

COURSE COORDINATOR

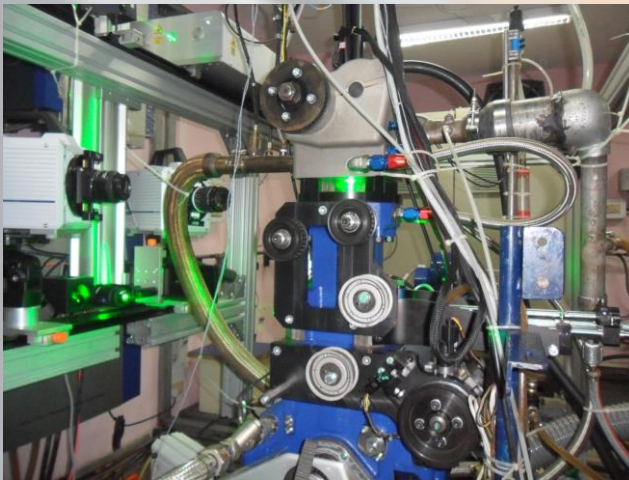
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Single Cylinder Optical Research Engine at IIT Kanpur

IMPORTANT DATES

Last date for receiving application	July 20, 2018
Notification about selection	July 22, 2018
Confirmation from participants	July 25, 2018

THE APPLICATIONS NOT ACCOMPANIED BY COURSE FEE WILL NOT BE ENTERTAINED.

Note: Selected candidates will be informed by fax / e-mail, if fax number/ e-mail address is provided.

For any further information, please contact:

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For more detail: -

<http://www.iitk.ac.in/new/courses-conferences-workshops>

ANNOUNCEMENT

*Short-Term Course
On*



***Advanced Course on
Engine Combustion, Diagnostics,
Emissions Control and
Emerging Fuels***

August 3-7, 2018

Organized By:
Dept. of Mechanical Engineering
Indian Institute of Technology Kanpur



Indian Institute
Of Technology
Kanpur



MHRD

Ministry Of
Human Resource
Development



Engine Research
Laboratory
IIT Kanpur

INTRODUCTION

Current automobile technology has matured significantly over the past few years. Engine technologies have come across a significant change to improve the efficiency and cost. At the same time, world is also confronted with the twin crises of fossil fuel depletion and environmental degradation. Indiscriminate extraction and lavish consumption of fossil fuels have led to reduction in underground-based carbon resources. This has propelled the development of advanced engine technologies, which promise a harmonious correlation with sustainable development, energy conservation, management, efficiency and environmental preservation.

With increasing environmental awareness worldwide, stringent regulations for fuel consumption, and exhaust emissions, including those for PM (Particulate Matter) and NO_x are evolving. Under these circumstances, diesel engines would continue to be attractive because of their low fuel consumption and high power output however they have to emerge as clean primary power sources.

This course focuses on various advanced engine technologies, diagnostics and modeling tools developed recently in automobile industry. The emphasis is on providing the participant an up-to-date knowledge of the advances in these areas.

SCOPE OF COURSE

- Gasoline direct injection technology
- Laser diagnostics for fuel sprays and droplet size distribution
- Single Cylinder Optical Research Engine (SCORE) as engine development tool
- Particle imaging velocimetry for engine combustion chamber flow diagnostics
- NO_x formation mechanisms
- Particulate formation mechanisms
- Engine exhaust particle characterization
- Instruments for particle size measurement
- Ultra fine and nano-particle formation
- Fuel property influence on emissions

- Diesel oxidation catalysts
- Diesel particulate filters, Partial flow filters
- Particulate and NO_x control using exhaust after-treatment
- 1-D modeling of engines, fuel injection systems, and engine cooling system
- New and Emerging fuels
- Challenges of Emerging fuels such as Methanol
- Emerging gaseous fuels

COURSE FACULTY

The course will be taught by experts from academia and Industry. Some of the potential faculties are:

- Prof. Avinash Kumar Agarwal, IIT Kanpur
- Prof. Tarun Gupta, IIT Kanpur
- Dr. Anirudh Gautam, RDSO Lucknow
- Dr. Nitin Labhsetwar, NEERI Nagpur
- Experts from Automotive Industry

COURSE STRUCTURE

There will be three lectures every day of 90 minutes each (five days; 3-7th August) and this will be followed by lab experiment demonstration session of two hours each day (three days). There will be a book exhibition related to engine technologies. The last day of the course i.e. 7th August (Tuesday) will be for the field visit to Engine Development Directorate, RDSO Lucknow, Ministry of Railways (Not compulsory) to observe large bore engine research facility of Indian Railways.

COURSE DETAILS

The Continuing Education Cell of Indian Institute of Technology Kanpur conducts courses in Engineering and Science for the benefit of the faculty of engineering colleges in the country under Quality Improvement Program of All India Council of Technical Education (AICTE). Research scientists working in DRDO, CSIR laboratories, automotive industries and other practicing engineers also participate on a payment basis and benefit from this exercise.

Course duration: August 3-7, 2018

Accommodation: Accommodation for the duration of the course shall be provided in the guest house of IIT Kanpur on twin sharing basis.

PARTICIPATION FROM INDUSTRY AND R & D ORGANISATIONS

Registration fee Rs. 50,000/- payable by a crossed demand draft drawn in favor of "Continuing Education Program, IIT Kanpur" payable at State Bank of India, IIT Kanpur. ***Course fee does not include accommodation. There will be separate accommodations and meal charges of approximately Rs 1500 to be paid directly to IITK Visitors Hostel (Guest House) for five/ six days (3rd-7th August).***

Please note that the applications not accompanied by the course fee will not be entertained.

HOW TO APPLY

Those interested in attending the course are requested to fill the registration form enclosed and send the completed application with a passport size photograph along with course fee of Rs. 50,000/- in the form of crossed bank draft in favor of "Continuing Education Program, IIT Kanpur" payable at State Bank of India, IIT Kanpur.

The registration form, complete in all respects accompanied by the demand draft and a covering letter should reach the under mentioned on or before **July 10th, 2018.**

All successful candidates will be provided the certificates.