



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 Coordinators

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TEQIP-III Short Term Course on Biomass to Energy and other value-added products

(25th-29th November 2019)



Venue: INDIAN INSTITUTE OF
TECHNOLOGY DELHI, Sonipat
Campus



Course content

Biomass resources and its availability for energy generation in India; Design, development & pilot plant demonstration of the system for conversions of biomass to energy and other value-added products; Economic feasibility for utilization of indigenous non-food feedstock and 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 to provide energy security.

Scope of the course

- Describe the nature and principle of different biomass to energy conversion systems and know how to choose the suitable biomass fuels for various bio-energy applications.
- Distinguish the desirable features of these biomass energy sources and their advantages over traditional fuels such as coal and oil.
- Identify their limited scope in terms of suitable sites, capital costs, and cost-effectiveness compared with traditional sources.

Target Audience

The course is designed for faculty members, research scholars, M. Tech students of all Engineering Disciplines; technology developers; technology practitioners; technology communicators; agricultural industries; agricultural researchers; start-up aspirants; etc.

Course breakup

Day—1: Biomass resources & its characterization, Biomass bulk chemical properties, properties of microbial biomass.

Day—2: Energy in biomass, biomass resource assessment; Biofuel policies and global best practices

Day—3: Introduction of Biomass to energy conversion routes, biomass densification technologies

Day—4: Thermochemical and biochemical conversion of biomass to heat, power & fuel

Day—5: Biofuels and other value-added products.

Learning outcomes

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

- Calculate the energy present in a given biomass resource.
- Identify and quantify the various routes to extract useful energy from a biomass source.
- Size and design the reactor to produce the gas (SYN or Bio).
- Cost analysis of reactor design to understand the technologies currently used to produce energy from biomass, and the fundamental principles governing the design of these processes.
- Govt. of India policies for utilisation of biomass in terms of energy and fuel production.

Accommodation and Travel

Boarding and lodging will be arranged for the selected candidates, as per **TEQIP-III** norms, on sharing basis from 24th November 2019 (night) to 29th November 2019 (night). However, due to a limited number of rooms in the guest house the allotment will be on first-come, first-served basis. Travelling Allowances will be provided for the **TEQIP-III** participants only from their hometown to IIT Delhi up to a maximum of the 3AC train fare.

No registration fee for **TEQIP-III** participants.

For non **TEQIP-III** participants mandatory registration fee for participation as following:

- INR 5,000/- + GST - Research Scholars
- INR 10,000/- + GST - Faculty
- INR 30,000/- + GST - Industry participants
- Accommodation will be provided on request and subject to availability. Cost of accommodation will be borne by the participant.
- Fee is payable online (via net banking) to the IIT Delhi CEP Account.

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**

Interested candidates are requested to fill the particulars in the online registration form on the following link and attached form as well.

https://docs.google.com/forms/d/e/1FAIpQLScan5oRSNGOVED2kiyGnpP3eRuExsX4BfCUiJayV yQNIF3q2w/viewform?usp=sf_link

For further information related to the course or accommodation enquiries, please contact us at courses.b2e.iitd@gmail.com

Important Dates

Deadline for Application: 31st October 2019

Fee payment by: 31st October 2019 (only for non **TEQIP-III**)

Confirmation by: 10th November 2019

TEQIP-III/RF/1

TEQIP -III Short term course on Biomass to Energy and other value-added products, IIT Delhi, Sonipat Campus



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
(Forwarding by the Principal/ Head of the Institution)**