



## About INDIAN INSTITUTE OF TECHNOLOGY DELHI

Established in 1961, Indian Institute of Technology Delhi is one of the premier educational institutions in the country and counted among the top institutions in the world. Situated in the National Capital, IIT Delhi has been instrumental in providing solutions to technological and societal problems through innovative academic and research activities. The institute has nearly 35 academic units that imparts knowledge on Engineering, Science, Design, Social Science, among others. IIT Delhi has been consistently placed among top academic universities around the globe. In 2018, IIT Delhi has been awarded the status of "Institution of Eminence" by Government of India which granted almost-full autonomy, leaving this institute to make its own decisions with enhanced research funding.

### Course Coordinator

Prof. Priyanka Kaushal  
Centre for Rural Development and  
Technology (CRDT), IIT Delhi

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### Core Faculty

Prof. V K Vijay, IIT Delhi  
Prof. K K Pant, IIT Delhi  
Prof. A K Nema, IIT Delhi  
Prof. Vivek Kumar, IIT Delhi  
Prof. Ramchandra, IIT Delhi  
Prof. P V Arvind, TU Delft

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### Contact us:

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## TEQIP-III Sponsored Online Short-term Course on Biomass valorization and its life cycle assessment (LCA)

(1<sup>st</sup>-5<sup>th</sup> December 2020)



## Introduction

This online short-term (30 hours) course covers emerging topics related to biomass valorization and its availability for energy generation in India; Design and development of the system for conversions of biomass to energy and other value-added products; economic feasibility for utilization of indigenous non-food feedstock and life cycle analysis including cost analysis of different conversion processes; Govt. of India policy such as Sustainable Alternatives Towards Affordable Transportation (SATAT), Ethanol Blended Petrol (EBP), National Policies on Biofuel etc. to meet the increasing energy needs of the country and ensure energy security.

## Scope of the course

- Biomass resources and its availability for energy generation in India.
- Environmental impact assessment of various technologies for the conversion of biomass to energy and other value-added products.
- Economic feasibility for utilization of indigenous non-food feedstock.
- An overview of global best practices and Govt. of India policy such as SATAT, EBP, National policy on biofuels, etc.

## Course content

- Nature and principle of different biomass to energy conversion systems and know how to choose the suitable biomass fuels for different bio-energy applications.
- Desirable features of biomass energy sources and their advantages over traditional fuels such as coal and oil with a life cycle perspective.
- Scope of biomass as alternative source of energy in terms of suitable applications, dependence on elements, capital costs and cost effectiveness compared with traditional sources and its impact on the environment.

## Learning outcomes

On successful completion of the course, the participants will be able to:

- Calculate the energy present and its economic value as a resource in a given biomass resource.
- Identify and quantify the various routes to extract useful energy from a biomass source.
- Environment impact assessment and cost analysis of the technologies currently used to produce energy from biomass and the fundamental principles governing these processes.
- Real life examples of the life cycle assessment (LCA) of different processes available for biomass valorization.
- Govt. of India policies for utilization of biomass in terms of energy and fuel production and reduce dependency on the fossil fuels.

## Participation

- This course is designed for faculty members from all disciplines of science and engineering from TEQIP-III institutions only.
- **No registration fee for TEQIP-III participants.**
- Participation from outside of TEQIP-III institutions is not permitted in this course.
- Based on first come first serve basis, a maximum of 50 participants will be allowed to register for the course.

## Registration

Interested faculty members and research students at TEQIP-III institutions should register by depositing a refundable security deposit of **Rs. 2000/-** to the IIT Delhi CEP Account with following details—

Name of the Account holder: **IITD CEP ACCOUNT**

Account number: **36819334799**

Name of the Bank: **STATE BANK OF INDIA, IIT Delhi**

IFS Code: **SBIN0001077**

SWIFT Code: **SBININBB547**

MICR Code: **110002156**

IITD PAN no.: **AAATI0393L**

GSTN: **07AAATI0393L1ZI**

After paying the security deposit, please fill online registration form on the following link <https://forms.gle/KQMK7yfi432uy8Ht6>

Deadline for Registration: **20<sup>th</sup> November 2020**

**Important note:** Reimbursement of refundable security deposit for the participants as well as declined participants will be processed after successful completion of the course.

For any query (registration or course content), contact us at [courses.b2e.iitd@gmail.com](mailto:courses.b2e.iitd@gmail.com)

TEQIP-III/RF/1

**TEQIP-III sponsored online short-term course on Biomass valorization and its life cycle assessment (LCA)**



**PARTICIPANT REGISTRATION FORM**

1. Name: Prof./Dr./Mr./Ms.: \_\_\_\_\_
2. Designation: \_\_\_\_\_
3. Department: \_\_\_\_\_
4. University/Institute: \_\_\_\_\_
5. Address: \_\_\_\_\_  
\_\_\_\_\_
6. Email ID: \_\_\_\_\_
7. Mobile/Phone: \_\_\_\_\_

**Place:** .....

**Date:** .....

**Signature of the Applicant**

**Signature of Principal or Head of Institution with seal  
(Forwarding by the Principal/ Head of the Institution)**