

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI – HYDERABAD CAMPUS
INSTRUCTION DIVISION
SECOND SEMESTER 2011 – 2012

Course Handout Part II

Date: 07.01.2012

In addition to Part – I (General Handout for all courses appended to the timetable) this portion gives further specific details regarding the course.

Course No. : BIO C411

Course Title : LABORATORY

Instructor In-charge : P. SANKAR GANESH

**Team of Instructors : Jayati Ray Dutta, Palash Mandal, P. Sankar Ganesh, G. Savitha,
M. Madhu Poornima, C.N. Rahul, B. Siva Prasad**

1. Course Description:

This is a specially designed laboratory course which aims to impart practical training in different areas of biology. Experiments in the areas of Biophysics, Animal and Plant Physiology, Cell Biology, Genetics, Developmental Biology and Ecology will be done to acquaint the students with practical aspects of these courses.

2. Scope and Objective of the Course:

Familiarize the students with the selected techniques/bench procedures in major areas of biology with an aim of giving them a hands-on experience.

3. Text Book: Protocol for the specific experiment will be provided in each class by respective instructor

4. Course Plan:

Exp. No.	Subject Area	Learning Objective	Date	Instructors
1.	General	Introduction and preparation	10 th Jan	Team of Instructors
2.	Cell Biology	Estimation of chlorophyll in virus infected and healthy leaves	13 th Jan	Jayati Ray Dutta & C. N. Rahul
3		Studying the effects of various factors on membrane permeability in beetroot/carrot	17 th & 20 th Jan	
4	Biophysics	Determination of the crystal structure of small molecules	24 th & 27 th Jan	G. Savitha & ???
5		Calculation of numeric and analytical energy of biomolecules	31 st Jan & 3 rd Feb	
Quiz			7 th Feb	Team of Instructors
6	General Physiology	Counting of blood cells: RBCs	10 th Feb	P. Sankar Ganesh & B. Siva Prasad
7		Counting of blood cells: WBCs & Platelets	14 th & 17 th Feb	
Common make-up for the absentees (Expts 1 to 7)			21 st Feb	Team of Instructors
Mid Semester Examination: Practical			24 th Feb	Team of Instructors
Mid Semester Examination: Viva voce			27 th Feb	

Exp. No.	Subject Area	Learning Objective	Date	Instructors
8	Ecology	Analysis of water quality	2 nd & 6 th Mar	P. Sankar Ganesh & B. Siva Prasad
9		Studying the quantitative characteristics of plant communities	13 th & 16 th Mar	
10	Genetics	Studying the effects of colchicine on mitosis in the cells of onion root tip	20 th Mar	Jayati Ray Dutta & C. N. Rahul
11		Mutational Studies	27 th & 30 th Mar	
12	Developmental Biology	Studying developmental stages of a chick	3 rd & 6 th Apr	Palash Mandal & M. Madhu Poornima
13		Studying cell Differentiation	10 th & 13 th Apr	
Common make-up for the absentees (Expts 8 to 13)			17 th Apr	Team of Instructors
End Semester Examination: Practical			20 th Apr	Team of Instructors
End Semester Examination: Viva voce			24 th Apr	

5. Guide to writing lab reports:

The records should be meticulously maintained in hard bound practical files. It should also include the following:

- Objective of the experiment
- Theory/ Principle on which the experiment is based
- Steps in experimental procedure
- Results including all observations
- Inference of the experiment conducted
- Precautions

6. Special Instructions: Lab coat is mandatory and no entry into the lab after 10 minutes from the hour of beginning.

7. Evaluation scheme:

Evaluation component		Weightage, %	Date and time	Nature of the Component*
Experimentation and Laboratory record keeping		40	-	-
Quiz		10	07.02.2012 & 3.00 – 3.50 PM	CB
Mid Semester Examination	(Practical)	20	24.02.2012 & 2.00 – 4.50 PM	CB/OB
	(Viva voce)		27.02.2012 & 3.00 – 3.50 PM	CB
Comprehensive Examination	(Practical)	30	20.02.2012 & 2.00 – 4.50 PM	CB/OB
	(Viva voce)		24.02.2012 & 3.00 – 3.50 PM	CB

*OB: Open book, CB: Closed book

8. Chamber consultation hour: To be announced in the class.

9. Grading policy: Award of grades will be guided in general by the histogram of marks. Decision on border line cases will be taken based on student's sincerity, regularity in attending classes, and the instructors' assessment of the student.

10. Make-up policy: If any of the experiment or evaluation components is missed due to medical emergency, make-up applications are accepted. Also refer to Clause 4.07 of BITS *Academic Regulations* for more details.

11. Notices: All notices/ announcements regarding this course shall be displayed in the notice board of Department of Biological Sciences, located at the 1st floor of A-Block.

Instructor In-charge
BIO C411