Course Specification
(Bachelor)

Course Title:	General Biology
Course Code:	BIO 101
Program:	Bachelor of Science (B.Sc)
Department:	Biology
College:	College of Science
Institution:	Majmaah University
Version:	2024
Last Revision Date:	22-06-1446

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (.....)					
2. Course type					
A.	☐University	☐College	☐Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (.....)					
4. Course General Description:					
This course deals with the basic concepts in biology, where includes the general classification of animal and vegetable kingdom, the structure and function of large molecules (sugars, fats, proteins and nucleic acids), Introduction to metabolism, structure and function of animal and plant cell, cell division, Mendel and genes, tissue Animal and finally non-specialized immune and immunology specialist.					
5. Pre-requirements for this course (if any)**:**					
6. Co-requisites for this course (if any)**:**					
7. Course Main Objective(s):					
• Identify the most important characteristics of living organisms and life manifestations. • Study the structure and function of macromolecules and developed a positive attitude towards diet. • The ability to identify the definition of animal & plant cell and components and the different types of tissues. To provide the student with basic information on the metabolism, cell division, Mendel and genes and finally immunology.					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	35	78%
2	E-learning		

No	Mode of Instruction	Contact Hours	Percentage
3	Hybrid • Traditional classroom • E-learning	10	22%
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment M

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Recognize basic knowledge of cells, tissues, divisions and organ system	K1-KPI (1)	Lectures, individual and group discussion, and project works, videos	MCQs, short essay.
2.0	Skills			
2.1	Illustrate different types of tissues and their functions in humans, evaluate the genetic experiment doing 'Punnet square' calculations	S1-KPI (8)	Lectures, individual and group discussion, and project works.	MCQs, short essay & Presentation
3.0	**Values, autonomy, and responsibility**			
3.1	Communicate and work effectively in groups as	V1-KPI (20)	Home work	Oral question

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
	well as individually for biological experiments		Assignment & projects	Report & presentation

ethods

C. Course Content

No	List of Topics	Contact Hours
1.	Unit 1 – Introduction to Biology: Principles, branches of biology, definitions	**3**
2.	Unit 2 – Chemistry of Life- Biological macromolecules: Introduction, Types of macromolecules – Carbohydrates, lipids, proteins and nucleic acids	**6**
3.	Unit 3 – Cell biology: • Definition, types of cells – Prokaryotic cells, Eukaryotic cells (plant and animal cells, cell structure, Major cell organelles and functions, • Outline of Cell membrane structure and Transport Brief details of cell cycle and reproduction (mitosis and meiosis); Definitions – Tissue, organ and organ system	**6**
4.	Unit 4 – Structure and functions of plant tissues: Outline of plant classification, Type of plant tissues, Plant organ system (Leaf, stem, root) modifications and functions.	**6**
5.	Unit 5 – Structure and functions of animal tissues Outline of animal classification (invertebrates and vertebrates);Types of animal tissues, Structure and functions of animal tissues, outline of major organs and organ systems (Gastrointestinal tract, nervous system ,muscular system , excretory system, immune system, circulatory system and reproductive system).	**6**
6.	Unit 6 – Genetics Brief understanding of Genetics – Mendels Law of Genetics – Human Genetics (outline) – Genetic disorders	**6**
7.	Unit – 7 Biodiversity Definition, System of classification, Binominal nomenclature, Brief details of 6 kingdoms, Plant and animal communities in different biomes	**6**
8.	Unit 8- Ecology Levels of ecological study, ecosystem, feeding relationship, symbiotic relationship and types, Energy flow through ecosystems – food chain, food web, biogeochemical cycles (Carbon, Nitrogen, water).	**6**
Total		**45**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Mid-term exam	6th week	15%
2.	E-exam (online)	8th week	10%
3.	Mid-term exam	11th week	15%
4.	Quiz, Assignment, Oral test and Home works	Every two weeks	20%
5.	Final exam	16th week	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	• Biology 11th Edition, Peter Raven , George Johnson , Kenneth Mason , Jonathan Losos and Susan Singer ,McGraw-Hill Education; 2016, ISBN:978-1259188138 • Biology. Ville C. and Martin D. W. Brookscole, 2007 • Kaplan AP Biology 2016 (Kaplan Test Prep) Pap/Psc Edition Linda Brooke Stabler , Mark Metz, and Allison Wilkes M.D. ISBN: 978-1625231468
Supportive References	• Biology Laboratory Manual 11th Edition, 2016; Darrell Vodopich, and Randy Moore.ISBN: 978-1259544873 • Question Bank (BIOL101) – General Biology : Dr. Vijayakumar_Issue Jan.2019
Electronic Materials	• National Science Digital Library (NSDL) Pathway for biological sciences education • Kimbells biology pages http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/ • https://www.cellsalive.com/ DNA from the beginning: http://www.dnaftb.org/
Other Learning Materials	Electronic materials of Lecture notes and PowerPoints available in 'Black board' database

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classrooms are available
Technology equipment (projector, smart board, software)	Smart board and e podium are available

Items	Resources
Other equipment (depending on the nature of the specialty)	Nil

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Self-evaluation Peer Reviewer	Indirect Direct
Effectiveness of Students assessment	Self-evaluation	Direct
Quality of learning resources	Program Leaders	Direct
The extent to which CLOs have been achieved	Departmental course committee	Direct
Other		

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching		
Effectiveness of Students assessment		
Quality of learning resources		
The extent to which CLOs have been achieved		
Other		

Assessors (Students, Faculty, Program Leaders, Peer Reviewers, Others (specify)

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	