

DCLS



Explore Life Science through
Workshops and Hands on
training program

DOGMA CENTRE FOR LIFE SCIENCE

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Unlock Your Potential in Life Science

Are you passionate about making a difference in the field of Life science?

Join our comprehensive Workshops and Hands-On training program designed to equip you with real time practical skills and knowledge essential for a successful career in Biotechnology.

About us

The Dogma Centre for Life Sciences (DCLS) is established as a research and development laboratory for the manufacture of high-quality eco-friendly bio-products. DCLS guides all life sciences student's skill-based laboratory experiences to develop future scientists of excellence for the empowerment of our nation.



Our motto is 'Searching for better solution' to nurture idealized researchers and products. We serve as a platform to encourage academic science students to pursue careers in industry and research, as well as to foster entrepreneurship; its main objectives are to provide novel, affordable and cost-effective Biotechnology products for enhancing both plant and human quality of life. DCLS is a life science-focused lab that offers students final year projects and research projects, Workshops, Hands-on training (both on and off campus), Internship training programmes, custom research services to analyse research samples, thesis writing services to aid in the publication of research papers, as well as supply of research kits and equipment for colleges and research institutes. For B.Sc., M.Sc., B.Tech., M.Tech., Biotechnology, Botany, Biochemistry, Microbiology, Zoology, Agri-Biotechnology, Plant pathology and Bioinformatics students as well as M.Phil./Ph.D., Researchers, DCLS offers the aforementioned training plan to help develop the future scientists in a variety of life science disciplines. Our training is entirely Practical-focused along with theoretical explanations using standardized protocol (SOPs), Giving students the skills they need to analyse and interpret experimental data.

Why us?

- ❑ **Expert Guidance:** Learn from industry professionals with years of experiences in research and development.
- ❑ **State-of-the-Art facilities:** Access cutting-edge laboratories equipped with the latest technology and equipment.
- ❑ **Practical Experience:** Gain hands-on experience in various fields of life science.
- ❑ **Real world Application:** Engage in projects that mimic real industrial challenges.
- ❑ **Career development:** Receive guidance on career paths and opportunities in the Life science industry.

Who should attend?

- ❑ Students pursuing B.Sc., M.Sc., Ph.D., degrees in life sciences (Biotechnology, Microbiology, Biochemistry etc.)
- ❑ Professionals looking to enhance their practical skills in life sciences.
- ❑ Anyone interested in exploring career opportunities in research and development

MOLECULAR BIOLOGY TECHNIQUES

Hands-on training in molecular biology immerses participants in the practical aspects of manipulating biological molecules and understanding their functions at a molecular level. Participants typically engage in a variety of activities designed to build skills and knowledge in experimental techniques and data analysis.

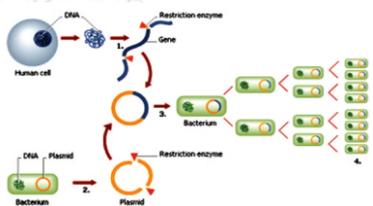


Basic

- ❖ DNA Isolation and Purification
- ❖ PCR Amplification
- ❖ AGE
- ❖ Primer design

Cloning Techniques

Hands-on sessions often cover cloning techniques to insert genes of interest into Plasmid vectors. Participants transform bacterial cells with these vectors and learn how to select for and express recombinant proteins.



- ❖ Isolation of Plasmid DNA
- ❖ Restriction Digestion with enzymes
- ❖ Ligation
- ❖ Transformation into an host Bacterial cell

- ❖ Colony Selection
- ❖ PCR
- ❖ Restriction Digestion

Microbiology Techniques

Understand the fundamental principles and advanced techniques in microbial sciences. Gain proficiency in essential microbiological techniques such as aseptic culturing, microbial staining, microscopy, biochemical testing and antimicrobial assay technique.

- ❖ Various culture stock preparation and its revival
- ❖ Isolation and Identification of Bacteria
- ❖ Pure Culture techniques
- ❖ Staining techniques
- ❖ Biochemical Characterization
- ❖ Anti-microbial Assay



Plant Tissue Culture Techniques

Gain an understanding of the principles underlying plant tissue culture, including explant selection, sterilization techniques, media preparation, and aseptic techniques. Explore techniques for inducing callus formation from explants and promoting organogenesis or embryogenesis for plant regeneration. Discover methods for enhancing the production of secondary metabolites in plant cell cultures.



- ❖ Media Preparation
- ❖ Micro propagation
- ❖ Callus Culture
- ❖ Hairy root Culture
- ❖ Organogenesis
- ❖ Plant metabolites Production
- ❖ ECS (Embryogenic Cell Suspension)

Biochemistry Techniques

Gain an understanding of the principles underlying plant tissue culture, including explant selection, sterilization techniques, media preparation, and aseptic techniques. Explore techniques for inducing callus formation from explants and promoting organogenesis or embryogenesis for plant regeneration. Discover methods for enhancing the production of secondary metabolites in plant cell cultures.



- ❖ Determination of toxic level in water
- ❖ Aquaculture kit production
- ❖ Metaldegrading effects of microorganisms
- ❖ Probiotics formulation preparation
- ❖ Effects of probiotics on lethal gases/metals
- ❖ Management of mineral effects on Aquaculture

Bioinformatics Techniques

Analyze Genomic sequences using computational tools and databases. Learn to perform sequence alignment, motif discovery, and phylogenetic analysis to unravel evolutionary relationships and functional implications. Explore methods for predicting protein structure and function using computational modeling and simulation techniques. Study protein-ligand interactions(molecular docking), and structure-based drug design approaches.

Basic

- ❖ Database - NCBI, Expasy tools
- ❖ BLAST
- ❖ Clustal W
- ❖ Primer design

Advanced

- ❖ Tools for Omics data analysis
- ❖ Introduction to Bioinformatics software
- ❖ Molecular folding modelling and design
- ❖ Data management systems
- ❖ Primer designing by Software
- ❖ Molecular docking



Job Training Program

Understand current trends, career paths, and the skills in demand. Sharpen your skills with hands-on sessions in laboratory techniques, data analysis, scientific writing, and presentation skills. Master the fundamentals of writing a compelling research paper. Learn strategies for structuring your paper. Understand the peer review process.

- ❖ Complete Government, private and Research Organization details
- ❖ Different types of Job positions (Given by Government Officials)
- ❖ Project Design
- ❖ Paper Publication
- ❖ Journals Selection



Training

Industrial Visits

Industrial visit is more than just a field trip – it's a chance to bridge the gap between academia and industry, inspiring you to envision your future career path. Whether you're curious about industry operations, seeking practical experience, or exploring potential career opportunities, this visit promises to broaden your horizons and deepen your understanding of the life sciences industry.

- ❖ Industrial Visits (IV) can be arranged on request basis at various Research Institutes all over India



DCLS Provides,
NET & GATE coaching
for B.Sc & M.Sc Students

