Dr. Ambedkar Institute of Technology for Divyangjan, Kanpur, U.P. 208024

Atal Bihari Vajpayee Research Center

"Revised Training Schedule: Advanced Techniques in Biotechnology and Biological Sciences"

From 27/05/2024 *to* 26/06/2024

S.No.	Date	Activity	Details
1.	**May 27th** (Monday) (10:00 am onwards)	Introductory Session	• Welcome address and introduction the program. • Overview of the research center and facilities. Visit of Dr. Ambedkar Institute of Technology.
2.	**May 29th** (Wednesday) (10:30 am onwards)	Spectroscopy	• Introduction to Spectroscopy. • Fundamentals of Spectroscopic techniques.
3.	**May 30th** (Thursday) (10:30 am onwards)	Spectroscopy	• Instrumentation and practical sessions.
4.	**May 31st** (Friday) (10:30 am onwards)	Chromatography	• Introduction to Chromatography techniques. Expert Talk.
5.	**June 3rd** (Monday) (10:30 am onwards)	HPLC	• Basics of HPLC and its applications. • Practical demonstrations and exercises.
6.	**June 4th** (Tuesday) (10:30 am onwards)	HPLC	• Hands-on training sessions.
7.	**June 5th** (Wednesday) (10:30 am onwards)	FTIR	• Theory and principles of FTIR. • Hands-on training on FTIR instruments.
8.	**June 6th** (Thursday) (11:30 am onwards)	Advanced Techniques in Biotechnology	• Special Expert lecture by a renowned person in the field. • Q&A session.
9.	**June 7th** (Friday) (10:30 am onwards)	Visit to IIT Kanpur	• Guided tour of the laboratories and facilities. Interaction with faculty and researchers.
10.	**June 10th** (Monday) (10:30 am onwards)	FTIR	• Report Analysis and Trouble Shooting Queries
11.	**June 12th** (Wednesday) (10:30 am onwards)	HPLC	• Special talk by world's renowned U.S. based • Industry ***(Water's)*** representative. Q&A session
12.	**June 13th** (Thursday) (10:30 am onwards)	Serial Dilution & Media Preparation	• Isolation of microorganisms from contaminated soil. **(Practical Session)**
13.	**June 14th** (Friday) (10:30 am onwards)	Bioinformatics (Computational biology)	• Introduction to Bioinformatics tools and techniques.

14.	**June 15th** (Saturday) (10:30 am onwards)	Isolation	• Isolation of single colonies of microorganisms from the master plate **(Practical Session)**
15.	**June 18th** (Tuesday) (10:30 am onwards)	Bioinformatics (Computational biology)	• Protein structure visualization using RasMol (Tool).
16.	**June 19th** (Wednesday) (10:30 am onwards)	Effluent Characterization	• Detection of pollutants using FTIR **(Practical Session)**
17.	**June 20th** (Thursday) (10:30 am onwards)	Treatment	• Effluent treatment using isolated microbes.
18.	**June 21th** (Friday) (10:30 am onwards)	Monitoring Degradation	• Monitoring degradation by Spectrophotometric analysis. (Step-1) **(Practical Session)**
19.	**June 22nd** (Saturday) (10:30 am onwards)	Monitoring Degradation	• Study of degradation kinetics using a microplate reader. (Step-2) **(Practical Session)**
20.	**June 24th** (Monday) (10:30 am onwards)	Result Analysis	• HPLC analysis of Untreated and Treated Effluent. **(Practical Session)**
21.	**June 25th** (Tuesday) (10:30 am onwards)	Process Optimization	• Process optimization using advanced tools and techniques for microbial effluent treatment.
22.	**June 26th** (Wednesday) (10:30 am onwards)	Recap of the Entire session	• Advanced equipment. • Microbial Biodegradation.
23.	**June 27th** (Thursday) (10:30 am onwards)	Human Values	• Session- 1 • Session- 2
24.	**June 28th** (Friday) (10:30 am onwards)	Presentation & Test	• Presentation of the entire project by individual students. • MCQ Test Mandatory for every candidate.
25.	**June 29th** (Saturday) (10:30 am onwards)	Valedictory Session	• Closing remarks by the organizers. • Distribution of certificates to qualified participants. • Feedback session and suggestions for future programs.

26.05.2024

Note: Schedule can be changed without any prior notice.