



ASU
جامعة العلوم التطبيقية الخاصة
APPLIED SCIENCE PRIVATE UNIVERSITY



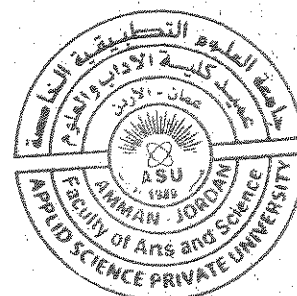
AMMAN - JORDAN

المستوى الذهبي

جامعة كل العرب

Faculty of Arts and Science
Course Syllabus
Semester: Second Academic Year: 2020/2021

Course Title: Biology 1
Course No.: 1501141
Prerequisite: -
Concurrent: -
Department: Basic Science and Humanities
Coordinator: Dr. Rula Khuzaie



Name	Office Number	Office phone	Office hours	E-mail
Dr. Rula Khuzaie	7014	1617	Sun, Tues & Thur 10-11. Mon & wed 9:30-11	khuzai@asu.edu.jo

*** Course Description:**

The course deals with a brief review of the cell with details of water and the fitness of the environment, carbon and the molecular diversity of life, structure and function of macromolecules including carbohydrates, proteins, lipids and nucleic acids, a tour of the cell, membranes structure and function. The course also deals with metabolism, cellular respiration, photosynthesis, reproduction of the cell in addition to Mendel and the gene idea, molecular basis of inheritance and cellular reactions from gene to protein. The E-learning platform (Microsoft Teams) will be used for teaching.

*** Learning Outcomes :**

Upon completion of the course, this module should lead to the following learning outcomes:

A. Knowledge and Understanding (student should) :

A1. Understand water's structure and properties that enable water to support all of life.

A2. Understand the concept of structure and function as a method of understanding biological activities.

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*** Learning Outcomes :**

Upon completion of the course, this module should lead to the following learning outcomes:

A. Knowledge and Understanding (student should) :

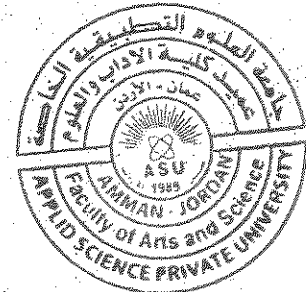
- A1. Understand water's structure and properties that enable water to support all of life.
- A2. Understand the concept of structure and function as a method of understanding biological activities.
- A3. Understand cell theory, which explains that the cell is the basic functional unit in the organism.
- A4. Understand metabolism.
- A5. Understand probability law in predicting mendelian genetics. In addition to exceptions for this law.
- A6. Understand the processes from gene to protein which enable the cell to express a gene.

B. Cognitive and Intellectual Skills :

- B1. Define essential terms in biochemistry, cell biology, genetics and molecular biology.
- B2. Recognize structure and function of water and biological molecules.
- B3. Recognize cell structure and function for both prokaryotes and eukaryotes.
- B4. Define metabolism and distinguish between anabolism and catabolism. Define ATP and enzymes.
- B5. Recognize pathways of respiration, fermentation and photosynthesis.
- B6. Describe types of cellular replication.
- B7. Recognize mendelian laws and predicting the genetics of the coming offspring.
- B8. Distinguish between mendelian and non-mendelian genetics.
- B9. Recognize DNA replication, transcription and translation.

C. Subject specific skills :

- C1. Distinguish between types of biological molecules.
- C2. Distinguish between prokaryotic and eukaryotic cells.
- C3. Utilize metabolism in understanding respiration and photosynthesis.
- C4. Utilize mendelian laws in predicting the character of the offspring.



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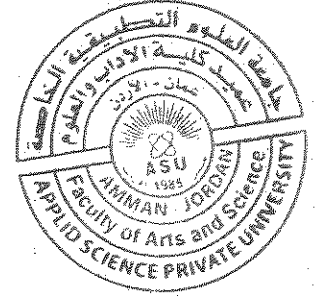


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D. Transferable Skills :

- D1. Integrate knowledge about water in pharmacy.
- D2. Integrate cell theory in understanding diseases.
- D2. Integrate laws of energy in understanding biological processes.
- D3. Integrate knowledge in molecular biology in pharmacy.



*** Course Contents and Schedule:**

Semester Weeks	Subject	Chapter
1&2	Water and the fitness of the environment	3
3&4	Carbon and the molecular diversity	4
5	The structure and function of macromolecules	5
6&7	A tour of the cell	6
8&9	Membrane structure and function	7
10	An introduction to metabolism	8
11	Cellular respiration	9
12	Photosynthesis	10
13	The cell cycle	12
13	Meiosis and the life cycle	13
14	Mendel and the gene idea	14
15	The molecular basis of inheritance	16
16	From gene to protein	17

*** Teaching Methods:**

- Interactive lectures
- Group discussions
- Self reading

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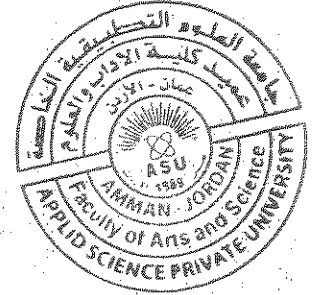
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*** Evaluation:**

Midterm exam	30	19/4/2021 (Microsoft teams)
Assignment	20	
Final Exam	50	

*** Textbook :**

Campbell, N., Reece, J. and Mitchell G. 11th Edition. Biology



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د. رلى خزايعي

Subject Coordinator :Dr. Rula Khuzai

Signature: رلى خزايعي

Head of Curriculum Committee: Dr. Husam Miqdad

Signature: Husam Miqdad

Department Head: Dr. Husam Miqdad

Signature: Husam Miqdad

Dean Faculty: Dr. Hadeel Ailsaed

Signature: Hadeel Ailsaed

Copy to:

- Department Head.
- Head of Curriculum Committee.
- Course File.

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