

# CFD CORPORATE TRAINING



## IMAGINE

The course being conducted at your company..... Using your own test cases  
Customized to your individual needs  
It's not only possible..... It's Cost effective



Centre for Computational **Technologies**

# ABOUT CCTECH



Established in 2006 by alumni of IIT Bombay. Our motive is to establish a knowledge centric organization in the field of computational engineering.

Over the last few years, we have created a brand name in CFD and CAD Training. With quality of training and support, our training has become one of the best choice for industry professionals

CCTech team comprises of industry professionals from leading CAE companies like ANSYS FLUENT, Geometric Software, Cognizant.



*Computational Fluid Dynamics or simply CFD is concerned with obtaining numerical solution to the fluid flow problems by using computers. Commercial CFD products are matured enough to solve almost every problem related to fluid flow, heat transfer, chemical reactions, multiphase flows, combustion and many more. The only requirement now is the domain knowledge and software expertise.*

*To tackle all your requirements in CFD training, CCTech offers CFD courses at introductory, intermediate and advanced level.*

## ○ INTRODUCTORY COURSES

The introductory course is designed for an engineer having very little or no CFD exposure. This course starts with the fundamentals of Fluid Mechanics, Heat Transfer and CFD. Once the fundamental training is imparted, the software training will be given and the participant can start working on CFD projects right away.

## ○ DOMAIN SPECIFIC COURSES

Domain specific training is designed for an engineer who is working in CFD and wants to develop his expertise in a specific domain. Some of the courses offered in this category are multiphase modeling, combustion modeling, turbomachinery modeling and many more.

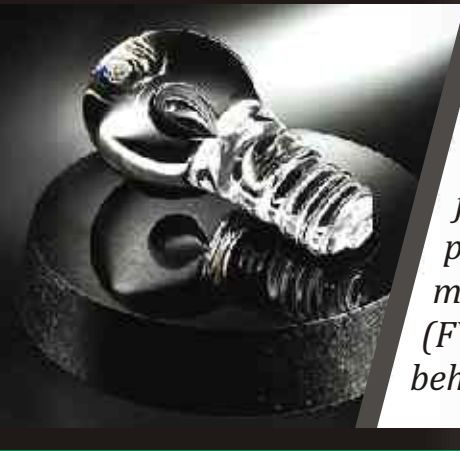
## ○ SOFTWARE SPECIFIC COURSES

Many times the engineer has very good domain knowledge but lack of software expertise restricts the engineer to use CFD tools during design activities. Our software specific courses are more focused towards giving training on software functionalities and execution. The software training course are divided in three categories viz. introductory, intermediate and advanced.

## ○ CUSTOMIZED COURSE

If your training requirements are something different than these regular courses, you can customize your own course. To make any course suitable for you, along with the standard software tutorials, CCTech prepares the test cases specific to your domain. During the training you can learn the fundamentals as well as software along with solving problems of your own interest.

# INTRODUCTORY COURSES ON CFD



*CCTech introductory courses on CFD are focused towards introducing CFD to the beginners. These courses are more suitable for those who have very little or no knowledge about CFD. The course will start with fundamental concepts in fluid mechanics and heat transfer. Once the participant is comfortable with the governing equations, numerical methods like Finite Difference Method (FDM) and Finite Volume Method (FVM) will be introduced. This will give good idea about what happens behind the screen during CFD software execution.*

## ○ COURSE FOR DESIGN ENGINEERS

CODE	NAME	DAYS
CFD-I001	Fluid Mechanics and CFD Fundamentals	Three
CFD-I002	Introduction to CFD with GAMBIT and ANSYS FLUENT	Six
CFD-I003	Introduction to CFD with ICEM-CFD and ANSYS FLUENT	Six
CFD-I004	Introduction to CFD with ICEM-CFD and ANSYS CFX	Six
CFD-I005	Geometric Modeling and CAD Repair	Two
CFD-I005	Fundamentals of Grid Generation Methods	Two

## ○ COURSE FOR MANAGERS

CODE	NAME	DAYS
CFD-M001	CFD For Managers	Three

For more information on any course drop a mail to [training-cfd@cctech.co.in](mailto:training-cfd@cctech.co.in)

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## DOMAIN & INDUSTRY SPECIFIC COURSES



*CCTech domain specific courses on CFD are focused towards imparting domain knowledge. In this category, advanced and specialist training with in-depth coverage of specific modeling area will be given. These are focused courses covering specific domain or industry needs.*

*In this category, advanced topics like turbulence, multiphase, combustion etc. will be introduced to the CFD engineers. These courses are more suitable for engineers who want to develop their expertise in specific domains.*

### ○ DOMAIN SPECIFIC COURSES

CODE	NAME	DAYS
CFD-D001	Turbulence Modeling	Three
CFD-D002	Multiphase Modeling	Three
CFD-D003	Combustion Modeling	Two
CFD-D004	Conjugate Heat Transfer Modeling	Two
CFD-D005	Dynamic Mesh Modeling	Two

### ○ INDUSTRY SPECIFIC COURSES

CODE	NAME	DAYS
CFD-In001	Turbo Machinery Simulations	Three
CFD-In002	Aerospace Simulations	Three
CFD-In003	Automobile Simulations	Three
CFD-In004	HVAC Simulations	Three
CFD-In005	Electronic Cooling Simulations	Three
CFD-In006	Automobile HVAC Simulations	Three
CFD-In007	Building HVAC Air Contamination Simulations	Three

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## SOFTWARE SPECIFIC COURSES



*CCTech CFD software specific courses are focused towards imparting software knowledge.*

***Introductory** courses are designed for participants with very little or no knowledge of the software. These courses will introduce the software to the engineers and will give an overall idea about the working principles/concepts of the software.*

***Advanced** courses are designed for participants with prior knowledge of the software. These courses will give an in-depth training on specific functionality of the software.*

**CODE**

**NAME**

**DAYS**

### ○ ICEM-CFD COURSES

CFD-ICEM001	Complete Training on ICEM-CFD	Four
CFD-ICEM002	CAD Repair in ICEM-CFD	Two
CFD-ICEM003	ICEM Blocking and Blocking Techniques	Two
CFD-ICEM004	Tetra/Prism Meshing in ICEM-CFD	Two
CFD-ICEM005	Mesh Editing Techniques in ICEM-CFD	One
CFD-ICEM006	Hybrid Meshing in ICEM-CFD	One

### ○ GAMBIT COURSES

CFD-GAM001	Complete Training on GAMBIT	Two
CFD-GAM002	Virtual Geometry and CAD Repair in GAMBIT	Two
CFD-GAM003	Mesh Clustering : Boundary Layer & Sizing Functions	Two
CFD-GAM004	Journal File and Process Automation	Two

### ○ TGRID COURSES

CFD-TG001	Complete Training on Tgrid	Two
CFD-TG002	Advanced controls in Prism and Hexcore Meshing	Two
CFD-TG003	Using Wrapper in Tgrid	Two

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## SOFTWARE SPECIFIC COURSES



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CODE	NAME	DAYS
<b>○ ANSYS FLUENT</b>		
CFD-FLU001	Complete Training on ANSYS FLUENT	Four
CFD-FLU002	Turbulence Modeling in ANSYS FLUENT	Two
CFD-FLU003	Multiphase Modeling in ANSYS FLUENT	Three
CFD-FLU004	Combustion Modeling in ANSYS FLUENT	Two
CFD-FLU005	CHT Modeling in ANSYS FLUENT	Two
CFD-FLU006	Acoustic Modeling in ANSYS FLUENT	Two
CFD-FLU007	Rotating Machinery Modeling in ANSYS FLUENT	Two
CFD-FLU008	Dynamic Mesh Modeling in ANSYS FLUENT	Two
CFD-FLU009	Writing UDF for ANSYS FLUENT	Two
<b>○ ANSYS CFX</b>		
CFD-CFX001	Complete Training on ANSYS CFX	Four
CFD-CFX002	Turbulence Modeling in ANSYS CFX	Two
CFD-CFX003	Multiphase Modeling in ANSYS CFX	Two
CFD-CFX004	Combustion Modeling in ANSYS CFX	Two
CFD-CFX005	Turbo Machinery Modeling in ANSYS CFX	Three

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## CUSTOMIZED COURSE



*Every project needs the specific domain knowledge, expertise in specific CFD tools and techniques. If your training requirements are not satisfied by our standard training suit, we can customize the course very specific to your requirements. This customized training will focus on very specific needs of your company and will be designed by considering the domain your organization is working on. This can be also customized for your software training needs*

When you have a need to tailor the course information to:

- Match the unique domain knowledge and software skill need
- Get the teams up-to-speed in minimal time
- Customize the practical sessions specific to your project needs

You can customize the training in two ways

- Combination of selective courses from our standard training suit
- Designing the course from scratch for your own requirements

CCTech offers standard courses on different CFD topics. You can select few of the courses and create a new course as per your requirements. This new course designed can have any combination. For example, if your organization is working in turbomachinery domain, you can select ICEM-CFD blocking and CFX-Turbomachinery module. Any course that you have designed can have your own test cases during the practical sessions.

If your requirements can not be satisfied with the standard courses we offer, you can send the specifics about your requirements. The course can be designed by considering your needs with the practical sessions including your own test cases

# CONTACT US



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