



**Jordan University of Science and Technology**  
**Faculty of Science & Arts**  
**Biotechnology & Genetic Engineering Department**

BT104 General Biology

First Semester 2020-2021

**Course Catalog**

3 Credit Hours. General Biology (BT104) is devoted to the study of the cellular and molecular basis of life. Students are expected to develop an understanding of certain core concepts of biology including cell structure and physiology, information flow, metabolism, cellular reproduction, Mendelian genetics, mammalian systems & protective mechanisms.

**Text Book**

<b>Title</b>	Biology
<b>Author(s)</b>	Campell NA, Urry LA, Cain ML, Wasserman SA, Minorsky PV and Reece JB
<b>Edition</b>	11th Edition
<b>Short Name</b>	1
<b>Other Information</b>	

**Instructor**

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**Instructor**

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**Instructor**

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Class Schedule & Room	
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**Section 2:**

Lecture Time: Sun, Tue : 08:30 - 10:00

Room: منصة الكترونية

**Section 3:**

Lecture Time: Sun, Tue : 13:00 - 14:30

Room: منصة الكترونية

**Section 4:**

Lecture Time: Mon, Wed : 11:30 - 13:00

Room: منصة الكترونية

**Section 5:**

Lecture Time: Mon, Wed : 11:30 - 13:00

Room: منصة الكترونية

**Section 6:**

Lecture Time: Mon, Wed : 13:00 - 14:30

Room: منصة الكترونية

**Section 7:**

Lecture Time: Mon, Wed : 14:30 - 16:00

Room: منصة الكترونية

**Tentative List of Topics Covered**

<b>Weeks</b>	<b>Topic</b>	<b>References</b>
Weeks 1, 2	Biological Macromolecules and Lipids: Concepts 5.1, 5.2, 5.3, 5.4, 5.5 & 5.6	From 1
Weeks 3, 4	Cell Structure and Function: Concepts 7.1, 7.2, 7.3, 7.4, 7.5, 7.6 & 7.7	From 1
Week 5	Cell Membranes: Concepts 8.1, 8.2, 8.3, 8.4 & 8.5	From 1
Week 6	Cell Respiration: Concepts 10.1, 10.2, 10.3, 10.4 & 10.5	From 1
Week 7	Mitosis: Concepts 12.1, 12.2 & 12.3	From 1
Week 8	Sexual Life Cycles and Meiosis: Concepts 13.1, 13.2, 13.3 & 13.4	From 1
Week 9	Mendelian Genetics: Concepts 14.1, 14.2 & 14.3	From 1
Week 10	Nucleic Acids and Inheritance: Concepts 16.1 & 16.2	From 1
Week 11	Animal Digestive Systems [Mammalian]: Concepts 42.3 & 42.5	From 1
Weeks 12, 13	Animal Transport Systems: [Mammalian]; Concepts 43.2, 43.3, 43.4; 43.5 (Lungs only); 43.6 (How mammals breathe) & 43.7 (Adaptation)	From 1
Weeks 14, 15	Animal Defenses Against Infection: Concepts 47.1, 47.2 & 47.3	From 1

<b>Mapping of Course Outcomes to Program Student Outcomes</b>	<b>Course Outcome Weight (Out of 100%)</b>	<b>Assessment method</b>
Describe the structure, characteristics and functions of carbohydrates, lipids, proteins and nucleic acids. [1A]	7%	
Become familiar with basic unit of life, how prokaryotes and eukaryotes are different and identify organelles and structures in animal and plant cells and how they differ from each other. [1A]	10%	
Analyze and explain the processes associated with and the role of the cell membrane in the processes of osmosis, diffusion and transport. [1A]	7%	
Explain how metabolic pathways are performed in plants and animals in the form of cellular respiration. [1A]	7%	
Describe the molecular basis of the cell cycle and the goals and outcomes of mitosis. [1A]	9%	
Describe how Meiosis differentiated from Mitosis, in addition to its goals and outcomes. [1A]	12%	
Define and apply the principles of Mendelian genetics and its modern extensions to the unity and diversity of life [1A]	7%	
Understand the molecular and chromosomal basis of heredity [1A]	12%	
Describe the anatomical structure and physiological functions of the mammalian digestive system [1A]	7%	
Describe the anatomical structure and physiological functions of the mammalian transport systems [1A]	12%	
Describe the anatomical structure and physiological functions of the animal immune system [1A]	10%	

<b>Relationship to Program Student Outcomes (Out of 100%)</b>					
A	B	C	D	E	F
100					

<b>Evaluation</b>	
<b>Assessment Tool</b>	<b>Weight</b>
MIDTERM EXAM	50%
FINAL EXAM	50%

Date Printed: 2020-10-19