



# AICTE -Training and Learning (ATAL) Academy



**Sponsored Five Days Online Faculty Development  
Programme (FDP)**

On

**Biowaste to Bioenergy: A future sustainable energy source**

**14<sup>th</sup> to 18<sup>th</sup> December, 2021**



***Organized by***

**Department of Biotechnology**

**Motilal Nehru National Institute of Technology (MNNIT) Allahabad  
Prayagraj, Uttar Pradesh, India – 211004**

**[www.mnnit.ac.in](http://www.mnnit.ac.in)**

## **About the Institute**

**Motilal Nehru National Institute of Technology Allahabad, Prayagraj (MNNIT)** 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. For a short duration of two years (2000-2002), the institute was affiliated to U.P. Technical University.

On June 26<sup>th</sup> 2002, MNREC was transformed into National Institute of Technology and Deemed University fully funded by Government of India. With the enactment of National Institutes of Technology Act-2007, the institute has been granted the status of the institution of national importance on 15<sup>th</sup> August 2007.

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Initially as a part of the Department of Applied Mechanics, an administratively independent Department of Biotechnology was established in April, 2012. Since its inception, the department has witnessed a consistent rise in the students' demand for the subject. Keeping a beat to the global demands for researchers in this field, a full-fledged postgraduate degree course (M. Tech.) in Biotechnology was introduced in the year 2010. The department has also started a Ph. D. program in biotechnology since 2009.

### **About the FDP course**

The FDP on “**Biowaste to Bioenergy: A future sustainable energy source**” is aimed to provide information regarding the emerging field of waste conversion to bioenergy (green energy). The dimension of bioenergy includes hydrogen energy, methane, and liquid fuel etc. These potential fuel can be used to fulfill the demand of present and future populations along with biowaste reduction. More than 90% of commercial energy is generated by steam reforming of natural gas that adds tones of CO<sub>2</sub> gas in the environment. The intent of this FDP is to promote healthy discussion regarding biowaste transformation to eco-friendly bioenergy generation by naturally occurring potent microbes (a small bioreactor) instead of physiochemical method learning. The main objective of the FDP course is to help in imparting quality technical education in the country and to support technical institutions in fostering research, innovation, and entrepreneurship through training.

The valuable lectures will be delivered by eminent faculty members of academia & provide a forum for the exchange of knowledge. The course will definitely provide positive impact on the participants who are in the practice of this qualitative emerging field or interested in this field.

### **Topics to be Covered**

- Fundamental knowledge of bioenergy and its future prospective
- Current status, opportunities, and challenges in bioenergy field
- Sustainable approaches for screening promising feedstocks (biowastes) for conversion into different bioenergy products
- Targeting influential parameters & its optimization for biowaste to bioenergy conversion
- Multidimensional approaches in technological development for upscaling biofuel generation
- Importance of energy efficient bioelectronics & 2D material in bioenergy
- Exploration of sensing technology in bioenergy detection
- Lab session for application of computational simulation in biofuel enhancement using python tool
- Lab session for experimental set up of bioenergy production, & its analysis using Gas chromatography
- Mental & emotional development, stress management

## **Target Audience**

Faculty Members of AICTE approved institutes, Research Scholars, Students of both professional and science backgrounds, Professionals of government agencies, Industry professionals.

## **Venue**

The programme will be organized online on [Microsoft Teams Platform](#) (Link/Team ID will be shared to registered participants).

## **Registration**

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

## **Consent to participate**

After registration the candidates have to provide their consent for participation to the coordinator by visiting the link <https://forms.gle/aaJwYvstWqsfhjbs5>

**\*Last date for registration and consent is Dec 03<sup>rd</sup>, 2021.**

**\*\*Selected participants will be intimated through mail by Dec 8<sup>th</sup>, 2021.**

## **Other relevant information for participants**

- Seats are limited (maximum up to 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 certificates 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**

Prof. Rajeev Tripathi  
Director

Motilal Nehru National Institute of Technology (MNNIT)  
Allahabad, Prayagraj, Uttar Pradesh, India -211004

**Programme Coordinator**

Prof. Anjana Pandey

Department of Biotechnology,

Motilal Nehru National Institute of Technology (MNNIT) Allahabad,  
Prayagraj, Uttar Pradesh, India -211004

Email: [anjanap@mnnit.ac.in](mailto:anjanap@mnnit.ac.in)

Contact No: 9452690849, 7905861372

**Local Organizing Committee**

Saumya Srivastava

Priya Rai

Vandita

Nahid Rehman