Course Specifications

Course Title:	**Biology for Medical Colleges**
Course Code:	**1103-102**
Program:	**B. Medicine/Applied Med. Science/ Nursing**
Department:	**Biological Sciences**
College:	**Science**
Institution:	**Northern Border University**

Table of Contents

A. Course Identification

1. Credit hours: 3
2. Course type **a.** University ☐ College ☑ Department ☐ Others ☐ **b.** Required ☑ Elective ☐
3. Level/year at which this course is offered: 1st or 2nd level / First year
4. Pre-requisites for this course (if any) **:**
5. Co-requisites for this course (if any)**:**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	45	100%
2	**Blended**	-	
3	**E-learning**	-	
4	**Correspondence**	-	
5	**Other**	-	

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	**45**
2	**Laboratory/Studio**	**-**
3	**Tutorial**	**-**
4	**Others** (specify)	**-**
	Total	**45**
Other Learning Hours*		
1	**Study**	45
2	**Assignments**	6
3	**Library**	10
4	**Projects/Research Essays/Theses**	4
5	**Others(Presentation)**	5
	Total	70

*The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

Introduction to Biology, the core themes of Biology, Chemical basis of life, Organic Biological Molecules of Cells, Cell Structure and function, Animal Tissues - Biodiversity (Bacteria - Archea - Protists - Fungi - Plants - Animals), Nutrition and Digestive system, Respiratory system, Circulatory system, Excretory system, Genital system and Reproduction, Genetics, Selective topics in Medical Biology (Parasitology - Immunology - Medical Microbiology - Medicinal plants) .

2. Course Main Objective

After attending this course the student should be able to:

- Acquainted with life sciences, the branches of biology and general characteristics of living organisms.

-Describe chemical bases of life and organic biological molecules of cells.

-Describe types of cells and animal tissues, their structures and functions.

- Understand the meaning of biodiversity and how to classify living organisms.

- Describe human systems structures and the correlation with their functions.

- Study selective topics related to medical biology.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	Define the major concepts in biological sciences and hierarchal levels of life.	
1.2	Recognize the chemical basis of life and biological molecules of cells.	
1.3	Describe the Cells: types, components and functions- Animal tissues and their types.	
1.4	outline the basics of classification of living organisms; with their different domains and kingdoms.	
1.5	Recognize the different Biological systems (Nutrition and Digestion, Respiration, Circulation, Excretion, Reproduction, Genetics and Inheritance).	
2	**Skills :**	
2.1	Explain major concepts in the biological sciences and principles of exploring life hierarchy.	
2.2	Differentiate between prokaryotic and eukaryotic cells (bacteria, fungi, plant, animal, etc.).	
2.3	Differentiate between the different kinds of animal tissues.	
2.4	Differentiate between the branches of biological science, its importance and the application in life.	
3	**Competence:**	
3.1	Judge the different levels of biodiversity in biology.	
3.2	Using knowledge of living organism's structure to understand their functions and mechanisms.	

C. Course Content

No	List of Topics (Theoretical)	Contact Hours
1	Introduction, Exploring life	3
2	Chemical basis of life	3
3	Organic Biological molecules of the cell	3
4	Cells : structure and function	3
5	Animal Tissues : Types and function	
6	Biodiversity (bacteria-archea- protists-)	3
7	Biodiversity (fungi – plants- animals)	3
8	Nutrition and Digestive system	3
9	Respiratory system	3
10	Circulatory system	3
11	Thermoregulation, Osmoregulation and Excretion	3
12	Excretory system	3
13	Genital system and Reproduction	3
14	Genetics	3
15	Selective topics in Medical Biology(Parasitology- Immunology - Medical Microbiology - Medicinal Plants)	3
Total		45

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Define the major concepts in biological sciences and hierarchal levels of life.	Lectures Discussions Brain storming	Exams Quizzes Assignments
1.2	Recognize the chemical basis of life and biological molecules of cells.	Lectures Discussion Brain storming .	Exams Quizzes Assignments
1.3	Describe the Cells: types, components and functions- Animal tissues and their types.	Lectures Discussions Brain storming	Exams Quizzes Assignments
1.4	outline the basics of classification of living organisms; with their different domains and kingdoms.	Lectures Discussions Brain storming .	Exams Quizzes Assignments
1.5	Recognize the different Biological systems (Nutrition and Digestion, Respiration, Circulation, Excretion, Reproduction, Genetics and Inheritance).	Lectures Discussions Brain storming .	Exams Quizzes Assignments

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
2.0	**Skills**		
2.1	Explain major concepts in the biological sciences and principles of exploring life hierarchy.	Lectures Discussions Brain storming .	Exams Quizzes Assignments
2.2	Differentiate between prokaryotic and eukaryotic cells (bacteria, fungi, plant, animal, etc.).	Lectures Discussions Brain storming .	Exams Quizzes Assignments
2.3	Differentiate between the different kinds of animal tissues.	Lectures Discussions Brain storming .	Exams Quizzes Assignments
2.4	Differentiate between the branches of biological science, its importance and the application in life.	Lectures Discussion Brain storming .	Exams Quizzes Assignments
3.0	**Competence:**		
3.1	Judge the different levels of biodiversity in biology.	Discussions Brain storming	Exams Participations
3.2	Using knowledge of living organism's structure to understand their functions and mechanisms.	Discussions Brain storming .	Exams Participations

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
١	Quiz1	4th or 5th week	5 %
2	1st Periodic Exam	6th or 7th week	15 %
٣	Quiz 2	9th or 10th week	5 %
4	2nd Periodic Exam	11th or 12thweek	15 %
6	Participation	During semester	10 %
7	Final Exam	End of semester	50 %

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

- 6 office hours per week.
- Email and mobile phone for contacting.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	Biology- Concepts & Connections , Campbell, Reece, Taylor, Simon, Dickey. –, Sixth Edition (2009).
Essential References Materials	1- Human Biology, Sylvia S. Mader& Michael Windelspecht, 14th Edition (2015). Publisher: McGraw-Hill Higher education. 2- Inquiry Into Life, Sylvia S. Mader, Jeffrey A.Isaacson, Kimberly G. Lyle-Ippolito, Andrew T. Storfer, 13th Edition (2011).
Electronic Materials	https://www.popsci.com/ http://www.Sciencedirect.com https://www.bioexplorer.net/divisions_of_biology
Other Learning Materials	

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	Classrooms with capacity of 50 student-conditioned and equipped with a display panel.
Technology Resources (AV, data show, Smart Board, software, etc.)	Data show unit, laptop computer used for PowerPoint.
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	library

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Effectiveness of Teaching and assessment	Students, Faculty, program leader	Indirect.
Extent of achievement of course learning outcomes .	Faculty, program leader	direct.
Quality of learning Resources	Students, Department, program leader	Indirect.

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	