



**SECOND SEMESTER 2023-24**  
**COURSE HANDOUT (PART II)**

Date: 09.01. 2024

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 KUMAR PRANAV NARAYAN

**Instructors** : Sridev Mohapatra, Atish Kumar Behera, Piyush Khandelja, Maddipatla Naga Sai Karthik, Vidya Rajesh, Hemapriya S, Sridev Mohapatra, Mude Hemanjali, Kirtimaan Syal, Shivashis Mund, Trinath Jamma, Ashna Fathima, Gireesha T Mohannath, Brahmandam N, S A L Gayatri, Puja Bhardwaj, Vivek Sharma, Shraddha Tripathi, Chhavi Dhiman, Teena Chandna

**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	Measurement of total cholesterol levels in serum
4	Extraction of DNA from banana
5	Study of the phenomenon of plasmolysis in onion peel
6	Separation of chlorophyll pigments using paper chromatography
7	Microscopic examination of permanent slides
8	Estimation of cell numbers
9	Identification of mitotic stages in the given plant tissue sample
10	Determination of ABO & Rh blood types



**Evaluation Components:**

<i>Evaluation component</i>	<i>% (Marks)</i>	<i>Date and time</i>	<i>Nature of the Component</i>
<b>Lab Record, involvement and sincerity</b>	30 (60)	Each Practical class	Open book
<b>Mid semester Evaluation</b>	40 (80)	09/03 - 3.30 - 5.00PM	Closed book
<b>End semester Evaluation</b>	30 (60)	04/05 FN	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 mandatory to enter the laboratory.

No student will be allowed into the laboratory after 5 minutes from the beginning of the class.

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 on 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