

National Institute for Rubber Training (NIRT)



announces



Rubber Board

Ministry of Commerce and Industry
Government of India

Certificate Course in **Molecular Biology & Biotechnology Techniques (MBBT)**

In collaboration with Mahatma Gandhi University
Kottayam.

Commences on 23.01.2023

Duration of the course 3 Months

About Us :

The National Institute for Rubber Training (NIRT) functioning under the Department of Training, Rubber Board, undertakes the growing need for training and skill development of all stake holders of the rubber industry value chain utilising the expertise and infrastructure of various departments of the Board. The Advanced Centre for Molecular Biology and Biotechnology (ACMBB) under Rubber Research Institute of India (RRII) has considerable infrastructure and valuable expertise accumulated in the past three decades. NIRT proposes to utilize the above expertise and academic collaboration with MG University, Kottayam for conducting this highly specialized course for students in Biological Science and practicing Molecular Biologists and Biotechnologists, which will equip the candidates in academic or industrial pursuits towards advancing in their career.

About the programme

This three-months certificate course is designed for fresh graduates, post graduates and research scholars in any branch of Biological Science and entrepreneurs interested in Molecular Biology and Biotechnology. The course is designed focusing more on hands-on experience in some of the most essential molecular techniques right from extraction of nucleic acids (DNA, RNA) to gene cloning, sequencing, gene expression and development of transgenics. The course will be beneficial for the students to take advanced research in Molecular Biology and allied areas as a possible career option. It is also advantageous for the practicing Molecular Biologists and Biotechnologists in the industry and academic streams to advance in their career.

Topics covered

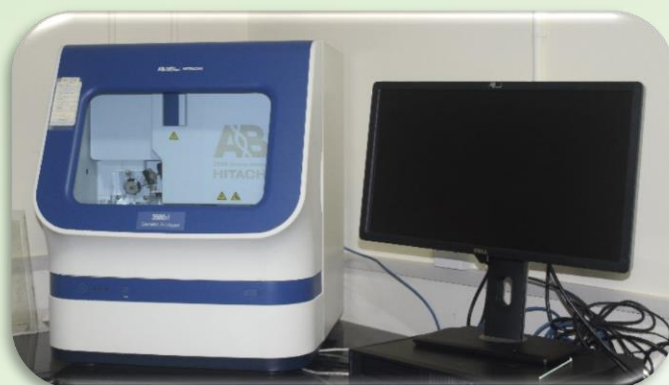
- Cell-Structure and function
- Genome structure, function and organisation
- Polymerase chain reaction (PCR)
- Gene cloning and bacterial transformation
- DNA Sequencing and applications
- Molecular genetic markers
- Functional Genomics



- Fundamentals of Microbiology
- Metagenomics
- Recombinant DNA technology
- Plant tissue culture techniques
- Plant genetic transformation and development of GM crops
- Gene editing technologies
- Bioinformatics

Hands-on sessions

- Isolation of nucleic acids (DNA, RNA and plasmids)
- Gel electrophoresis (Agarose and Polyacrylamide)
- Restriction endonuclease digestion and ligation
- Gene cloning



- PCR and RT PCR
- Real time PCR
- DNA sequencing (Genetic Analyzer)
- Molecular Marker analysis (RAPD, Microsatellites)
- SDS PAGE analysis
- *Agrobacterium* mediated gene transfer
- Plant tissue culture techniques
- Microbial isolation and identification

Contact

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Course fee

Rs. 35000/- (18% GST extra).
Fee includes registration kit and course material.

Number of seats limited to 15

For Registration Click:

<https://training.rubberboard.org.in/online/?SelCourse=MzM0>

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