

REGISTRATION FORM

A three day short term course on
**FUNDAMENTALS OF
COMPUTATIONAL FLUID DYNAMICS:
A PRACTICAL APPROACH**

(CFD-2014)

22-24 December 2014

Department of Mechanical Engineering
National Institute of Technology Rourkela

Name:

Designation:

Department:

Organization:

Highest qualification:

Specialization:

Mailing Address:

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Mobile:

Email:

Accommodation Required (Yes/No):

Payment Details: Amount: Rs/-

Demand Draft No.: Date:/...../2014

Bank:

Demand Draft should be drawn in favour of "Continuing Education, NIT Rourkela" payable at Rourkela.

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Signature of Applicant Date:/...../2014

Note:

Incomplete registration form/without demand draft shall be rejected.

Registration fee is non-refundable.

No TA/DA will be provided for attending the course.

Accommodation cost to be borne by participants.

ORGANIZING COMMITTEE

Principal Co-ordinator: Dr. Manoj Kumar Moharana

Co-ordinators: Dr. Amitesh Kumar

Dr. Suman Ghosh

IMPORTANT DATES

Last date for receipt of application: 01 Dec 2014

Notification about selection: Within 01 week of receipt of complete application.

Only limited number of participants will be selected on first-cum-first serve basis. Selected candidates will be informed by email immediately after receipt of the application form. Complete information for communication must be necessarily provided in the registration form.

ACCOMMODATION

Accommodation will be arranged for outside participants at NIT guest house on prior request on standard tariff (twin sharing Rs 300/-, single Rs 450/- per night).

CONTACT

For registration form or any clarification please contact

Dr. Manoj Kumar Moharana

Tel: +91-661-246-2533 (O), Mob: +91-8895593400

E-mail: mkmoharana@gmail.com

moharanam@nitrkl.ac.in

<https://www.facebook.com/DrManojMoharana>

Dr. Amitesh Kumar

Tel: +91-661-246-2532 (O), kumaramitesh@nitrkl.ac.in

Dr. Suman Ghosh

Tel: +91-661-246-2531 (O), ghoshs@nitrkl.ac.in

For further information or updates related to this short term course please visit

<https://www.facebook.com/CFDfundamentals>

Send your filled in application and demand draft to

Dr. Manoj Kumar Moharana

Assistant Professor

Department of Mechanical Engineering

National Institute of Technology Rourkela

Rourkela 769008 (Odisha)

A
THREE DAY
SHORT TERM COURSE
ON

FUNDAMENTALS OF COMPUTATIONAL FLUID DYNAMICS: A PRACTICAL APPROACH

CFD-2014
22-24 DEC 2014



Principal Co-ordinator
Dr. Manoj Kumar Moharana

Co-ordinators
Dr. Amitesh Kumar
Dr. Suman Ghosh

Department of Mechanical Engineering
National Institute of Technology Rourkela
Rourkela 769008 (Odisha)

ABOUT NIT ROURKELA:

National Institute of Technology Rourkela is an institute of national importance created under the act of parliament. NIT Rourkela provides quality education in a diverse and multi-cultural environment. The mission of the institute is to become an internationally acclaimed institution of higher learning that will serve as a source of knowledge and expertise for the society and be a preferred destination for undergraduate and graduate studies. The vision of the institute is to advance and spread knowledge in the area of science and technology leading to creation of wealth and welfare of humanity.

NIT Rourkela is a residential campus offering accommodation to the faculty, staff and students. The campus has all the amenities for developing personal, social and academic skills of the student community.

The Department of Mechanical Engineering is the largest among all of its departments at NIT Rourkela with about 180 students doing their master's degree and another 150 students are pursuing their doctoral program in different fields of cutting edge technology.

The institute is located about 8 KM from Rourkela railway station and 2 KM from Sector-2 bus-stand. It is well connected to major cities of India by direct rail link. The nearest airports are Bhubaneswar, Ranchi, Raipur and Kolkata.

INTRODUCTION TO THE COURSE:

The development of high speed digital computers has had a great impact on the way principles from sciences of fluid mechanics and heat transfer are applied to problems of design in modern engineering practice. Therefore, there is a growing demand to find graduating engineers with the basic skill of computa-

COURSE CONTENTS:

- Introduction to CFD
- Mathematical modelling: Governing equations of fluid flow and heat transfer
- Introduction to discretization methods
- Solution techniques for system of algebraic equations
- Grid generation techniques
- Finite difference and finite volume methods for fluid flow and heat transfer
- Solution techniques for Navier-Stokes equation
- CFD solution procedure
- Introduction to commercial CFD code
- Fundamentals of CFD techniques
- Essentials of CFD solution analysis
- Practical guidelines for CFD simulation and analysis
- Some applications of CFD with examples

The course content includes theory as well as live practical session in computer laboratory.

WHO SHOULD ATTEND?

This program is intended for faculty members of engineering colleges who is interested to expose him/herself to the field of computational fluid dynamics (CFD) as a beginner for the purpose of teaching and/or research. Students (B. Tech/ M.Tech/Ph.D) at any academic institute/research laboratory will also be benefitted by attending this course. This program will also be helpful to students planning to pursue M.Tech/Ph.D in near future in the field of fluid flow and heat transfer. Engineers from industries will also be benefitted by attending this course.

Target branch of Engineering:

Mechanical, Chemical, and Civil Engineering.

Prerequisite for attending this course:

Fundamentals of fluid flow and heat transfer, basic computer operation, basics of numerical methods. Basic computer programming knowledge will be an added advantage though not mandatory for this course.

COURSE FEE:

- a. Student: INR 2000/-
- b. Faculty: INR 3000/-
- c. Delegates from industry: INR 4000/-

The course fee includes course material and refreshment during the program days. Accommodation at NIT guest house can be provided at a nominal cost (to be paid by the participant) as per institute rule on first-cum-first service.

The successful participants will be given participation certificate

PAYMENT:

Registration fee has to be paid through Demand Draft in favour of "Continuing Education, NIT Rourkela" payable at **Rourkela**. Demand draft along with completely filled in registration form should reach the following address on or before 01 Dec 2014.

Dr. Manoj Kumar Moharana
Assistant Professor
Department of Mechanical Engineering
National Institute of Technology Rourkela
Rourkela-769008 (Odisha)

