AICTE – Training and Learning (ATAL) Academy

AICTE Training and Learning (ATAL) online Faculty Development Programme (FDP)

On

Rhizospheric Engineering: Revisiting the Microbe-Plant Synergy to Mitigate Plant Nano Toxicology

January 24th -28th, 2022

Organized by
Department of Biotechnology
Motilal Nehru National Institute of Technology Allahabad
Prayagraj, Uttar Pradesh – 211004 (India)
www.mnnit.ac.in

ABOUT THE INSTITUTE

Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Prayagraj (MNNIT Allahabad) 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.

ABOUT THE DEPARTMENT

The Department of Biotechnology at MNNIT Allahabad was established as a new academic unit under Applied Mechanics in 2006, with the objective of integrating life sciences with engineering and to develop cutting-edge technology through research, training and technological innovation. Keeping a beat to the global demands for researchers in this field, a full fledged post graduate degree course (M. Tech.) in Biotechnology was introduced in the year 2010. The department runs PhD program in biotechnology since 2009.

The department gained shape as an independent administrative 'Department of Biotechnology' on April, 2012. Department has received support from DST under FIST programme and UG programme (B.Tech Biotech) has been duly accredited by NBA.

The department comprises of thirteen expert faculty members from diverse areas. The faculties have also been able to generate the external funding from various government agencies viz., DST, DBT, UGC, MNRE etc. and published papers in National/ International journals of repute. In addition, national, international conferences supported by various funding agencies and various short term courses have also been organized successfully. The department has independent state-of-art modular laboratories to perform experiments in microbiology, immunology, biochemistry, molecular biology, cell culture and bioprocess technology.

ABOUT THE FDP COURSE

The course aims to develop students know about rhizospheric engineering by exposing them to the fundamentals of rhizosphere, microbe-plant synergy, nanomaterial stress, plant stress physiology, with a focus on the interplay of plant-microbe-nanomaterial in abiotic stress. Furthermore, it aims to combine students' knowledge in multiple fields of agronomic science, such as plant physiology, experimentation, plant improvement and microbiology, while providing exposure to practical problems and their solutions through case studies.

The hand on training session aims to provide a platform for an effective science & technology communication, outreach, create awareness, offer training, much-needed skills and educate various stakeholders on current and relevant topics. The five days' activity will include various eminent speakers from academics, industry, start-ups, govt. agencies including entrepreneurs and other areas across the world to share their thoughts on the diverse array of disciplines/domains.

TOPICS TO BE COVERED

- Rhizosphere and Plant Microbe Interactions
- Harnessing Plant Microbial Synergy to alleviate Abiotic Stress
- Rhizospheric Engineering for Sustainable Agriculture
- Modulating Rhizobacteria to augment plant growth promoting potential.
- Plant Nanotoxicology : Knowledge Gap and Recent Trends
- Nanotoxicity of Engineered Nanomaterials (ENMs) and Rhizobacteria
- Stress Determination in Plants : Morphological, Biochemical and Molecular Parameters.
- Fluorescent Probes : Elucidation of Stress Level in Plant.
- Mitigating Abiotic Stress in plants using various alleviators(Si, PGPRs etc.)
- Crosstalk among Signaling Molecules (NO, H_2S) and Phytohormones to cope up Plant Stress
- Integrating omic approaches for abiotic stress tolerance
- Discover your Soul : Yoga and Relaxation Class

TARGET AUDIENCE

This course is designed for participants from various backgrounds including students, researchers, faculty and scientists working in the field of biotechnology, microbiology, biochemistry, nanotechnology, bioinformatics, environmental sciences, life sciences, biology, agriculture, and PhD students undertaking courses of study in any of these areas.

MODE OF CONDUCT

The programme will be organized online on Microsoft Teams Platform (Links / Team ID will be shared to registered participants.

REGISTRATION

The registration is free of cost of all the participants. Interested candidate can register by visiting the link.
https://www.aicte-india.org/atal

CONSENT TO PARTICIPATE

After registration the candidate have to provide their consent for participation to the coordinator by visiting the link
https://docs.google.com/forms/d/1FgEJlNDXV85x9Edvuyznret4vna8Oc9Bd8EHKAVgeaI/edit

OTHER RELEVANT INFORMATION FOR PARTICIPANTS

- Seats are limited (maximum upto 200) & participants will be selected on the first come first serve basis.
- After successful completion of the FDP course, a test will be conducted by the coordinator for the assessment of each participant.
- The certificate shall be awarded only to those participants, who have attended the course with minimum of 80% attendance and scored minimum 60% marks in the test.

PATRON

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PRINCIPAL COORDINATOR

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COORDINATOR

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