

## Course Syllabus of Biology

Faculty: Medicine and Health Sciences

Department: Health science

Program: Bachelor in Medical laboratory

I. General information about the course instructor :							
Name	Prof. Saeed M. Alghalibi	Office Hours(3 Hours Weekly )					
Location & phone number	Sanaa 733583112	Sat	Sun	Mon	Tue	Wed	Thu
Email	alghalibi@gmail.com	1		1		1	

II. General information about the course:						
1.	Course Title :	Biology				
2.	Course Code and Number :	BHS120				
3.	Credit Hours :	Credit Hours				Total
		Theoretical	Seminar/Tutorial	Practical	Training	
		2	-	1	-	3
4.	Study Level and Semester:	First Year- First Semester				
5.	Pre-requisites :	None				
6.	Co-requisites :	None				
7.	Program in which the course is offered:	Bachelor in Medical laboratory				
8.	Teaching Language:	English				
9.	Instruction location:	Sana'a				

جامعة العلوم والتكنولوجيا  
إدارة ضمان الجودة والاعتماد  
معتصم  
APPROVED

المراجع:  
د. مجاهد نصار

الموصف:  
الد. سعيد الغالبي

عميد الكلية:

د. عبد الله المخلافي

رئيس القسم:  
د. عبد الحبيب ردمان

## I. Course Description

This course is concerned with the fundamental biological knowledge about living organisms. The topic will cover the history of evolution, function and chemical structure of macromolecules, difference between prokaryotic and eukaryotic cells, cell function, cell division, enzymes and material transport in living organisms.

The practical part will be focus on structure and function of living cells, mitosis and meiosis division in plant and animal cells, active and passive transport, properties and function of enzymes in living organism. The teaching will include lecture, collaborative learning, self-learning, dialogue, brain storming, discussion and assignment. The students will be evaluated through report, written exam and practical exam

## II. Course Aims:

1. Provide students with the basic knowledge of concepts of biology including structure of cell and its organelles.
2. Familiarize students with background about macromolecules and its function in living cells.
3. Able to used microscopes and their importance in viewing cellular structure.
4. Understand ethical and professional education necessary for dealing with living organisms.
5. Accepts students with skills in distinguish between different living organisms.

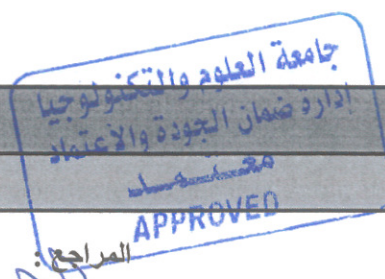
## III. Course Intended Learning Outcomes (CILOs) :

**After completion of this course student should be able to:**

- 1) Define scientific terms related to biology and differentiate between prokaryotic and eukaryotic organisms.
- 2) Describe the structure , properties and function of macromolecules and enzymes.
- 3) Recognize techniques and procedures used for quality control and quality assurance systems in biological labs.
- 4) Correlate laboratory findings with processes of living cells.
- 5) Explore and solve familiar and unfamiliar problems related to biological science.
- 6) Compare critically the function of various organs and systems in living organisms.
- 7) Operate different equipment's and instruments and use emerging technologies in identification and recognition of living organisms.
- 8) Demonstrate proper handling of microscope to view the cells and using chemicals safely.
- 9) Evaluate the results obtained in the laboratory of biology and compare them with published results.
- 10) Cooperate with supervisors and colleagues in biology lab and show the appropriate responsibility, self-confidence and behaviors.

## IV. Course Contents

Theoretical Aspect:



الموصف :

No.	Course Units	Sub-topics	Week due	Contact Hours
1	Overview and Introduction to Biology	Historical background Definition of Biology and evolution	1 <sup>st</sup> ,2 <sup>nd</sup>	4
2	Macromolecules	Carbohydrates, lipids, proteins and nucleic acid (DNA and RNA) Protein synthesis	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup>	6
3	Cells	Microscope Difference between Prokaryotic and Eukaryotic cells, cell organelles and function	6 <sup>th</sup> ,7 <sup>th</sup> ,8 <sup>th</sup>	6
4	Mid term Exam		9 <sup>th</sup>	2
5	Membrane structure and function	Type of membranes Active transport, Passive transport,	10 <sup>th</sup>	2
6	Energy and the cell	Definition, types of energy and metabolic pathway	11 <sup>th</sup>	2
7	Enzymes	Properties, function and composition of enzymes Enzyme inhibitors	12 <sup>th</sup> ,13 <sup>th</sup>	4
8	Cell division	Asexual reproduction in Prokaryotic Mitosis and meiosis in plant and animal cell	14 <sup>th</sup> ,15 <sup>th</sup> ,	4
9	Final Exam		16 <sup>th</sup>	2
Total number of weeks and hours			16	32

### Second: Practical/Tutorial/Clinical Aspects :

No.	Practical/Tutorial/Clinical topics	Week due	Contact Hours
1	Microscope (structure, types and function)	2 <sup>nd</sup>	2
2	Macromolecules (carbohydrates, lipids, protein and nucleic acid)	3 <sup>rd</sup> ,4 <sup>th</sup> ,5 <sup>th</sup>	6
3	Cells (bacteria, plant and animal cells)	6 <sup>th</sup> ,7 <sup>th</sup> ,8 <sup>th</sup>	6
4	Membrane structure and function	9 <sup>th</sup>	2
5	Enzymes	10 <sup>th</sup>	2
6	Cell Division (bacteria, plant and animal cell)	11 <sup>th</sup>	4
7	Final Exam	14 <sup>th</sup>	2
Total number of weeks and hours			24



المراجع :

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الموصف :

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