

IMPORTANT DATES:

Last date of Registration: 11 May, 2020

Notification about Selection: 12 May, 2020

Payment of Course Fee: 13 May, 2020

Participants' Confirmation: 13 May, 2020

ELIGIBILITY AND REGISTRATION

Faculties, research scholars, PG, UG & Diploma (ME, AE, CE) course students from engineering institutions and professionals from Industry & R&D units may attend the course.

MODE OF EDUCATION

It will be an online course communicated through zoom application.

COURSE DURATION & TIMINGS

This entire course is designed for 10 hours of duration and the timings for each day will be from 10:00 a.m to 12:00 p.m i.e (Monday-Saturday). Zoom meeting I.D. along with a password will be provided to all the participants on daily basis three hours prior to the course starting time.

REGISTRATION & COURSE FEES

The registration fee for this course is Rs. 100 only and the course fee is Rs 1000 only.

CERTIFICATES

E-certificates will be issued to all the registered participants via mail.

ORGANIZING COMMITTEE PATRON

Dr. Prateek Kushwaha
Director, Rama University, Kanpur.

CHAIRMAN:

(Prof.) Dr. Hari Om Sharan

Dean & Professor
FET, Rama University, Kanpur

CONVENER

Mr. Devendra Kumar Lohia

Head
Mechanical Engineering, FET, RU, Kanpur

Coordinator

Mr. Hemant Sharma

Assistant Professor
Mechanical Engineering, FET, RU, Kanpur

ADVISORY COMMITTEE

Mr. Shivam Trivedi, RU, Kanpur
Mr. Kuldeep Kumar, RU, Kanpur
Mr. Aditya Gautam, RU, Kanpur
Mr. Anurag Kumar, RU, Kanpur
Ms. Parul Sahu, RU, Kanpur
Mr. Hemant Kumar, RU, Kanpur

CONTACT PERSONS

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(Head of the Department)

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Faculty of Engineering and
Technology
Rama University, Kanpur (U.P.)
Department of Mechanical
Engineering
Organizing
One week Online Short Term
Course

On

**“Engine Combustion,
Diagnostics, Emission
Control & Emerging Fuels
(ECDEC-2020)”**

**Course Begins: May 14,
2020**

Convener

Mr. Devendra Kumar Lohia
Coordinator
Mr. Hemant Sharma

Department of Mechanical Engineering
FET, Rama University, Mandhana,
Kanpur (U.P.)

ABOUT THE INSTITUTION

Rama University is a higher educational of Rama Group. Established in 1996, the University now has three main campuses in Delhi-NCR and Kanpur. Spread in over 150 acres of area. The institute consistently attracts the finest faculty and the best of students for its Bachelor's, Master's and Doctorate degree programs. At present, the institute offers five B.Tech, five M.Tech, and MBA programmes.

ABOUT THE DEPARTMENT

The Department of Mechanical Engineering is one of the pioneer and leading department in terms of well-educated faculty members, research activities as well as facilities. The department offers B.Tech. and M.Tech. (CAD/CAM). The department has well equipped labs with modern facilities such as equipment, measuring tools, advanced machines and latest software. The lab View for virtual instrumentation along with Temperature and Pressure sensors with DAQ card, Wire EDM, ZNC EDM, ECM, Computerized Hardness tester, Pin-on-disc Wear test apparatus, Microscope etc purchased under UGC grant are available in department. The department has well modern Virtual Class Room equipped with lecture recording and video conferencing systems.

INTRODUCTION

There is significant advancement in the automobile sector over the past few years. There is significant change in the engine technologies to improve the cost and efficiency. However due to indiscriminate extraction, lavish consumption of fossil fuels, the world is facing crisis of fossil fuel depletion and environmental degradation. This calls for the

advanced engine technologies which promise a harmonious a sustainable development along with energy conservation, management, efficiency and environmental preservation.

With stringent emission norms worldwide for Particulate matter and NO_x emissions diesel engine continue to be the first choice of the customers due to their lower fuel consumption and greater power output compared to their gasoline counterparts. The course focuses on modern non-intrusive diagnostic techniques and the emphasis is to provide the participants an upto date knowledge of the advances in engine technologies and emission compliance.

COURSE OBJECTIVE

The objective of this short term course is to enrich the knowledge of participants in the emerging field of internal combustion engines. To be update with the latest engine diagnostic techniques such as Particle Imaging velocimetry and phase Doppler interferometry which measures the spray droplet size and velocity in both two and three dimensional directions with the help of laser beam intersection. The course, will get insights into the modern gasoline direct injection engines which promises higher efficiency and lower emissions. The course will also cover in detail the particulate formation mechanism and how the application of direct oxidation catalyst (DOC) control these emissions. In the end of the course latest emerging fuels like CNG, hydrogen and methanol based engines will be discussed.

COURSE CONTENTS

- Introduction to laser diagnostic techniques.
- Particle Image Velocimetry (PIV)
- Phase Doppler Interferometry (PDI)
- Gasoline direct Injection (GDI) technology
- Injectors, sprays and droplet size distribution
- Particulate formation mechanism
- Exhaust treatment devices
- Emerging Fuels

NOTE: Applicants who have registered but not paid the course fee shall not be entertained.

LINK for the registration form:

<https://forms.gle/8LriShUUdZerUsQ76>

REGISTRATION FEES DETAILS

Registration fees (non-refundable) for the participants for this course is Rs. 100/ and the course fee is Rs 1000/ and it needs to be paid online to the below mentioned account via any of the money transfer online payment gateways.

ACCOUNT DETAILS

Account Holder's Name: Rama University, Uttar Pradesh

Account Number: 696820110000037

IFSC Code: BKID0006968

Account Type: Current Account

