Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED SCIENCES

Faculty of Laboratory medicine

Department of BIOCHMASTRY And Molecular Biology

Course Specification of General Biology

Course No. (03.02.311)

2023/2022

Course name : General Biology

I. Course Identification and General Information:					
1	**Course Title:**	General Biology			
2	**Course Code & Number:**	03.02.311			
3	**Credit Hours:**	**Theory Hours**			
		Lecture	**Exercise**	Practical	**Credit Hours**
		2	0	2	3
4	**Study Level/ Semester at which this Course is offered:**	1st Level / 1st Semester			
5	**Pre –Requisite (if any):**	English			
6	**Co –Requisite (if any):**	None			
7	**Program (s) in which the Course is Offered:**	Bachelor in laboratory medicine			
8	**Language of Teaching the Course:**	English			
9	**Study System:**	semester			
10	**Mode of Delivery:**	Regular			
11	**Location of Teaching the Course:**	University Campus			
12	**Prepared by:**	Dr. Nabeel Aloery			
13	**Date of Approval:**	2022-2023			

	II. Course Description:
	This course cover basic knowledge the deferent structure between Eukaryotic and prokaryotic cells and Discuss Cellular organization and functions .

III. Alignment Course Intended Learning Outcomes with program outcomes		
III. Course Intended Learning Outcomes (CILOs)		**Referenced PILOs**
A. Knowledge and Understanding: ***Upon successful completion of the course, students will be able to:***		
a1	Understand the deferent structure between Eukaryotic and prokaryotic cells	**A1**
B. Intellectual Skills: ***Upon successful completion of the course, students will be able to:***		
b1	**Discuss Cellular organization and functions**	B1
C. Professional and Practical Skills: ***Upon successful completion of the course, students will be able to:***		
c1	ANALYSIS the deferent structure between Eukaryotic and prokaryotic cells	**C3**
D. Transferable Skills: ***Upon successful completion of the course, students will be able to:***		
d1	Ability to transfer information of cell content	D1

IV. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods :			
(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	Discuss the deferent structure between Eukatotic cells and pokaotic cells	Lectures	Exam
(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies

b2	Recognize **Cellular organization and functions**	Lectures	Exam
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	**ANALYSIS** the deferent structure between Eukaryotic and prokaryotic cells	Practical lectures	Practical Exams
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1	Ability to transfer information of cell content	seminar	discussion

V. Course Content:

A – Theoretical Aspect:

NO.	Units/Topics List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes (CILOs)
1	**Introduction to cell biology (Goals and Methods)**		1	2	a1, b1
2	**Essential characteristics of the cell.** Eukaryotic and prokaryotic cells		1	2	.a1
3	**Cellular organization and functions**		1	2	b1
4	**Cell membrane structure and function**		1	2	a1 .b1
5	**Membrane organelles (Types and Functions)**		1	2	a1 .b1
6	**Non-membranous organelles (Types and Functions)**		1	2	a1 .b1
7	**Nuclear structure and dynamics**		1	2	d1
8	MED TERM		1	2	
9	**Cell Division (Types and significance)**		1	2	a1
10	**Cell Cycle** -Phases of cell cycle -Checkpoints of cell cycle		1	2	b1
11	**Basic body tissues** -Epithelial Tissue (General features and Classification)		1	2	d1
12	**Connective tissue (CT) (General features and** Classification**)** **-Embryonic CT** **-Adult CT**		1	2	d1
13	**The Special connective tissue** (General features and function)		1	2	d1
14	**The muscular tissue** (General features and Classification)		1	2	d1
15	**The nervous tissue** (General features and Classification)		1	2	d1
16	FINAL THEORTICAL		1	2	
	Total		16	32	

B - Practical Aspect: (if any)				
Order	**Tasks/ Experiments**	**Number of Weeks**	**contact hours**	**Learning Outcomes**
1	**Introduction to cell biology (Practical applications)**	**1**	**2**	**a1**
2	**Basic principles of light Microscope**	**1**	**2**	**c1**
3	**Microscopes (Types and functions)** -Electron microscope -Fluorescence microscope	**1**	**2**	**c1**
4	**Ultra-structure of Cell membrane**	**1**	**2**	**c1**
5	**Structure and ultra-structure of Membrane organelles**	**1**	**2**	**c1**
6	**Structure and ultra-structure Non-membranous organelles**	**1**	**2**	**c1**
7	**Nucleus structure (General features)**	**1**	**2**	**c1**
8	**Cell Division**	**1**	**2**	**c1**
9	**Basic body tissue** -Structural Types of Epithelial Tissue (General features and Classification)	**1**	**2**	**c1**
10	**Structural Types of Connective tissue (General features and Components) -Embryonic CT -Adult CT**	**1**	**2**	**c1**
11	**Structural Types of special connective tissue (Adipose CT, Cartilage and Bone CT)**	**1**	**2**	**c1**
12	**Structural Types of Muscular tissue and nervous tissue.**	**1**	**2**	**c1**
13	**Structural Types of Nervous tissue**	**1**	**2**	**c1**
14	**Final exam**	**1**	**2**	
Number of Weeks /and Units Per Semester		**14**	**28**	

IV. Teaching strategies of the course:	
1	**Lectures**
2	Practical Sessions
3	Seminars

VI. Assessment Methods of the Course:

No	Assignment
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)
3	Practical Exams (PE)

VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Midterm Exam**	8	20	20%	a1, ,b1, ,c1
2	**Practical exam**	12	30	30%	a1, ,b1, ,c1,d1
3	**Final Exam**	16	50	50%	a1, ,b1, ,c1
	Total	100		100%	

IX. Learning Resources:

1- Required Textbook.

1-	Warren Levinson, Peter Chin-Honh, Elizabeth A. Joyce, Jesse Nussbaum and Brian Schwartz, Review of Medical Microbiology and Immunology, 2018, 15th edition, McGraw-Hill, ISBN: 978-1-259- 64449-8

2-	Jawetz, Melnick, & Adelberg's Medical Microbiology, 28e **Riedel, Stefan** Published by McGraw-Hill Education, 2019 ISBN 10: 1260012026ISBN 13: 9781260012026
2- Essential References.	
1-	
2-	Bailey & Scott's Diagnostic Microbiology 15th Edition Patricia M. Tille- February 4, 2021
3- Electronic Materials and Web Sites *etc*.	
1-	http://www.asmusa.org\
2-	http://www.phage.org/black09.htm
3-	http://www.microbe.org/microbes/virus_or_bacterium.asp
4-	http://www.microbelibrary.org
	http://www.bact.wisc.edu/Bact330/330Lecturetopics

X. Course Policies: (Based on the Uniform Students

1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**

7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.