Visit https://tinyurl.com/fcfd-2022

NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA

FIVE-DAY SHORT TERM COURSE
27 JUNE-01 JULY 2022

Registration fee for foreign national participants
US$ 50/-

FUNDAMENTALS OF
COMPUTATIONAL FLUID DYNAMICS
A PRACTICAL APPROACH

Principal Coordinator: Prof. Manoj Kumar Moharana
Coordinators: Prof. B. Kiran Naik
Prof. Kishore Singh Patel

Registration fee for Indian participants
₹ 750/-
(+18% GST)

Course content include

- Introduction to computational fluid dynamics (CFD)
- Introduction to FDM, FVM, FEM, LBM, MDS
- Introduction to ANSYS Fluent, Comsol
- Introduction to OpenFOAM
- Solving system of linear equations
- Data processing in CFD
- Application of CFD with examples

Duration

27th June to 01st July, 2022

Hybrid mode:Online & Off-line

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

For details about this course please visit https://tinyurl.com/fcfd-2022

Contact Us: +91 8895593400 (WhatsApp), +91 7008111684, mkmoharana@gmail.com

About NIT Rourkela

Where everyone strives to attain their potential

NIT Rourkela is one of the premier national level institutions for technical education in India and is funded by the Government of India. It is an institute of national importance created under the act of the parliament of India. It provides quality education in a diverse and multi-cultural environment. The Institute aspires to be among the internationally highly acclaimed institution of higher learning that will serve as a source of knowledge and expertise for society and be a globally preferred destination for undergraduate and graduate studies.

NIRF Ranking 2021

- 20 (Engineering)
- 31 (Research)
- 41 (Overall)

Other ranking

- 201-250: The Asia University 2021
- 250: QS Asian University 2021
- 271-280: Qs World University ASIA Rankings-2022
- 201-250: The Emerging Economies 2021

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FIVE-DAY SHORT TERM COURSE
27 JUNE-01 JULY 2022

FDM
FVM, FEM
LBM, MDS
Comsol
Ansys Fluent
OpenFOAM

Course content

This course will provide an introduction to different discretization methods in CFD such as finite difference method (FDM), finite volume method (FVM), finite element of method (FEM), lattice boltzmann method (LBM), and molecular dynamic simulation (MDS). FDM and FVM will be covered in detail with focus on solving practical 1D, 2D and 3D CFD problems along with learning CFD data processing such as line plot, 2D and 3D contour diagram.

This course will also cover an introduction to commercial CFD software Ansys Fluent, and Comsol in addition to free CFD code OpenFOAM. Emphasis will be laid on learning by doing self using Ansys Fluent, thus providing a practical approach to learning. Other topics include

- Solution techniques for system of algebraic equations
- Grid generation
- CFD solution procedure
- Essentials of CFD solution analysis
- Practical guidelines for CFD simulation and analysis
- Some applications of CFD with examples

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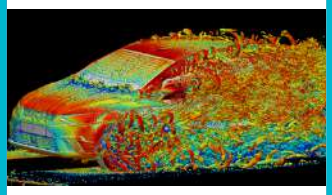

ENGINEERING SIMULATION IS AN ART OF PREDICTION

CFD knowledge can give you a better job opportunity

Target audience

CFD can help in quality UG/PG/Ph.D thesis

Individuals aspiring to be an expert in CFD

This course is the first course in Computational Fluid Dynamics (CFD) providing introduction to this topic with a practical approach. Individuals without any exposure to this topic will find this course very useful

Who can attend?

- Undergraduate/post graduate students
- Research scholars
- Teachers
- Practising engineers

Relevant branches

This course will be useful to individuals who are dealing with engineering problems involving fluid flow and/or heat transfer e.g. Mechanical/ Civil/ Chemical/ Metallurgical/ Mining/Ceramic Engineering etc.

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Smart City ROURKELA Odisha

NURTURING NEIGHBOURHOODS CHALLENGE

ONLINE
HYBRID MODE
OFF-LINE

Course Details

HYBRID MODE: ONLINE & OFF-LINE

The course will be organized in a hybrid mode of both online and off-line. The course consists of approx 40 hrs to be conducted during 09.00 AM to 06.00 PM (Indian Standard Time)

Dates

27 June to 01 July 2022

Venue

PPA Auditorium, NIT Rourkela, Odisha and live on Microsoft Team

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FIVE-DAY SHORT TERM COURSE
27 JUNE - 01 JULY 2022

COURSE FEE

Indian Nationals

Attending online:

- Rs 885/- (Rs 750/- Plus 18% GST)*
- Rs 1180/- (Rs 1000/- Plus 18% GST)**

Attending in -person:

- Rs 1475/- (Rs 1250/- Plus 18% GST)

Other than Indian nationals

- US$ 50/- (online during 9.00 AM-06.00 PM (Indian Standard time)*

MODE OF PAYMENT

Online bank transfer to the following bank account

Bank account number: 10138951784
Account name (as per bank record): CONTINUING EDUCATION NIT ROURKELA
IFS Code: SBIN0002109
Name of Bank: State Bank of India
Bank Branch Address: NIT Campus, Rourkela, Odisha 769008 (India)
MICR No: 769002007, SWIFT Code: SBININBB137

*Digital participation certificate (PDF or TIFF) will be provided via email
**Printed participation certificate will be provided via speed-post

REGISTER ON OR BEFORE
20 JUNE 2022

How to register in this program?

Pay course fee online and
Fill online registration form at http://tinyurl.com/cfd-2022
or
Submit registration form by email along with fee payment details

pay registration fee & submit registration form

Steps for registration

- Pay course fee through online bank transfer
- Fill online registration form at http://tinyurl.com/cfd-2022
- Do not forget to upload payment slip
- Alternately fill the registration form given in this brochure
- Mail the registration form and payment details to mkmoharana@gmail.com
- Soon you will receive acknowledgement email and will be added to course WhatsApp group for faster communication

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A FIVE-DAY SHORT TERM COURSE
ON

FUNDAMENTALS OF COMPUTATIONAL FLUID DYNAMICS: A PRACTICAL APPROACH

27 June-01 July 2022

REGISTRATION FORM
(This form can also be filled online at http://tinyurl.com/cfd-2022)

Name: …….

Designation: ……...

Department: ……...

Organization: …….

Highest qualification: …….

Specialization: ……

Mailing Address: ……

……

……Pin: ……

Mobile: …….. Whatsapp No:……

Email: ……

Mode of attending the course: Online / off-line (in person at NIT Rourkela)

Accommodation Required: YES / NO (for offline mode)

Course fee paid: Rs 885 / Rs 1180 / Rs 1475 (including 18% GST) / US$ 50

Bank Transfer Details:

Date of bank transfer: ……../……./2022

Name of Bank: …….....

Transaction reference No: …….....

Note: Copy of bank transfer slip to be attached with this registration form

Signature of Applicant Date: ……/……/2022

Note: (i) Incomplete registration form/ without bank transfer slip shall be rejected (ii) Registration fee is non-refundable (iii) and no TA/DA will be provided for attending the course

Please email this filled in registration form along with copy of bank transfer slip to

mkmoharana@gmail.com