Five-day skill enhancement course

LEARNING COMPUTATIONAL FLUID DYNAMICS WITH ANSYS FLUENT

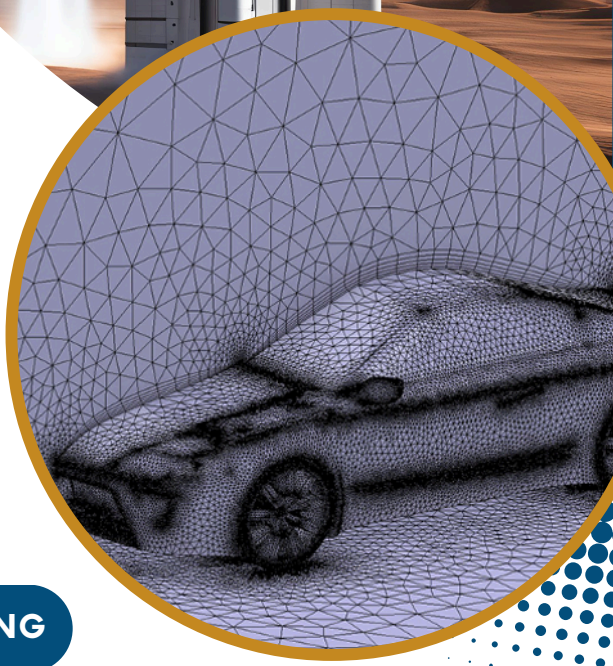
Learn from industry trainers & earn the certificate from NIT Rourkela, India

23-27 September 2024

(Hybrid mode of both online & offline)

COURSE HIGHLIGHTS

1. LEARN FROM INDUSTRY TRAINERS
2. LEARN ANSYS SPACECLAIM, UDF & MACROS
3. LEARN OPTIMIZATION USING ANSYS OPTISLANG



COURSE CONTENT

- Introduction to Computational Fluid Dynamics (CFD)
- Geometric modelling using Ansys Spaceclaim
- Different meshing techniques in Ansys Fluent
- Turbulence modeling for internal flows
- Battery thermal management using Ansys Fluent
- Introduction to multiphase flow (VOF model)
- Evaporation and condensation
- Introduction to user defined functions (UDFs) and macros
- Application of macros and UDFs
- Introduction to parametric and optimization analysis using Ansys Optislang

Course fee
Rs 1003/- (including 18%GST)

COURSE COORDINATORS

Prof. Manoj Kumar Moharana
Prof. Sumit Kumar
Prof. Ashwin Lakshman Nandagiri
Prof. Jnana Ranjan Senapati

For course details visit: https://tinyurl.com/cfd2024

For course registration visit: https://tinyurl.com/cfdstc2024

For any query about the course/ course registration, please contact

+91 7008111684 +91 7008111684 moharanam@nitrkl.ac.in

Thermal Systems Laboratory, Department of Mechanical Engineering, NIT Rourkela

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

ONE WEEK SHORT TERM COURSE
ON
LEARNING COMPUTATIONAL FLUID DYNAMICS WITH ANSYS FLUENT
(CFD-2024)
23-27 September 2024

REGISTRATION FORM

This form is to be filled online at https://tinyurl.com/cfdstc2024

For any difficulty, please contact us at

+91 7008111684 (call & WhatsApp) or moharanam@nitrkl.ac.in

Note:

(i) Incomplete registration form/ without screenshot of course fee payment slip shall be rejected
(ii) Registration fee is non-refundable
(iii) (iii) No TA/DA will be provided for attending the course

Please also email the screenshot of the course fee payment slip to cfd.nitrkl@gmail.com after submitting the online registration form positively.

ONLINE PAYMENT OF COURSE FEE

Course fee can by paid via UPI using the following scanner

The course fee can also be paid via bank transfer to the account details given below

Account Name	Continuing Education, NIT Rourkela
Account Number	101 3895 1784
Account Type	Savings
Bank Name	State Bank of India (SBI)
Branch Name	NIT Rourkela Campus
Branch Code	002109
IFS Code	SBIN0002109
MICR Code	769002007
SWIFT Code	SBININBB137
PFMS Unique ID	NIT14
Pan No.	AAAJN0665L
GST No.	21AAAJN0665L1Z8
IE Code	AAAJN0665L
Bank AD Code	0009678 / 1800007

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REGISTRATION FORM

A five-day short term course on

LEARNING COMPUTATIONAL FLUID DYNAMICS WITH ANSYS FLUENT

(CFD-2024)

23-27 September 2024, NIT Rourkela

Hybrid mode (Both online and offline)

The participants are required to fill out the online registration form using the below-given weblink.

https://tinyurl.com/cfdstc2024

Fee can be paid using the UPI scanner/bank transfer to the bank account details given below.

UPI ID: 01389517841@sbi

Merchant Name:

Continuing Education NIT

Account Name	Continuing Education, NIT Rourkela
Account Number	101 3895 1784
Account Type	Savings
Bank Name	State Bank of India (SBI)
Branch Name	NIT Rourkela Campus
Branch Code	002109
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PFMS Unique ID	NIT14
Pan No.	AAAJN0665L
GST No.	21AAAJN0665L1Z8
IE Code	AAAJN0665L
Bank AD Code	0009678 / 1800007

Note:

- Incomplete registration form/ without bank transfer slip shall be rejected.
- Registration fee is non-refundable.
- No TA/DA will be provided for attending the course.

ORGANIZING COMMITTEE

Principal Co-ordinator: Dr. Manoj Kumar Moharana

Co-ordinators: Dr. Sumit Kumar
Dr. Ashwin Lakshman Nandagiri
Dr. Jnana Ranjan Senapati

IMPORTANT DATES

Last date for receipt of application: 20 September 2024

Only a 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 registration form and the course fee payment. Therefore, complete information for communication must be necessarily provided in the registration form.

ACCOMMODATION

Accommodation will be arranged for outside participants (who opted for offline mode) at the NIT guest house on prior request on standard tariff (to be paid by the participant) subject to room availability.

CONTACT

For the registration form or any other clarification, please contact

Dr. Manoj Kumar Moharana (Course coordinator)
Associate Professor
Department of Mechanical Engineering
National Institute of Technology Rourkela
Rourkela 769008 (Odisha)
Tel: +91-661-246-2533 (O)
Mob: +91-8895593400 (Whatsapp), +91-7008111684
E-mail: moharanam@nitrkl.ac.in
mkmoharana@gmail.com

A

FIVE DAY

SHORT TERM COURSE

ON

LEARNING COMPUTATIONAL FLUID DYNAMICS WITH ANSYS FLUENT

(CFD-2024)

23-27 September 2024

Principal Coordinator
Dr. Manoj Kumar Moharana

Coordinators
Dr. Sumit Kumar
Dr. Ashwin Lakshman Nandagiri
Dr. Jnana Ranjan Senapati

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

ABOUT NIT ROURKELA

NIT Rourkela is an institute of national importance. It provides quality education in a diverse and multi-cultural environment. The institute's mission 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.

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.

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 computational methods for heat transfer, mass transfer and fluid dynamics.

The objective of this course is to provide the participants an introduction to computational fluid dynamics (CFD) with the help of ANSYS Fluent commercial software which would help them to use this tool in reaearch activity. The specific objectives achieved through this short-term course are to provide a practical approach to solving fluid flow and/or heat transfer problems using ANSYS Fluent.

COURSE CONTENT

- Introduction to Computational Fluid Dynamics (CFD)
- Geometric modelling using Spaceclaim
- Different meshing techniques in Ansys Fluent
- Turbulence modelling for internal flows
- Battery thermal management
- Introduction to multiphase flow (VOF model)
- Evaporation and condensation
- Introduction to user defined functions and macros
- Application of macros and UDFs
- Introduction to parametric and optimization analysis using Ansys Optislang

WHO SHOULD ATTEND?

This program is intended for faculty members of engineering institutes who is/are interested in exposing him/herself to the field of 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 benefit by attending this course. This program will also be helpful to students planning to pursue an M.Tech/Ph. D. in fluid flow and heat transfer in the near future. Engineers from industries will also be benefitted by attending this course. The successful participants will receive a participation certificate.

Prerequisite for attending this course:

Fundamentals of fluid flow and heat transfer and interest to learn something new

COURSE FEE

National participants

Attending in online mode:

Rs 850 + GST 18% = Rs 1003/- *

Rs 1000 + GST 18% = Rs 1180/- **

Attending in offline mode:

Rs 1250 + GST 18% = Rs 1475/-***

*Only a digital copy of the certificate will be emailed.

** In addition to the digital copy of the certificate, a hard copy of the certificate will be provided via speed post.

*** Hardcopy and softcopy participation certificates will be provided.

PAYMENT

Registration fee must be paid (on or before 20 September 2024) through online bank transfer to the following bank account, and proof of the same must be provided to the course coordinator.

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