



भारतीय प्रौद्योगिकी संस्थान गुवाहाटी Indian Institute of Technology Guwahati

Short Term Course/ Workshop/ Quality Circle Symposium



Combustion, Emission and Power Technology

December 22nd -26th Feb, 2021

Conducted by :
Centre for Energy



Organized by :
Knowledge Incubation for TEQIP
Centre for Educational Technology
URL: <https://www.iitg.ac.in/ceer/cept>

ABOUT THE COURSE / EVENT

This short-term course will provide an excellent opportunity for academicians, budding engineers, scientists and students community to exchange ideas and views in an informal and cordial atmosphere. This will also help in focusing the national efforts to develop the skills for experimental facilities in the laboratories of the parent institutes. The interaction with leading academicians, scientists and experts around the country will enrich North-Eastern communities to initiate new research programs in the area of “Combustion Science and Engineering”.

COURSE CONTENTS

- Introduction to linear and non- linear dynamic systems, finite elements methods and vibration signal processing.
- Combustion Technologies in Internal Combustion (IC) engines
- Dual-fuel/Multi-fuel Combustion
- Alternative and Renewable Fuels
- Clean Combustion: Scopes and Impacts
- Combustion and Emissions: Diagnostics, Modeling and Control
- Gas Turbine and Power Generation
- Porous-media Combustion
- Biomass/Decentralized gasification
- Aerospace Propulsion
- Clean Energy Technologies
- Usage of computational tools
- Pedagogy/Technical

Topics to be covered

- Theory and Fundamentals of Combustion
- Internal Combustion (IC) Engines
- Combustion Technology in Gas Turbine (GT) Engines
- Combustion and Gasification
- Fuels and Combustion
- Emission Dignostics and Control for IC Engines
- Porous Media Combustion
- Gasification Technology
- Bio-oil Characteristics for Power Transmission
- Measurement Diagnostics and Engine Health Monitoring
- Combustion Modeling
- Pedagogy/Technical Writing
- R & D Activities of ISRO

ELIGIBILITY

The course/event is open to Faculty members/Students (strike off, whichever is not applicable) from TEQIP mapped Institutions/Engineering Colleges/ATUs. No course fee is charged.

BOARDING AND LODGING

As the event will be organized online hence no boarding and lodging is required.

IMPORTANT DATES

The last date for the receipt of duly sponsored application:

By email: scanned copy: 18/02/2021

Hard copy must reach by: 18/02/2021

Intimation of selection: 19/02/2021

SELECTION CRITERIA

Number of seats: 30.

Selection will be based on First cum first served basis.

ADDRESS FOR CORRESPONDENCE

Name:

Course Coordinator: Prof. Niranjana Sahoo

Course Co-coordinator: Dr. Pankaj Kalita

Center of ENERGY

Indian Institute of Technology Guwahati

Guwahati- 781 039

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ABOUT TEQIP

TEQIP conceived in pursuance of the NPE-1986 (revised in 1992) by Govt of India as a long term program to be implemented in different phases. After successful execution of TEQIP II, TEQIP III starts from 2017-18 as Central Sector Scheme with a focus on the Low Income States, Northeast, Hill States and Islands. The third phase of TEQIP is also special in a way that it incorporates twinning arrangements between mentee & mentor institutions with an emphasis on Focused Training (PT) and Focused Interventions from IITs in terms of deliverables and accountability. KIT, established at IIT Guwahati under 2nd phase of TEQIP is a focal point for training Faculty, Staff and students from TEQIP-III institutions in Knowledge Engineering, Content Creation, Improving Teaching, Pedagogy & administrative skills in identified niche areas/disciplines.

ABOUT KIT

KIT (**K**nowledge **I**ncubation **C**ell for **TEQIP**) at IIT Guwahati functions as a multi-disciplinary as well as interdisciplinary Innovation Incubation Centre with a focus to impart Knowledge, infusing innovation and leading a path to achieve academic excellence. Its activities are in the area of improving quality of technical education, incubator of Innovative Ideas; implementer of contemporary pedagogy practices and development of Learning Content in Technical institutions while mentoring them.

ABOUT IIT GUWAHATI

SNAP OF CAMPUS

IIT Guwahati campus is spread over a sprawling 785 hectares plot of green land on the north bank of the river Brahmaputra around 25 km from the heart of the city. With hills and vast open spaces, the campus provides an ideal setting for training. Details on how to reach IITG Campus are available on the institute website

Website: www.iitg.ac.in