هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

T-104
2022

Course Specification

Course Title:	**Bacteriology**
Course Code:	**MICR 231**
Program:	**Bachelor of science in Biology**
Department:	**Biology Department**
College:	**College of Science**
Institution:	**Jazan University**
Version:	**T-104**
Last Revision Date:	**24 January 2023**

Table of Contents:

A. General information about the course:

Course Identification					
1. Credit hours:	2				
2. Course type					
a.	University ☒	College ☐	Department☐	Track☐	Others☐
b.	Required ☐	Elective☒			
3. Level/year at which this course is offered:					
4. Course general Description This course provides a wide-ranging introduction to bacteriology, classification of bacteria, bacterial cell structure and functioning, bacterial growth and its estimation and factors affecting it, metabolism, genetics and biological importance of bacteria. .					
5. Pre-requirements for this course (if any): General Biology BIOL 101					
6. Co- requirements for this course (if any): None					
7. Course Main Objective(s): **At the end of the course students will be able to:** This course is designed to provide students with the following concepts: This course aims giving students the basic theoretical and practical techniques of types, structure, taxonomy, and life cycles of freshwater and marine algal organisms.					

1. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1.	Traditional classroom	10	76.9%
2.	E-learning	1	7.7%
3.	Hybrid • Traditional classroom • E-learning	1	7.7%
4.	Distance learning	1	7.7%

2. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	11
2.	Laboratory/Studio	11
3.	Field	-
4.	Tutorial	-

5.	Others (Self-study)	2
	Total	24

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Define all principals, concepts, theories and aspects concerning with bacteriology.	K1.1	Lectures	Quizzes, Short Answer Question (SAQ), MCQs
2.1	Compare between different mechanisms, functions, practices and aspects related to bacteriology.	K2.1	Lectures	Direct questions
2.3	Draw all systems, organs, cells and its contents diagrams and figures of bacteriology.	K2.3	Lectures, Lab work	Long or short answer questions, homework
2.0	Skills			
2.1	Debate the bacteriology theories, principles and processes.	S1.1	Lectures	Long or short answer questions
2.3	Write a report about any practical or theoretical tasks related to bacteriology.	S3.3	Lectures, Lab work	Long or short answer questions
3.0	Values, autonomy, and responsibility			
3.2	Illustrate awareness of risk assessment and safety observation when dealing with lab equipment at various fields.	V3.2	Lab work	Practical exam-Homework

C. Course Content

No	List of Topics	Contact Hours
1.	**Introduction/ Distribution of bacteria**	2
2.	**Function of bacteria**	2
3.	**Size and fundamental shapes of bacteria and Archaea.**	2
4.	**Surface Structures-Appendages.**	2
5.	**The Cell Envelope (*Gram +ve and Gram-ve bacteria)***	2
6.	**Importance of Surface Components**	2
7.	**Cytoplasmic Constituents of bacteria**	2
8.	**Cell division in bacteria-Binary fission – Sexual reproduction (Para sexuality).**	2
9.	**Classic methods of Identification of Bacteria**	2
10.	**Ecology of Bacteria- Bacterial Pathogenicity**	2
11.	**General conditions for growth of bacteria**	2
Total		22

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	ÓWritten assignment	3	5%
2.	Theoretical quiz	3	5%
3.	mid-term exam	6	10%
4.	Practical quiz	4	%5
5	Practical assignment	6	%5
6	Final practical exam	10	%20

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.)

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Ibrahim Youssef Trabelsi (2007): Agricultural microbiology, King Saud University.
Supportive References	List Required Textbooks - Dubey, R. C., Maheshwari, D. K. (2005). A Textbook of Microbiology 7th edition . S. Chand and Company LTD, Ram Nagar , New Delhi -110055.
Electronic Materials	www.ausers.rcn.com/jkimball.ma.ultranet/BiologyPages/ www.emc.maricopa.edu • www.biology.clc.uc.edu • List Essential References Materials (Journals, Reports, etc.)
Other Learning Materials	-------

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Traditional classrooms and E-learning
Technology equipment (projector, smart board, software)	(projector, smart board, software)
Other equipment (depending on the nature of the specialty)	NA

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students Course Coordinator	Direct (Questionnaire)
Effectiveness of students assessment	Peer Reviewer	Direct (Cross Check marking)
Quality of learning resources	Students Course Coordinator Quality Committee	Indirect
The extent to which CLOs have been achieved	Course Coordinator Quality Committee	Indirect
Other	----	----

Assessor (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

G. Specification Approval Data

COUNCIL /COMMITTEE	Biology Department Board
REFERENCE NO.	BIO2214
DATE	20/9/2022AD