

**QIP SPONSORED  
SHORT TERM COURSE  
on**

**GAS DYNAMICS AND SPACE PROPULSION**

**22 - 26 DECEMBER, 2014**



**COORDINATORS**

**Dr. A. S. KRISHNAN**

**Dr. G. SURESHKANNAN**

**Mr. M. VELLIANGIRI**

**Organized by**

**DEPARTMENT OF MECHANICAL ENGINEERING  
COIMBATORE INSTITUTE OF TECHNOLOGY**

**(A Government Aided Autonomous Institution affiliated to  
Anna University & accredited by NBA)**

**COIMBATORE - 641 014**

**TAMILNADU, INDIA**

**TEL: 0422-2574071, 72**

**Website: [www.cit.edu.in](http://www.cit.edu.in)**

**ABOUT THE COURSE**

Gas Dynamics or Compressible Fluid Flow, as it is otherwise called, is an important area in the present day situation, which deals with the study of fluid flow wherein compressibility effects are predominant. This QIP focuses on teaching the fundamentals of gas dynamics and its applications, through analytical techniques. It is centered to prepare faculty members to understand the fundamental aspects of gas dynamics viz., compressibility, governing equations and approximations, computation of flow properties, and introduction of space propulsion. Further, this course aims to give room for discussions on allied topics in mathematics, which are required for a strong foundation in compressible fluid flow.

**COURSE TOPICS**

- Concept of compressibility and its effects
- Governing equations
- Reference states
- Wave propagation and Sonic velocity
- Quasi One Dimensional Flow
  - Isentropic flow through variable area duct
  - Fanno flow
  - Rayleigh flow
  - Normal and oblique shocks
- Propulsion systems
  - Air-breathing
  - Non Air-breathing

**RESOURCE PERSONS**

Eminent persons from IITs, NITs, Anna University, Government & Government Aided Institutions, and leading Scientific Organizations.

**ELIGIBILITY AND SELECTION**

Faculty from AICTE approved Institutions are eligible to participate in the programme. The total intake is restricted to **30** and selection will be based on first come first served basis.

**IMPORTANT DATES**

- Receipt of Application: 10.12.2014
- Intimation of Selection: 12.12.2014

**REGISTRATION**

Registration fee in the form of DEMAND DRAFT for Rs. 1000/- is to be drawn in **favor of "THE PRINCIPAL, CIT, Coimbatore-641014"** payable at **Coimbatore**. The application in the attached format is to be sent to the coordinator on or before 10.12.2014.

**ALLOWANCE AND ACCOMODATION**

- No TA/DA will be provided
- Accommodation will be given in College Hostels

## THE INSTITUTE

Coimbatore Institute of Technology (CIT), started in 1956 by Sri. V. Rangasamy Naidu is reckoned for its academic and research excellence in engineering and technology. CIT is a Government Aided Autonomous Institution affiliated to Anna University, Chennai. The institute has a reputation with service of competent well qualified faculty members and dynamic management to set highest standards in engineering research and development. CIT offers undergraduate, post graduate and PhD programs with curriculum of global standards, promoting the students to compete internationally. All the courses are accredited by NBA. The institute has celebrated its Golden Jubilee in the year 2006 and has collaborations with leading frontier universities and industries in India and abroad for promotion of innovative engineering ideas. CIT has a laurel foliage on the head as an emblem of victory. Recently, CIT was awarded with the "Bizz-2012" the world business leader award and "ABP News National B-School awards" 2014 for outstanding Engineering Institution in South India.

## THE DEPARTMENT OF MECHANICAL ENGINEERING

The Department of Mechanical Engineering is one of the earliest departments in CIT, started in the year 1956. It offers programs right from under graduate to doctoral level. It was started in the year 1956 with Bachelor of Engineering, since then many quality engineers graduated from here, have served the society and the nation. It has moved further by adding Post graduate degree programmes in engineering in the field of Heat Power Engineering in 1965 and Advanced Manufacturing Technology in the year 2005. Doctorate Programme was started in the year 1972, and as on date it has awarded more than 70 Ph.Ds. Thirteen out of thirty eight faculty members are doctoral degree holders from premier institutes including Indian Institute of Technology and Loughborough University, with the rest of them in the pursuit. There are 22 laboratories accounting for more than Rs. 6 Crores for research and academic work with a work force of 33 technical staff. The infrastructure and people together have been instrumental in producing more than 3000 quality engineers for the past 58 years through quality education.

## ORGANIZING COMMITTEE

### CHIEF PATRON

**Dr. S. R. K. PRASAD**

Correspondent, CIT, Coimbatore

### PRESIDENT

**Dr. R. PRABHAKAR**

Secretary, CIT, Coimbatore

### PATRON

**Dr. V. SELLADURAI**

Principal, CIT, Coimbatore

### Coordinators

Dr. A. S. KRISHNAN, Associate Professor

Dr. G. SURESHKANNAN, Assistant Professor

Mr. M. VELLIANGIRI, Assistant Professor

Department of Mechanical Engineering, CIT

### ADDRESS FOR CORRESPONDANCE

**Mr. M. VELLIANGIRI**

Assistant Professor

Department of Mechanical Engineering

Coimbatore Institute of Technology

Coimbatore- 641014.

E-mail: velliangiri69@gmail.com

Mobile: 9952517325

## QIP SPONSORED ONE WEEK

### SHORT TERM COURSE

on

### **GAS DYNAMICS AND SPACE PROPULSION**

22-26 December, 2014

### REGISTRATION FORM

Name :  
Designation :  
Department :  
Address :

Phone :  
Email :  
Accommodation required : YES/NO

### PAYMENT DETAILS

Name of the bank :  
DD No. :  
Date :

### DECLARATION

I \_\_\_\_\_ agree to abide by the rules and regulations governing the training programme. If selected, I shall attend the programme for the entire duration. I undertake to inform the co-coordinator well in advance in case I am unable to attend the course. The information provided herewith is true to the best of my knowledge.

Signature of the Applicant

### SPONSORSHIP

This is to certify that \_\_\_\_\_ is an employee of our Institution and is hereby sponsored for attending one week **QIP sponsored Short Term Course on "GAS DYNAMICS AND SPACE PROPULSION"** at Coimbatore Institute of Technology, Coimbatore during 22-26 December, 2014. He / She will be permitted to attend the course for the entire duration if selected.

Place:

Date:

Signature with seal  
Head of the Institution