

Biotechnology Course Finishers Training Program

This capstone-like program consolidates all learned biotechnology skills and knowledge, offering intensive practice and review sessions to ensure mastery of the field before final evaluations.

Note: Below modules are designed keeping high end industrial professionals into consideration. Please refer individual protocols below for affordable prices.

Molecular Biology Techniques

Kindly review the fees outlined for the individual protocols listed in this module.

- Gateway Cloning
- TOPO Cloning
- Bacterial Artificial Chromosome (BAC) Cloning
- Yeast Two-Hybrid Screening
- Recombineering
- Directed Evolution
- Phage Display
- Protein Labeling with Fluorescent Tags
- Site-Directed Mutagenesis
- Protein-Protein Interaction Mapping via Cross-Linking Mass Spectrometry
- RNA-Seq
- Northern Blotting
- MicroRNA Analysis using qPCR
- Ribosome Profiling
- RNA Immunoprecipitation
- ChIP-Seq
- ATAC-Seq
- DNA Methylation Analysis using Bisulfite Sequencing
- Histone Modification Studies via Mass Spectrometry
- Chromosome Conformation Capture (3C)
- Confocal Microscopy
- Fluorescence in situ Hybridization (FISH)
- High-Content Screening
- Live Cell Imaging
- Super-Resolution Microscopy
- Luciferase Reporter Assays
- Fluorescence Resonance Energy Transfer (FRET)

- Bimolecular Fluorescence Complementation (BiFC)
- Fluorescent Protein Engineering
- Quantitative Fluorescent Assays

Bioprocessing Techniques

Kindly review the fees outlined for the individual protocols listed in this module.

- Sterile Filtration
- Fed-Batch Fermentation
- Continuous Culture Systems
- Cell Harvesting by Centrifugation
- Protein Purification via Chromatography
- Tangential Flow Filtration
- Lyophilization for Product Stabilization
- Bioreactor Operation and Control
- Downstream Processing Optimization
- Enzyme Immobilization Techniques
- Cell Line Development for Production
- Quality Control in Bioprocessing
- Process Analytical Technology (PAT) Implementation
- Upstream Processing Optimization
- Scale-Up and Scale-Down Models
- Aseptic Processing and Validation
- High-Gravity Fermentation
- Bioproduct Recovery Techniques
- Use of Disposable Bioreactor Systems
- Application of CRISPR in Cell Line Engineering
- Metabolic Flux Analysis
- Real-Time Bioprocess Monitoring
- Cell Culture Media Formulation
- Optical Density Measurements for Growth Monitoring
- Dynamic Process Simulation

Genetic Engineering Practices

Kindly review the fees outlined for the individual protocols listed in this module.

- Agrobacterium-mediated Transformation
- Electroporation of Cells
- CRISPR-Cas9 Gene Editing

- TALENs for Targeted Gene Editing
- Zinc Finger Nucleases (ZFNs)
- Homologous Recombination
- Viral Vector-Mediated Gene Transfer
- Transgenic Animal Production
- Gene Silencing Using RNA Interference (RNAi)
- Gene Knockout via CRISPR
- Site-Directed Mutagenesis
- Synthetic Biology Constructs
- Gene Drives for Population Control
- Gibson Assembly of DNA Fragments
- Use of Reporter Genes for Gene Expression Studies
- Single-Cell Genomics
- Multiplex Genome Engineering
- Epigenetic Editing
- Gene Therapy for Genetic Disorders
- Custom Antibody Production
- Genome-Scale CRISPR Screens
- Bioinformatics for Gene Annotation
- Use of Guide RNA Libraries for CRISPR Screening
- Protein Engineering for Altered Functionality
- Development of Biosynthetic Pathways

Biotechnology Applications

Kindly review the fees outlined for the individual protocols listed in this module.

- Genetically Modified Crops for Enhanced Yield and Resistance
- Biofuels Production through Microbial Fermentation
- Bioremediation of Contaminated Sites Using Engineered Organisms
- Tissue Engineering for Regenerative Medicine
- Gene Therapy for Hereditary Diseases
- Development of Diagnostic Biosensors
- Enzyme Engineering for Industrial Applications
- Personalized Medicine Based on Genetic Profiling
- Production of Biodegradable Plastics
- CRISPR Technology for Genome Editing
- Antibody Production for Immunotherapy
- Stem Cell Therapy for Disease Treatment
- Vaccine Development Including mRNA Vaccines
- Synthetic Biology for Novel Organisms
- Pharmaceutical Production Using Cell Culture Systems
- Aquaculture Improvements with Genetic Engineering
- Microbial Mining for Bioleaching of Metals

- Nutraceutical Production for Health Enhancement
- Industrial Biocatalysis for Cleaner Manufacturing Processes
- Forensic DNA Analysis for Legal and Criminal Investigations
- Biological Control of Pests and Vectors
- Environmental Biosafety Monitoring
- Nano-biotechnology for Targeted Drug Delivery
- Cell-free Systems for Synthetic Pathway Assembly
- Agricultural Biotechnology for Soil and Plant Health

Individual Protocols Under Biotechnology Course Finishers Training Program

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Please contact on +91-8977624748 for more details

Cant Come to Hyderabad? No Problem, You can do it in Virtual / Online Mode