Jordan University of Science and Technology

Faculty of Science & Arts

Applied Biological Sciences Department

BIO104 General Biology
First Semester 2019-2020

Course Catalog
3 Credit Hours. General Biology (B104) 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	
Title	Biology
Author(s)	Campell NA, Urry LA, Cain ML,Wasserman SA, Minorsky PV and Reece JB
Edition	11th Edition
Short Name	1
Other Information	

Instructor	
Name	**Prof. Homa Darmani**
Office Location	PH1L1
Office Hours	Sun : 10:00 - 11:00 Sun : 11:00 - 12:00 Tue : 10:00 - 11:00 Tue : 11:00 - 12:00 Wed : 13:00 - 14:00 Thu : 10:00 - 11:00 Thu : 11:00 - 12:00
Email	darmani@just.edu.jo

Instructor	
Name	**Prof. Zuhair Amr**
Office Location	PH1L1

Office Hours	Sun : 12:00 - 14:00 Mon : 13:00 - 14:30 Tue : 11:00 - 13:00 Wed : 13:00 - 14:00
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Instructor	
Name	**Dr. Khaldon Bodoor**
Office Location	-
Office Hours	Sun : 09:30 - 10:30 Sun : 11:30 - 12:30 Mon : 09:00 - 10:00 Tue : 09:30 - 10:30 Wed : 09:00 - 10:00 Thu : 09:30 - 10:30
Email	khaldon_bodoor@just.edu.jo

Instructor	
Name	**Dr. Sereen Bataineh**
Office Location	-
Office Hours	Sun : 10:00 - 11:00 Sun : 12:45 - 14:00 Mon : 11:45 - 12:15 Tue : 09:45 - 11:00 Tue : 13:00 - 14:30 Wed : 11:45 - 12:15
Email	smbataineh3@just.edu.jo

Instructor	
Name	**Dr. Rami Alkhatib**
Office Location	PH1-L1
Office Hours	Sun : 10:30 - 12:30 Mon : 12:15 - 13:30 Tue : 10:30 - 12:30 Thu : 10:30 - 11:30
Email	rqalkhatib@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Sun, Tue, Thu : 12:30 - 13:30
Room: SCIENCE HALL2

Section 3:
Lecture Time: Mon, Wed : 11:30 - 13:00
Room: SB19

Section 4:
Lecture Time: Mon, Wed : 13:00 - 14:30
Room: NG76

Section 5:
Lecture Time: Sun, Tue, Thu : 12:30 - 13:30
Room: SCIENCE HALL1

Section 6:
Lecture Time: Mon, Wed : 10:00 - 11:30
Room: NORTH HALL

Tentative List of Topics Covered		
Weeks	**Topic**	**References**
Weeks 1, 2	Biological Macromolecules and Lipids: Concepts 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: [Mammalalian; 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**

Mapping of Course Outcomes to Program Student Outcomes	**Course Outcome Weight (Out of 100%)**	**Assessment method**

Describe the structure, characteristics and functions of carbohydrates, lipids, proteins and nucleic acids. [1A]	7%	MIDTERM EXAM
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%	MIDTERM EXAM
Analyze and explain the processes associated with and the role of the cell membrane in the processes of osmosis, diffusion and transport. [1A]	7%	MIDTERM EXAM
Explain how metabolic pathways are performed in plants and animals in the form of cellular respiration. [1A]	7%	MIDTERM EXAM
Describe the molecular basis of the cell cycle and how mitosis and meiosis are differentiated in addition to their goals and outcomes. [1A]	9%	MIDTERM EXAM
Meiosis [1A]	12%	FINAL EXAM
Define and apply the principles of Mendelian genetics and its modern extensions to the unity and diversity of life [1A]	7%	FINAL EXAM
Understand the molecular and chromosomal basis of heredity [1A]	12%	FINAL EXAM
Describe the anatomical structure and physiological functions of the mammalian digestive system [1A]	7%	FINAL EXAM
Describe the anatomical structure and physiological functions of the mammalian transport systems [1A]	12%	FINAL EXAM
Describe the anatomical structure and physiological functions of the animal immune system [1A]	10%	FINAL EXAM

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

Evaluation	
Assessment Tool	**Weight**
MIDTERM EXAM	40%
FINAL EXAM	60%

Policy	
Class Attendance	Your class attendance is mandatory. Absences in excess of 20% of the total lecture hours will result in your being dropped from the course with a failing grade.
Makeup Exams	Make-up exam appeals should be filed within one week of the missed exam.
Cell Phones	Cell phones are completely prohibited during examinations according to the university regulations i.e. you are not allowed to bring your phone into the exam hall.

Cell Phones	Cell phones must be turned off during lectures. No incoming or outgoing calls or text messages are allowed.
Cheating	Unethical conduct, including cheating during examinations, will result in punishment by the university administration

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