# Certified District Cooling Professional (CDCP) Workshop

Days: **2 Days** | Course Fee: **USD 1,000**


## Course Description

The Certified District Cooling Professional (CDCP) Training Program is a comprehensive, industry-leading certification designed to equip professionals with the expertise to design, operate, optimize, and assess district cooling systems. Covering every stage of the district cooling lifecycle—from load analysis and equipment selection to distribution network design, thermal energy storage (TES), and energy assessment—this program integrates technical rigor with practical application. Aligned with global best practices, CDCP empowers participants to build efficient, scalable, and sustainable cooling infrastructure for communities, campuses, and cities.

## What You Will Learn

By completing this program, you will learn:

### 1 Plant Load Analysis

- Calculate peak and annual cooling loads, interpret diversity factors, and avoid oversizing/undersizing risks.
- Use simulations and site measurements to model hourly load profiles.

### 2 Equipment Expertise

- Design and select water chillers (refrigeration cycles, refrigerants, components like compressors/evaporators).
- Optimize heat rejection (cooling towers, air-cooled condensers) and pumping systems (variable speed drives, performance curves).
- Leverage TES to shift peak loads, reduce capacity needs, and improve economic performance (ice tanks, slurry storage).

### 3 Distribution Network Design

- Engineer chilled water (constant/variable-flow systems) and condenser water networks (piping, economizers, heat recovery).

### 4 Controls & Instrumentation

- Specify sensors (temperature, flow, pressure), control valves, and DDC controllers to integrate chiller plants, VFDs, and power metering.
- Monitor performance and troubleshoot via real-time data.

### 5 Design Optimization

- Select chilled water flow arrangements (primary-only vs. primary-secondary), optimize temperatures, and size chillers/piping for energy savings.
- Fine-tune control sequences (staging chillers, reset temperatures) to maximize efficiency.

### 6 Procurement & Commissioning

- Navigate chiller procurement (life-cycle costing, vendor bids) and oversee startup/commissioning (levels, roles, and phase-specific responsibilities).

### 7 Regulations & Compliance

- Adhere to district cooling design standards, water management rules, and key performance indicators (KPIs) for reliability and energy efficiency.

### 8 Energy Assessment

- Use tools like Arcadia™ to evaluate electrical energy consumption, seasonal efficiency (SEER), and identify improvement opportunities.

## Who Should Attend?

This program is tailored for professionals driving district cooling excellence, including:

- **Mechanical Engineers:** Specializing in central plant design, HVAC systems, or sustainable infrastructure.
- **District Cooling Plant Operators:** Managing chiller plants, distribution networks, and TES systems.
- **Sustainability Consultants:** Advising on energy efficiency, renewable integration, and green building certifications.
- **Construction & Project Managers:** Overseeing district cooling project delivery, procurement, and commissioning.
- **Facility Managers:** Responsible for large-scale cooling in commercial, residential, or institutional developments.
- **Regulatory Professionals:** Ensuring compliance with district cooling standards and environmental regulations.
- **Energy Analysts:** Evaluating system performance, conducting audits, and recommending optimizations.

Whether you're entering the district cooling field or advancing your career, CDCP provides the credentials and skills to lead innovative, efficient cooling solutions for modern communities.

## Course Modules

Course Content (Teaching Modules)

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| Module 1: | Introduction Overview |
| Module 2: | District Cooling Plant (DCP) – Loads and Equipment |
| Module 3: | Hydronic Distribution System |
| Module 4: | DCP Controls and Instrumentation |
| Module 5: | DCP Design and Optimization |
| Module 6: | Design of Energy Transfer Stations |
| Module 7: | Design of Thermal Energy Storage (TES) |
| Module 8: | Selection of Equipment and Procurement |
| Module 9: | Startup and Commissioning |
| Module 10: | District Cooling Regulations and Metering requirements |
| Module 11: | Optimizing the building side of District Cooling |
| Module 12: | District Cooling Energy Assessment |