



**SECOND SEMESTER 2022 – 2023**

**COURSE HANDOUT (PART II)**

Date: 13.03.2023

In addition to Part – I (General Handout for all courses) printed on Page 1 of the timetable book; this portion gives further specific details regarding the course.

**Course Number** : BIO F110

**Course Title** : BIOLOGY LABORATORY

**Instructor In-charge** : Dr. JAYATI RAY DUTTA

**Instructors** : Dr. Piyush Khandelia, Dr. Vivek Sharma, Dr. Pranav Narayan, Dr. Nishith Gupta, Dr. Jayati Ray Dutta, Aditi Dey, Neethu R S, Priyanka Chakrabarti, Shivashis Mund, Mude Hemanjali, Pranathi Tata, Suryansh Sengar, Puja Bhardwaj, Devika P, Sharayu, Chhavi Dhiman, Sharon and Poosala Ramyasri.

**Course Description:** An introductory level course, where students would perform selected experiments of biology in the laboratory so that they appreciate the concepts learned in the theory course. Experiments in the course include those related to microscopy and micrometry, quantification of biological macromolecules, chlorophyll estimation, measurement of solvent potential of plant tissue, measurement of parameters related to cell cycle, experiments related to hematology, DNA quantification from the plant organs.

**Scope and Objective:** The major objective of this course is to impart knowledge of the application of biological sciences to encourage students' interest in biology. This course is designed to make the student understand various biological phenomena, and equip the student with knowledge of simple biology laboratory techniques. The following 10 experiments will be conducted as part of the course.

<b>Experiments: Sl. No.</b>	<b>Title of the experiment</b>
1	Measurement of total protein content in the given sample
2	Measurement of glucose content in the given sample
3	Separation of chlorophyll pigments using paper chromatography
4	Microscopic examination of permanent slides
5	Study of the phenomenon of plasmolysis in onion peel
6	Identification of mitotic stages in the given plant tissue sample
7	Determination of ABO & Rh blood types
8	Measurement of total cholesterol levels in serum
9	Micrometric measurement of microorganisms
10	Extraction of DNA from banana

**Evaluation Components:**

<i>Evaluation component</i>	<i>% (Marks)</i>	<i>Date and time</i>	<i>Nature of the Component*</i>
<b>Lab Record</b>	30 (60)	Each Practical class	Open Book
<b>Mid-semester Evaluation</b>	40 (80)	04.05.2023; 3.30 pm - 5 pm	Closed book
<b>End semester Evaluation</b>	30 (60)	TBA	Closed book

**All students should have the lab manual and refer to it before and after each experiment.**

Wearing lab coat and closed shoes are mandate to enter the laboratory.

Students are expected to be in the lab minutes before the lab starts.

No student will be allowed into the laboratory after 5 minutes from the beginning of the practical session only on unavoidable circumstances. Lab coats are available in the shopping complex on campus.

**If a student does not meet these criteria, he/she will be not be permitted to enter the lab.**

**Notices:** All notices, concerning the course, will be displayed on CMS.

**Grading policy:** Students missing evaluation component(s) are subject to award a “Not Cleared” (NC) grade.

**Make-up policy:** Make-up will be granted only during medical emergencies (such as hospitalization).

**Academic Honesty and Integrity Policy:** Academic honesty and integrity are to be maintained by all the students throughout the semester and no type of academic dishonesty is acceptable.

Instructor In-charge  
BIO F110