



FIRST SEMESTER 2021 – 2022

COURSE HANDOUT (PART II)

Date: 20.08.2021

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. Trinath Jamma

Instructors : Dr. Trinath Jamma, Dr. Naga Mohan, Sharayu, Manjari, Shifa, Bharwani Harsha, Shraddha Tripathi, Sushma S Kumar, Raunak Sharma, Ali Akbar, Syeda Lubna, Nikhil P T, Murali Krishna Ramgopal

Lab Demonstrators/Technicians: Imitiaz Akbar.

Course Description: An introductory level course, where students would perform selected experiments of biology in the laboratory, so that they appreciate the concepts learnt in theory course. Experiments that are covered in the course include those that 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 on application of biological sciences to encourage student's 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.

Laboratory Manual: Soft copy of the manual uploaded on CMS and by email.

Experiments: Online semester - experiments will be done through virtual mode and demonstrated to students during lab hours. Videos will be made available to students. If students return back, physical experiments will be done in Lab A122.

Sl. No.	Title of the experiment
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>
Participation in experiment and Lab Record	40 (80)	Every Practical	Open Book
Mid semester Evaluation	30 (60)		Open Book
End semester Evaluation	30 (60)	11/12/2021 FN	Open Book

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

***Note: Applicable if students physically are in campus to perform experiments:**

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

No student will be allowed into the laboratory after 10 minutes from the beginning of the practical session.

Material will be available in the shopping complex.

If the student does not meet these three criteria, he/she will be sent out of the lab and will have to forego the experiment.

Notices: All notices, concerning the course will be displayed on CMS and through emails.

Grading policy: Students missing evaluation component(s) could be awarded Not Cleared (NC) grade.

Make-up policy: Make-up will be granted only on medical grounds (which evidently prevents you from attending the class like hospitalization). In the campus, the make-up request is accompanied with chief warden's approval and campus doctor's certificate. In case of online course offering, the make-up request should be accompanied by doctor's certificate with a written note by parents (this is mandatory).

Computers, internet and course material: It is expected that each student registered in a course in First Semester 2021-2022 shall acquire a computer or laptop with the desired hardware, software along with high-speed broadband internet access, power backups as required and a web camera. Streaming of student videos is essential during online evaluations. Students are also expected to purchase their text book.

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.

Trinath Jamma,
Instructor In-charge
BIO F110