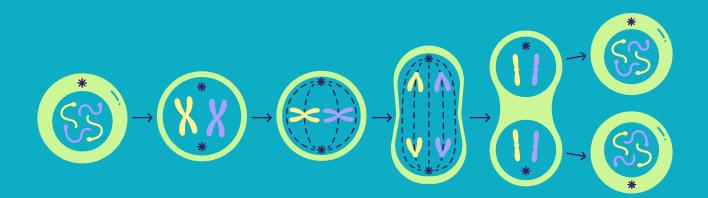




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FOUNDATIONS IN MICROBIOLOGY, MOLECULAR BIOLOGY, CELL CULTURE & SOFT SKILLS

8 MAY – 4 JUNE 2025 , AGRI BIOTECH FOUNDATION, RAJENDRA NAGAR, HYDERABAD



BUILD YOUR CAREER IN LIFE SCIENCES

Develop essential laboratory skills, technical expertise, and professional competencies

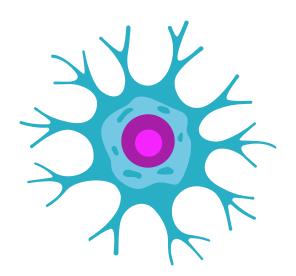
For: Bachelor's, Master's, Industry Professionals and Ph.D. students in Life Sciences

This intensive one-month course provides a comprehensive introduction to the fundamentals of microbiology, molecular biology, and cell culture techniques along with soft skills needed to job market.

Through a combination of lectures, hands-on laboratory sessions, and interactive discussions, participants will gain a solid theoretical understanding and practical skills in these essential areas of life sciences.

WHY CHOOSE THIS PROGRAM?

- Comprehensive curriculum covering microbiology, molecular biology, and cell culture
- Hands-on laboratory experience with cutting-edge techniques and equipment
- Career development through professional soft skills training
- Expert instruction from experienced faculty members
- Industry-relevant skills that enhance employability
- Networking opportunities with professionals in the field



WHAT YOU'LL LEARN:

Technical Skills:

- Microbial culture techniques and analysis
- DNA isolation, PCR, and gel electrophoresis
- Cell culture maintenance and advanced applications
- Laboratory safety and aseptic techniques
- Experimental design and data analysis

Professional Skills:

- Scientific literature searching and evaluation
- Laboratory notebook
 maintenance
- Career development strategies
- Personal branding and CV building
- Using AI tools for scientific research

A detailed syllabus with expanded technical skills coverage will be shared soon

DETAILED COURSE STRUCTURE

	Theory	Hands-on
Week 1: Introduction to Microbiology & Soft Skills	 Literature Search Generative AI for sciences Laboratory book maintenance Instrumentation Fundamentals of Lab experimentation (basic principles) CV Making Linkedin Profile Personal Branding Job-searching strategies and career building History and scope of microbiology Data Analysis and Statistics Microbial diversity (bacteria, archaea, fungi, viruses) Microbial structure and function Microbial growth and nutrition Microbial control and sterilization 	 Showing basic instruments and understanding the principles Buffers Microscopy and staining techniques Aseptic techniques Bacterial culture and growth analysis Antibiotic susceptibility testing
Week 2: Molecular Biology Fundamentals	 DNA structure and replication Gene expression and regulation Recombinant DNA technology Polymerase chain reaction (PCR) - Real-Time PCR Gel electrophoresis 	 DNA isolation and purification PCR amplification Gel electrophoresis and DNA visualization Plasmid DNA isolation and analysis

DETAILED COURSE STRUCTURE

	Theory	Hands-on
Week 3: Introduction to Cell Culture	 Principles of cell culture Aseptic techniques and safety considerations Cell culture media and reagents Cell growth and maintenance Cell passaging and cryopreservation 	 Aseptic techniques and cell culture setup Cell counting and viability assessment Cell passaging and subculturing Cryopreservation and thawing of cells
Week 4: Advanced Cell Culture Techniques and Applications	 Cell differentiation and transformation Cell-based assays and applications Transfection and gene expression analysis Cell imaging techniques 	 Cell transfection and gene expression analysis Cell staining and microscopy Cell-based assays (e.g., proliferation, cytotoxicity)



EXPERT FACULTY

Project Head: Dr. M V Jagannadham is a distinguished scientist with a Ph.D. in Life Sciences from Jawaharlal Nehru University, New Delhi. He served as Chief Scientist at CCMB, Hyderabad, visiting professor, University of Hyderabad and currently scientific committee member of FSSAI, New Delhi, specializing in mass spectrometry, protein chemistry and proteomics.

Industry experts will share practical insights and cutting-edge applications in biotechnology, providing participants with valuable industry perspectives and networking opportunities.

Experienced faculty members with expertise in microbiology, molecular biology, and cell culture. This one-month course will provide students with a strong foundation in microbiology, molecular biology, and cell culture techniques, enabling them to pursue further studies or research in these exciting fields.

REGISTRATION INFORMATION

Program Fee

- Students (Undergraduates/Graduates/Postgraduates) Rs. 10,000
- Faculties/Ph.Ds and Postdocs -Rs. 15,000
- Industry Professionals Rs. 20,000

Application Deadline: 1st May 2025

HOW TO APPLY

Complete the online application form and pay the registration fee at <u>https://biofaba.org.in/FABA_Finishing_School_Reg.php</u>

CONTACT INFORMATION

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Limited upto 20 seats only. Apply early to secure your spot in this careerenhancing program.



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ABOUT ORGANISERS

Federation of Asian Biotech Associations (FABA):

The <u>Federation of Asian Biotech Associations</u> (FABA) is a non-profit organization established in 2004 for providing a platform for academy, industry, and government bodies. FABA has launched the FABA academy to bridge the gap between academy and industry in human resources development by providing professional development programs to science graduates (<u>https://biofaba.org.in/</u>).

Indian Immunologicals Limited (IIL):

Indian Immunologicals Ltd (IIL) is the market leader in veterinary and human biologicals in India. It manufactures over 150+ products. IIL operates one of the largest plants in the world for veterinary vaccines. IIL has adequate infrastructure and cold chain distribution capability to reach out to various parts of India and world market. This flexibility in logistics has ensured many products of IIL occupy top slots in the market. IIL is a major player in the human vaccine market in India, focusing on the pediatric and rabies vaccine segments. IIL is also a major supplier of pediatric vaccines to India's large Universal Immunization Program. <u>www.indimmune.com</u>