هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission
اعتماد
NCAAA
2024
TP-153

Course Specification
(Bachelor)

Course Title:	General Biology
Course Code:	101BIO-4
Program:	Biological Science
Department:	Biology
College:	Science and Arts
Institution:	Najran University
Version:	4
Last Revision Date:	30/12/2024

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: (4 hours)					
4 hours (Theoretical:3 and Practical: 1)					
2. Course type					
A.	☒ University	☒ College	☐Department	☐Track	☐Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: (Level one)					
4. Course General Description:					
The course is aimed to introduce students to the study of the living organisms by emphasizing different concepts of eukaryotes and prokaryotes cell's structure and function. The course will also deal with other aspects of biology, such as, cell biology, structure and function of tissues and organs, reproduction, genetics, etc. The focus will be also on the mechanisms involved in feeding and digestion, excretion, respiration etc. The course will also focus on a general outline of classification of living organisms.					
5. Pre-requirements for this course (if any)**:**					
Non					
6. Co-requisites for this course (if any)**:**					
Non					
7. Course Main Objective(s):					
1. Define the foundation of basic biological principles, levels of biological organization from molecules to biosphere. 2. Describe the differences between prokaryotes and eukaryotes, animal, and plant cells in relation to the structure and function of cellular organelles. 3. Describe the major plant parts and the differences between angiosperms and gymnosperms. 4. Describe the processes and locations of cellular respiration and photosynthesis and the role in energy conversion. 5. Recognize the synthesis, and regulation of nucleic acids and proteins. 6. Illustrate the general structures and functions of major vertebrate and invertebrates					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	60%
2	E-learning	30	40%

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

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	**Lectures**	45
2.	**Laboratory/Studio**	30
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		75

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

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Define the foundation of basic biological principles, levels of biological organization from molecules to biosphere.	K1	Academic lectures. Scientific discussion	Quizzes, theoretical & practical Exams
1.2	Describe the differences between prokaryotes, eukaryotes, animal, and plant cells with respect to the structure and function of cellular organelles.	K3	Academic lectures. Scientific discussion	Quizzes, theoretical & practical Exams
2.0	**Skills**			
2.1	Determine cellular and molecular mechanisms underlying animal Physiology .	S1	Academic lectures. Discussion Practical Training	Quizzes, theoretical & practical Exams
2.2	Demonstrate the general structures and functions of the major vertebral organ systems.	S3	Academic lectures. Discussion Practical Training	Quizzes, theoretical & practical Exams
3.0	**Values, autonomy, and responsibility**			
3.1	Excels in analyzing information and making	V2	Teamwork Discussion	Evaluation Card

Code	Course Learning Outcomes	Code of PLOs aligned with the program	Teaching Strategies	Assessment Methods
	decisions in unexpected contexts that require action, self-learning, and innovation.			Extracurricular activities

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to biology, chemical structure and components of living organisms.	3
2.	Chemical composition of protoplasm, inorganic and organic molecules.	3
3.	Cell structure and function: prokaryotic and eukaryotic cells, Cytoplasmic organelles, differences between plant and animal cells -	3
4.	Cell Cycle and Cell division	3
5.	Anatomy of plant, plant tissues: Meristmatic tissues, Permanent tissues: Proper tissues, dermal tissues and vascular tissues (xylem and phloem).	3
6.	First Theoretical Exam	3
7.	Animal tissue: Types and functions of epithelial, connective, muscular and nervous tissues.	3
8.	Classification of Kingdoms of living organisms: Kingdom Monera, Kingdom Myceteae, Kingdom Plantae (Bryophyta, Hepatophyta, Bryophyta, Tracheophyta, Pteridophyta, Angiosperms and Gymnosperms), Kingdom Protista (Subkingdom Phycophyta, Subkingdom Protozoa).	6
9.	Kingdom Animalia: Phylum Porifera, Phylum Coelenterata, Phylum Platyhelminthes, Phylum Aschelminthes (Nematoda), Phylum Annelida, Phylum Arthropoda, Phylum Mollusca, Phylum Echinodermata, Phylum Chordata.	6
10.	Plant metabolism: anabolism and catabolism, photosynthesis: structure of plastids, light and dark reactions, Respiration.	6
11.	Water relations in plants	3
12.	Second Theoretical Exam	3
	Total	**45**

(Practical Course Content):

No	List of Topics	Contact Hours
1.	Introduction, Components of microscope, Types of microscopes	2
2.	Cell components, Structure of Animal and palnt cells	
3.	Cell division	2
4.	Animal tissues	2
5.	Plant tissues	2
6.	Mid-Term Practical Exam	2
7.	Bacteria and fungi	2
8.	Angiosperms, Gymnosperms	2
9.	Protozoa	2
10.	Sponges & Cinidaria	2
11.	Platyhelminthes, Nematoda	2
12.	Arthropoda	2

13.	Mollusca and Echinodermata	2
14.	Annelida	2
15.	Final Practical Exam	2
Total		30

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Theoretical First Exam	7	10%
2.	Short Exams	10-3	5%
3.	Practical Mid-Term Exam	6	10%
4.	Practical Notebook	13	5%
5.	Theoretical Second Exam	11	10%
6.	Practical Final Exam	15	10%
7.	Theoretical Final Exam	17	50%

*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	1- Campbell, Neil A. & Reece, Jane B. (2009). Campbell Biology, Concepts and Connections, 8th Ed., Pearson Benjamin Cummings. 2- Nabih Abdel-Rahman Baeshen (1985) Introduction to the Science of Life, Jeddah: Dar country for printing and publishing.
Supportive References	1- Campbell, Reece, Taylor , Simon, Dickey . BIOLOGY – Concepts & Connections, Sixth Edition. 2009 2- Elbadry, M. et al., (2013). Introduction to Biology 101. 1st Ed., Pearson Benjamin Cummings (Compiled Version).
Electronic Materials	http://allbiology.net/intbio http://biology.about.com/od/apforstudents/tp/tpapbiobooks.htm http://dannyreviews.com/s/biology.html-www.cellsalive.co www.mycology.adelaide.edu.au http://www.biology-online.org/
Other Learning Materials	Web sites to search for ready topics, PowerPoint, diagrams, images, videos, electronic books, papers, web site of international universities

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	• Classrooms number of seats = 30 seat • Computer rooms containing at most 21 PCs • Rooms equipped with modern teaching techniques and different display devices
Technology equipment (projector, smart board, software)	• Data show • Smart Board.

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

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Student	direct
Effectiveness of Students assessment	Faculty, Program Leaders	indirect
Quality of learning resources	Staff members	indirect
The extent to which CLOs have been achieved	Peer Reviewer	indirect
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Department of Biology**
REFERENCE NO.	**14460709-1075-00012**
DATE	**29/1/2025**