هيئة تقويم التعليم والتدريب
Education & Training Evaluation Commission

2023
TP-153

Course Specification
(Bachelor)

Course Title:	Introduction to Biology
Course Code:	**BIO105**
Program:	**Bachelor's degree for Medical Colleges**
Department:	**Biological Sciences**
College:	**Faculty of Science**
Institution:	**Northern Border University**
Version:	1ST version
Last Revision Date:	**7/5/2024**

Table of Contents

A. General information about the course:

1. Course Identification

1. Credit hours: 2 (1+1)					
2. Course type					
A.	☐University	☒ College	☐Department	☐Track	☐ Others
B.	☒ Required		☐Elective		
3. Level/year at which this course is offered: 1st year					
4. Course general Description:					
The course is designed to provide the students with the cognitive and scientific skills related to biology, in order to form a scientific background for the students to help them form a clear vision of basic biology. Including, Introduction to Biology, the core themes of Biology, Chemical basis of life,, Cells and tissues : Structure and function, Genetics and heredity Material , Cell cycle , mitosis and meiosis.					
5. Pre-requirements for this course (if any):					
6. Pre-requirements for this course (if any):					
7. Course Main Objective(s):					
After attending this course the student should be able to: -fundamentals of biological concepts. including , the core themes of Biology , chemical bases of life, types of cells and Tissues their structures and functions and Genetics					

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning		
3	Hybrid • Traditional classroom • E-learning		
4	Distance learning		

3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours

1.	**Lectures**	**15**
2.	**Laboratory/Studio**	**30**
3.	**Field**	
4.	**Tutorial**	
5.	**Others (specify)**	
Total		**45**

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

Code	Course Learning Outcomes	Code of CLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	**Knowledge and understanding**			
1.1	Define the major concepts in biological sciences, the Cells' components and their functions, Cells and tissue structures functions Genetics and heredity Material.		Casting, Class / Group discussion, Collaborative learning, Self-learning, Brainstorming,	Objective exam , Discussion,
2.0	**Skills**			
2.1	Apply the common laboratory techniques Related to course topics. (Microscopes, Detection of Biological Molecules, Cells, tissues and Biodiversity)		Lab-based learning, Collaborative learning, Self learning,	Laboratory Exams., Direct observation of procedural skills. Discussion.
3.0	**Values, autonomy, and responsibility**			
3.1	Operate self-directed learning from the approved sources of knowledge		Class / Group discussion, Collaborative learning, Self learning,	Discussion, Presentations, reports

C. Course Content

No	List of Topics	Contact Hours
1.	Introduction to biology (the core themes of Biology, common characters of living organisms,)	**2**
2.	Chemical basis of life ,Organic Biological molecules of the cell and their	**3**

	structure &function	
3.	Cells : (Prokaryotic and Eukaryotic /Organelles 'structure & functions)	**3**
4.	Animal Tissues : (Types , structure relative to function)	**2**
5	Plant Tissues : (Types , structure relative to function)	**2**
5.	Genetics (connections between cell division and reproduction- Eukaryotic cell cycle and mitosis- meiosis and crossing over- chromosomes and karyotyping)	**3**
Total		**15**

No	List of Topics	Contact Hours
1	Lab. Instruction, safety, glassware, and instruments	**2**
2	Microscopes- Types, Parts and how to use	**4**
3.	Detection of Organic Biological molecules.	**6**
4.	Cells: (Prokaryotic (bacterial cells) and Eukaryotic (Animal cells)	**6**
5.	Animal and plant Tissues: (Types, structure relative to function)	**6**
6.	Biodiversity (classification & characters of living organisms)	**6**
Total		**30**

D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	**Midterm**	7^{th} , 9^{th}	20%
2.	**Assessments**	During semester	10%
3.	**Practical exam**	15^{th}	30%
4.	**Final exam**	16^{th} , 17^{th}	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	Campbell Biology (11th Edition) Neil A. Campbell Lisa Urry , Michael Cain, Steven Wasserman, Peter Minorsky , Jane Reece, publisher Pearson eduction (2018)
Supportive References	Biology: Concepts and Connections (6th Edition), Neil A. Campbell, Jane B. Reece, Martha R. Taylor, Eric J. Simon, Jean L. Dickey, published by

	Benjamin Cummings, (2008)
Electronic Materials	Power points presentation .
Other Learning Materials	Practical samples Models and virtual lab.

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Large, spacious classrooms suitable for seats and comfortable seats for students. -Projectors in each hall and Lab. -Large, multi-function equipped labs.
Technology equipment (projector, smart board, software)	Data show unit, laptop computer used for PowerPoint. Blackboard
Other equipment (depending on the nature of the specialty)	Library

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of teaching	Students	Direct:
Effectiveness of Students assessment	Faculty	Indirect
Quality of learning resources	Faculty and Student	Indirect
The extent to which CLOs have been achieved	Instructor Student.	Direct Indirect.
Other		

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

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	**Biological sciences Department**
REFERENCE NO.	**14TH /1445**
DATE	**7/5/2024**