BRAC University
Department of Mathematics and Natural Sciences
BIO 101: Introduction to Biology
Fall Semester 2023

Course Teacher:

Section 11 **Kashmery Khan**, Lecturer, MNS (UB 15th Floor, UB21507)
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Course Objectives:

This course will provide an introduction to the cellular aspects of modern biology. It will give a coherent account of the sweeps of life's diversity. The course aims at highlighting the key concepts, current understanding, and trends in modern biology. The underlying unity including the chemical basis of life, cell theory, energetics, biochemistry, physiology, genetics and development, and evolution and Ecology will be outlined. The development of cell structure and function as a consequence of the evolutionary process and dynamic properties in biological systems will also be explained. In addition to the assigned textbook, articles from recent biological literature will be discussed. Some laboratory components have been added to make the course more interesting.

Credits: 3

Prerequisite: None

Class Schedule:

Sunday and Tuesday 9.30-10.50 AM

Consultation hours:

Wednesday 10 AM to 1 PM

Course Resources:

1. Text: Biology-Concepts and Applications (5th Ed.)-Cecie Starr (required and available in the library)
2. Biological Sciences. 2nd Ed. NPO Green, G. W. Stout and D. J. Taylor, 1990. Cambridge Univ. Press. 72 pp. (available in the library).
3. Lecture materials will be provided in the class.

Course requirements:

You will be expected to be present in each class session. A lot of materials will be covered in each class and it will be hard to make up the missed materials. Because of the huge amount of materials presented, I will be highlighting the important materials in the class, and if you miss a class, you will not know what was emphasized in each lecture. Your final grade will be based on periodical quizzes, assignments, midterm examinations, laboratory experiments, group presentations, and final examinations. The quizzes/ exams will consist of multiple-choice questions, matching questions, true-false questions, and short answer questions, and mark distribution will be as follows:

Assessments		Marks distribution	Syllabus
Quizzes	4	(best 3 quizzes will be counted to make the average)	Quiz 1 (before mid)- Lecture 1,2,3 Quiz 2 (before mid)- Lecture 4,5,6 Quiz 3 (After mid)-Lecture 13,14 Quiz 4 (After mid)-Lecture 15,16
Assignments	2	10+10 (Mandatory, All will be counted)	Assignment 1 (before mid): will be announced later in the classroom Assignment 2 (After mid): will be announced later in the classroom Assignment 2
Lab Experiment	1	5 (Lab attendance and report submission are mandatory)	

Poster Presentation	1	10 (Topics will be given by the course instructor)	
Attendance		5	
Mid-term Exam	1	20	
Final Exam	1	40	
Total		100	

Dates and Deadlines	Lecture No.	Topics to be covered
24 September	01	Overview of the course- Concepts and Methods in Biology
26 September	02	Chemical Foundations for Cells
1 October	03	Carbon Compounds in Cells-Biomolecules
3 October	04	Cell Structure and Function
8 October	04+05	Carbon Compounds in Cells-Biomolecules
10 October	06	**Quiz 1 (lecture 1-3)**+Cell Structure and Function, Ground Rules for Metabolism
15 October	06	ASSIGNMENT 1 submission deadline+Photosynthesis
17 October	07	Respiration
22 October	LAB	LAB experiment
29 October	07	**Quiz 2 (4-6)**, Respiration (continues)
31 October		Midterm review class
	8	MIDTERM EXAMINATION

Dates and Deadlines	Lecture No.	Topics to be covered
14 November	8-9	Cell division-mitosis and meiosis
19 November	10	Class
21 November	11	Class
26 November	12	**Poster presentation and Viva**
28 November	13	Lab tasks
3 December	14	Class
5 December	13-14	Class +Assignment 2 Submission
10 December		Class
12 December		Class
17 December		Class + Review class for Final examination
19 December		
24 December		