Core Course

Research Methodology - II (LS611A)

(Every Faculty member guiding Ph D students)

Student will need to join respective labs immediately after the lab allotment is over. Students will initiate learning of experimental research methodology in consultation with the concerned faculty. This will continue till the second semester. The student will start learning techniques which are being practiced in the laboratory.

The course will require the students to learn and master minimum four techniques being practiced in the concerned laboratory. **Student will present the work carried by her/him during this period twice before the evaluation committee (approximately around the 6th and 12th week from the date of beginning of the semester). Further, each student will submit progress report for evaluation before the committee**.

The student is required to learn the followings: -

1. Relevant scientific literature search;
2. Identification of lacunae in the research area of interest;
3. Generation of hypothesis; defining aims and objectives;
4. Designing of a realistic research strategy and alternate strategy;
5. Designing of experiments – importance of positive and negative experimental controls, biological and technical replicates;
6. Statistics based sample size determination prior to finalization of study design; recording of observations – methods of systematic record keeping;
7. Learn performing experiments and recording of observations.
8. Studying principles of these research methodologies
9. Analysis and interpretation of data
10. Need to learn the principles of instruments (at least two) used to perform the experiments
11. Proper maintenance of laboratory work books and files in computer;
12. Storage of data including regular backups
13. Regular discussion with concerned faculty

Faculty Committee for evaluation:-

Niti Puri (NP)*, Abshieka Bansal (AB), Amol C Mondal (ACM), Anand K Sarkar (AS), Sneha Sudha Komath (SSK), Vikas Yadav (VY)