

**Registration Form for Short Term Course on  
“Efficient Energy Conversion in Harmony with  
Environment”  
(Oct 29 - Nov 03, 2018)**

Name (block letters): .....

Designation & pay scale: .....

Organization: .....

Address for communication: .....

.....

Pin code: ..... Ph. No.: .....

E-mail: .....

Highest academic qualification: .....

Specialization: .....

Experience (in years) :

(a) Teaching ..... (b) Industrial .....

Accommodation required (Yes/ No):

Amount of TA required as per entitlement mentioned in the  
brochure (only for AICTE approved college teachers):

.....

DD No. & Date:

Bank :

Amount :

Please register me for the “QIP short term course on “Efficient  
Energy Conversion in Harmony with Environment” held at IIT  
(BHU) Varanasi.

Place :

Date : Signature of the applicant

**Sponsorship**

Prof./Dr./Mr./Ms./Mrs./.....

an employee of our institute, is hereby sponsored for the  
course. The applicant will be permitted to attend the “QIP short  
term course on “Efficient Energy Conversion in Harmony with  
Environment” at IIT (BHU), Varanasi, to be held during 29  
October - 03 November, 2018, if selected.

Signature with date of Sponsoring Authority:

Designation :

Official Seal :

**Registration procedure**

There is **no registration/ accommodation fee**. However, a  
Demand Draft of Rs. 2,000/- should be enclosed with the  
application form which will be refunded to the participants  
after attending the course. Total reserved seats for QIP  
candidates are 30 which will be given on first-cum-first served  
basis. The registration fees [DD in favor of 'Registrar, IIT  
(BHU), Varanasi' payable at Varanasi, (SBI Branch Code:  
11445)] along with completed registration form should be  
sent to **Dr. J. Sarkar** (jsarkar.mec@itbhu.ac.in). Also send a  
copy of the registration form and draft through email to  
Coordinator QIP ([coordinator.qip@itbhu.ac.in](mailto:coordinator.qip@itbhu.ac.in)). The refund  
amount will not be returned to those who will be absent.  
Accommodation will be arranged on request. Complementary  
working lunch/tea and snacks will be served.

**How to reach**

The city of Varanasi is well connected by road, rail and air with  
all the important cities of India. Regular flights are there from  
Varanasi to Delhi, Mumbai, Chennai, Hyderabad, Bangalore,  
Kolkata, Khajuraho and Lucknow. The IIT (BHU) campus is  
about 10 Km away from Varanasi Cantt Railway Station and 20  
Km from Mughalsarai Railway Station and 35 Km from the  
Babatpur (Varanasi) airport.

**About Varanasi**

The holy city Varanasi is the oldest living city in the world. It is  
also known as the capital of the spiritualistic world. The city  
has a great historical and cultural importance. This religious  
and cultural capital of India is situated at the bank of the holy  
river Ganges and is famous for temples of Lord Shiva, Buddha,  
Sankat Mochan etc. Varanasi is the premiere most place of  
oriental learning. It simultaneously keeps pace with modern  
advanced knowledge. This vibrant city with multiple  
dimensions of knowledge and liberation has a magnetic  
attraction for people from all over the world.

**Important dates**

Last date for Registration: 06.10.2018  
Intimation of Selection: 10.10.2018

**Venue: Thermal & Fluid Engineering Seminar  
Hall, Department of Mechanical Engineering,  
IIT (BHU), Varanasi.**



**AICTE Sponsored QIP Short Term Course  
On**

**“Efficient Energy Conversion in  
Harmony with Environment”**

**October 29 - November 03, 2018**



**Organised by:**

Department of Mechanical Engineering  
Indian Institute of Technology  
VARANASI-221005

**Coordinator:**

**Dr. J. Sarkar**

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## CELEBRATING CENTENARY



### Introduction

In view of ensuring advanced technology, ever-increasing urbanization, energy security and management, economic growth and environment protection for future sustainable energy systems, we need efficient eco-friendly energy conversion technology from renewable energy sources. The aims of this short term course are not only efficient energy conversions but also to address environmental impacts such as ozone layer depletion and global warming. The level of pollution control and improved biological effects should also be accessed through ecofriendly conversion of energy. Hoping the present STC will motivate us toward the next generation eco-friendly energy conversion and utilization technologies. The participants will get adequate exposure to interact with the experts in different fields of energy. Experts from IIT (BHU) and other IITs will be delivering lectures on topics directly related to the basic theme of the STC.

### Topics to be covered

**Energy and Environment-** Climate change global issues, Ozone layer depletion, Global warming, Energy policies, Economics and Sustainability

**Energy conversion technologies-** Direct & indirect energy conversions, Power generation cycles (Organic Rankine Cycle, Supercritical Rankine cycle, Supercritical Brayton Cycle, etc.) and working fluids

**Renewable energy:** Solar energy storage, Photovoltaic cell, solar collector, indirect power generation options from solar energy and challenges, Biomass pyrolysis and gasification, H<sub>2</sub> and syngas productions, Wind energy, Geothermal energy conversion, waste heat conversion, CCHP

**Low emission energy conversion:** Low emission internal combustion engine, zero emission vehicle, hybrid vehicle, Biodiesel, Fuel cell, Combustion generated pollution, biological and environmental effects, emission measurement and control

#### Laboratory Procedures:

Numerical simulation with CFD, EES and AspenPlus; Record Keeping and Paper Writing; Instrumentation; Hands-on training on Solar Energy, Pyrolysis, Gasification and Biochemical reaction setup

### Indian Institute of Technology (Banaras Hindu University) Varanasi

The Banaras Hindu University, a globally renowned institution, established in 1916 by one of the greatest nationalists and visionary persons Mahamana Pandit Madan Mohan Malaviya Ji, is the largest residential universities of Asia. For providing the educated and trained technical manpower for the building up of independent India, Mahamana Ji envisioned the role of technical education and established the Banaras Engineering College in 1919, College of Mining and Metallurgy in 1921 and College of Technology in 1923 under the umbrella of the University.

The three colleges were amalgamated to form the Institute of Technology (IT-BHU) in 1969 which was renamed as IIT (BHU) Varanasi in June 2012. The alumni of the Institute and the University have been actively participating in the nation building. Thirteen engineering and technology departments and three interdisciplinary schools comprise the Institute at present.

### Department of Mechanical Engineering

The Department of Mechanical Engineering came into existence in 1919 under the leadership of Professor Charles A. King, the first Head of the Department and Principal of the erstwhile Banaras Engineering College. Over the last ninety nine years, the department has grown four folds to become the largest department in IIT (BHU), Varanasi. The post-graduate and doctoral program in the department is well-established and infrastructural facilities exist for studies and research for a range of specializations such as Machine Design, Thermal and Fluid Engineering, Production Engineering and Industrial Management. Faculty members are involved in the frontier and interdisciplinary areas of research. The department is known nationally and internationally for academic and research contributions.

