbiology is important.
3. Identifying plasmid cloning vectors, bacteriophages as cloning vectors, expression vectors, eukaryotic cloning vectors, and polymerase chain reaction (PCR).
4. Describing methods of detection and isolation of microorganisms in the environment.
5. Identifying beneficial and harmful effects of microorganisms in the environment.
6. Relationships between microorganisms and food.
7. Knowing the microbial spoilage of food.
8. Describing microorganisms in the production of biochemical
9. Products derived from genetically engineered microorganisms
10. Microorganisms in wastewater treatment and bioremediation
11. Microorganisms in the mining industry.

22. Topic Outline and Schedule:

Week	Lecture	Topic	Teaching Methods*/platform	Evaluation Methods**	References
1	1, 2	Introduction to Microbiology	Microsoft teams, Zoom and Moodle	Oral questions	Hogg, S. (2005).
2 & 3	3 - 8	Microorganisms in the Environment	Microsoft teams, Zoom and Moodle	Oral questions and Homework	Hogg, S. (2005).
4, 5, 6 & 7	9 - 17	Microorganisms in Industry	Microsoft teams, Zoom and Moodle	Oral questions	Hogg, S. (2005).
7	18	Midterm Exam			
8	19, 20 & 21	Presentations	Microsoft teams and Zoom	PPT content and Oral questions	
9, 10, 11 & 12	22-31	Microorganisms in Genetic Engineering	Microsoft teams, Zoom and Moodle	Oral questions	Hogg, S. (2005).
Final Exam					

- Teaching methods include: Synchronous lecturing/meeting; Asynchronous lecturing/meeting
- Evaluation methods include: Homework, Quiz, Exam, pre-lab quiz...etc

23 Evaluation Methods:

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Evaluation Activity	Mark	Topic(s)	Period (Week)	Platform
Homework Assignments	10	Microorganisms in the Environment	4	Moodle
Midterm Exam	30	Microorganisms in the Environment, and Microorganisms in Industry	7	LMSystem
Oral Presentation	10	All topics	8	Zoom
Final Exam	50	All topics	14	-

24 Course Requirements (e.g: students should have a computer, internet connection, webcam, account on a specific software/platform...etc):

Computer and internet connection are required for watching lectures, reading the module documents and reviewing related eBooks, applying for online test, answering and submitting homework.

25 Course Policies:

A- Attendance policies:

- I strongly recommend students attend every lecture. Missing any lecture will put them at a distinct disadvantage when test taken.
- Any student with six or more unexcused absences from lecture can be legally dropped from the course.

B- Absences from exams and handing in assignments on time:

The only valid excuses for missing an exam are death in the family, illness, or accident. In this case, student must provide evidence of some kind and must report me within 3 days.

C- Health and safety procedures:

Students who miss the exam due to illness or other excuse must notify me within the first week after the exam, so make up arrangements can be made.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

- Students are not expected to talk loudly while the lecturer is lecturing,
- After two warning, the Student will be automatically removed from the class or the online lecture.
- Any act of cheating, or academic misconduct is subject to penalties.
- The minimum penalty for any students caught cheating will receive a zero on that test.

E- Grading policy:

Type	Grading
Homework Assignments:	10%
Midterm Exam:	30%
Presentation:	10%
Final Exam:	50%
Total	100%

Exams: The examinations consist of any combination of multiple choice, and true or false questions.

F- Available university services that support achievement in the course:

Library sources are available and internet.

26 References:

A- Required book(s), assigned reading and audio-visuals:

- Hogg, S. (2005). Essential Microbiology. West Sussex: John Wiley and Sons. Chicago, 15th ed.
- Other readings provided as PDF files.

B- Recommended books, materials and media:

Selected videos from YouTube,
Electronic online-free books, and
Moodle.

27 Additional information:

N/A

Name of Course Coordinator: **Dr. Zeinab H. Arabeyyat** Signature:  Date: **20/09/2020**

Head of Curriculum Committee/Department: ----- Signature: -----

Head of Department: ----- Signature: -----

Head of Curriculum Committee/Faculty: ----- Signature: -----

Dean: ----- Signature: -----