Data Center Cooling Professional

3 DAYS 21

SPECIALIST LEVEL COURSE

This course explains the thermodynamics of cooling in an easy to understand way and focuses on the application of concepts that students can use in their own data center today. While this course does not replace the need for a knowledgeable HVAC Engineer, it does provide the learning necessary to allow students to successfully operate the cooling system within a data center.

Learning Outcomes

Upon successful completion, students will be able to:

- Get an introduction to advanced cooling, impacts on cooling and design operations and new operating parameters and efficiency metrics
- Explain the implications of equipment placement, installation and decommissioning on cooling and energy efficiency
- Explain airflow management systems
- Discuss free cooling and how it may be applied in various data center scenarios
- Understand the factors related to optimization in a new data center vs a legacy data center
- Explain how to deal with new and disruptive technologies such as unified computing platforms, blade servers and high-density networking devices
- Apply Computational Fluid Dynamics (CFD) modelling to help validate a data center's design and the placement of equipment within it

5 reasons to choose our courses:

1 Courses aligned to international standards

2 Expert instructors with over 10 years experience

3 Interactive learning experience

4 Blended learning solutions (classroom and online)

5 Specialist career progression tracks for advanced learning

Who should attend?

Any person involved in making design decisions within a new or existing facility, including:

- M&E Engineer/Consultant
- HVAC Engineer/Consultant
- Data Center Manager
- IT Manager
- Network Manager
- Facility Manager
- Project Manager
- Building Contractor
- OEM Sales Engineer
- Architect

Professional Development Hrs	21
Exam	1 hour, open book
Pre-requisites	Practical hands-on experience of a data center environment is recommended
Suggested Progression	Data Center Power Professional + online modules

Price - $2,250 | €1,725 | £1,425

DCD GROUP

"Very good instructor. He brought plenty of real-world experience to the table and was able to provide very technical and detailed answers to our questions."

SEAN XINGWANG YIP, Business Development UAP Solutions

Course Content

Introduction to Advanced Cooling

Cooling Systems
- Computer Room Air Conditioner – CRAC
- Computer Room Air Handler – CRAH
- In-Row and contained systems
- Chillers
- Pumps, valves and piping
- Redundancy and availability
- Codes and regulations

Managing Airflow
- Increases in server power and airflow
- Airflow issues
- New IT environmental specification
- Better airflow management
- High density cooling
- Design changes and challenges

Free Cooling and How It May Be Applied in Various Data Center Scenarios

The Future – Forward Thinking
- Trends and server technology
- Strategic efficient design
- Airflow
- Outside air economization
- Other technologies

Dealing with New and Disruptive Technologies
- Thinking forward
- New metrics
- New IT cooling systems
- New standards and codes
- Future developments
- Summary

CFD Fundamentals
- Introduction to CFD
- The business case
- Case studies
- Calibration and validation
- Future trends