# DCT Data Center Cooling

**Duration: 1 Day**

**Course Code: DCT06**

## Overview

The DCT Data Center Cooling course, covers the mechanical cooling systems that support data centers and prevent them from overheating. As the data center power and density has increased every year, the need to remove the heat generated has become a more important factor for the design and operation of the facility.

## Target Audience:

- Architects
- Engineering design professionals
- Facilities operations
- Contractors
- Technicians
- Mechanical engineers

## Objectives:

- Introduction to data center cooling and mechanical systems
- Redundancy concepts for mechanical and cooling systems
- Understanding of mechanical & plumbing systems and controls
- How differing priorities, locations, and more change the cooling design

## Pre-requisite

- Basic understanding of data centers, layouts, and common terms.

## Course Outline

- Concepts, definitions, operating conditions - the typical mechanical terms, cooling operations, and redundancy levels
- Air cooling solutions - air cooling and operating parameters for typical and atypical data centers
- Computational Fluid Dynamics - what it is, how these tools are used, and what to look for when analyzing a data center flow model
- Water cooling solutions - water cooling components, circulation, and typical arrangements for modularity and redundancy
- Water system operations - operating the data center cooling systems efficiently and effectively, including water cooled servers and immersion cooling