



College of Computer Science and Information Technology, Latur.

Biotechnology Department

Intensive Training Programme on Techniques in Molecular Biology

Following enlisted molecular techniques are required for students throughout their research carrier. These techniques are the base to enter any research institute or any agricultural research organization.

Duration of Training Programme: **Start Date: 07 Feb. 2022**

End Date: 14 Feb. 2022

Day	Session	Module	Outcome
Day-1	Morning (10 am to 01 pm)	Introduction and handling of Molecular biology lab instruments	Students will be able to operate various lab instruments.
	Afternoon (02 pm to 05 pm)	Preparation of stock Solutions.	Students will be able to Prepare Percent, Normal, Molar solutions
Day-2	Morning (10 am to 01 pm)	Different methods of plant genomic DNA extraction.	Students will learn different methods of DNA extraction
	Afternoon (02 pm to 05 pm)	plant genomic DNA extraction by CTAB method	Students will be able to isolate plant genomic DNA.
Day-3	Morning (10 am to 01 pm)	Quantification of isolated DNA sample and its storage.	Students will learn different methods of DNA Quantification
	Afternoon (02 pm to 05 pm)	Introduction to Agarose gel Electrophoresis Technique.	Students will learn details about polymerization, different buffers, staining agents for various macromolecules.
Day-4	Morning (10 am to 01 pm)	Introduction to PCR	Students will learn details about DNA amplification
	Afternoon (02 pm to 05 pm)	Preparation of Master mix for PCR	Students will be able to set PCR Programme and run PCR

Day-5	Morning (10 am to 01 pm)	Electrophoresis of PCR product.	Students will learn details about polymerization, different buffers, staining agents for various macromolecules.
	Afternoon (02 pm to 05 pm)	Gel viewing and gel documentation.	Students will learn details about gel observation and documentation
Day-6	Morning (10 am to 01 pm)	Scoring and Analysis of gel data and use of analytical software.	Students will be able to easily analyze genetical data. Accordingly they can study and compare genetic diversity in plants.
	Afternoon (02 pm to 05 pm)	Isoelectric Focusing	This technique is very important to analyze proteins from given sample. Students will be able to analyze any protein sample based on protein charge.
Day-7	Morning (10 am to 01 pm)	Protein Estimation from sample	Students will learn different Protein Estimation
	Afternoon (02 pm to 05 pm)	Exit Test	-----

Name of the training instructor:

- 1) Mr. Ishwar A. Patil
- 2) Mr. Sharad C. Gangavane

Link for Registration: <https://forms.gle/yjU7Sm498V5bskoV9>

Contact for further details: 9561347002, 7507420938, 8459380012

HoD

Principal