SUMMER TRAINING PROGRAMME

(1st – 5th July, 2024)

Hands on Training on Nanopriming of Blackgram Seeds to Enhance Growth, and Nutritional Quality for Sustainability

Department of Biotechnology
Motilal Nehru National Institute of Technology Allahabad (MNNITA)
Prayagraj, Uttar Pradesh – 211004, India

About the Institute

Motilal Nehru National Institute of Technology Allahabad (MNNITA), Prayagraj is an institute with total commitment to quality and excellence in academic pursuits. It was established as one of the seventeen Regional Engineering Colleges of India in the year 1961 as a joint enterprise of Government of India and Government of Uttar Pradesh, and was an associated college of University of Allahabad, which is the third oldest university in India. With more than 50 years of experience and achievements in the field of technical education, having traversed a long way, on June 26, 2002 MNREC was transformed into National Institute of Technology fully funded by Government of India. With the enactment of National Institutes of Technology Act-2007, the Institute has been granted the status of institution of national importance w.e.f. 15.08.2007.

Course Overview

This course explores the emerging field of nanopriming in agriculture, focusing on its application for sustainable growth. Nanopriming involves the use of nanotechnology to enhance seed germination, plant growth, and stress tolerance. Participants will delve into the fundamentals of nanopriming, understand its mechanisms, and analyze its impacts on crop productivity and environmental sustainability. Through case studies, practical demonstrations, and discussions on challenges and future directions, participants will gain the knowledge and skills to integrate nanopriming into agricultural practices for sustainable growth.

Course Objectives

- Understand the concept of nanopriming and its relevance to sustainable agriculture.
- Explore the mechanisms and techniques of nanopriming for seed enhancement, nutrient delivery, and pest management.
- Analyze the impacts of nanopriming on crop productivity, stress tolerance, and environmental sustainability.

Course Module

Introduction to nanopriming in agriculture, fundamentals of nanopriming, impacts of nanopriming on crop productivity and sustainability, tools & techniques.

Hands on training

- Synthesis of nanoparticles (Fe_2O_3 NP) & characterization (UV-vis. Spectroscopy, PSA, PL, FT-IR).
- Plant growth experiment and assessment of growth parameters such as germination rate, length, biomass, and chlorophyll content.
- Biochemical parameters (Reactive oxygen species content [MDA, H_2O_2] & Antioxidative enzymatic activity).
- Data analysis and interpretation (ANOVA).

Registration Fee

The registration fees of all the participants is as follow:

For applicants: Rs. 5900 (Rs. 5000 + 18% GST)

- The above fee includes all instructional materials, computer use for tutorials & assignments.
- Minimum 90% attendance necessary to be eligible for certificate of participation/attendance.
- Appearing for evaluations/examinations during the course is necessary for certificate of gradesin the course.
- Accommodation in the campus can be provided subject to availability. The accommodation will be on payment and 'first come first served' basis.
- **Maximum no. of seats is 30**. First come first served basis.

***A minimum of 20 participants is necessary to initiate the course.**

Bank Details

Account Name: SNFCE MNNIT Allahabad
Account Number: 10424975574
Bank Name: State Bank of India (SBI)
Branch: MNNIT Allahabad
IFSC Code: SBIN0002580

Programme Coordinator

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Student Coordinator

Vandita
Nahid Rehman
Divya
Anmol Kumari

Registration link:

Interested candidate can register by visiting the link https://docs.google.com/forms/d/1zV0dX8uE94YW9Eq1qI3srDdWzGsKHOwx5CdKb_H3o6Q/edit

Target Participants:

This course is designed for U.G., P.G., Ph.D. and faculties