DCEP Generalist Training

7:45  Registration (15 minutes)
8:00  1. Generalist Training Introduction (30 minutes)
      Objectives
      Overview
      Resources
8:30  2. Data Center Profiler (DC Pro) Overview (40 minutes)
      Introduction to Benchmarking and PUE
      Overview of DC Pro
      Introduction to PUE Estimator
9:10  3. IT Equipment (40 minutes)
      IT Equipment Energy Use
      Provisioning and Minimizing Waste
      Best Practices
9:50  Break (10 minutes)
10:00 4. Air Management (50 minutes)
      Environmental Specifications and Metrics
      Airflow and Temperature Management
      Best Practices
10:50 5. Cooling Systems (60 minutes)
      Air- and Liquid-Cooled Systems
      Chilled-Water Plant
      Best Practices
11:50 Lunch (60 minutes)
12:50 6. Electrical Systems (50 minutes)
      Causes of Energy Inefficiencies
      Electrical Power Chain
      Best Practices
1:40  7. Assessment Process Manual (30 minutes)
      Objectives of DCEP Assessments
      DCEP Assessment Process Manual
      DCEP Assessment Process
2:10  Break (10 minutes)
2:20  8. Data Center Profiler (DC Pro) Case Study (40 minutes)
      Input Steps
      Results
      Abbreviations and Acronyms
3:00  Exam (120 minutes)
5:00  End of Generalist Training/Exam
DCEP HVAC-Specialist Training (Day 1)

8:00   Registration (15 minutes)
8:15   9. HVAC Specialist Training Introduction (30 minutes)
       Overview
       Resources
       Performance Metrics
8:45   13. Air Handlers and Air Conditioners (80 minutes)
       HVAC Systems Overview
       Airside Economizers
       Indirect Evaporative Coolers
       Energy Efficiency Opportunities
       Best Practices
10:05  Break (10 minutes)
10:15  14. Liquid Cooling (70 minutes)
       Why Liquid Cooling?
       When to Consider Liquid Cooling
       Cooling Configurations
       Best Practices
11:25  Lunch (60 minutes)
12:25  15. Chilled Water Plants (60 minutes)
       Metrics to Identify Energy Efficiency Opportunities
       Optimizing Energy Usage
       Design Considerations for Data Centers
       Best Practices
1:25   16. Cooling System Controls (45 minutes)
       Temperature, Humidity, and Airflow Control
       Cooling Plant Control
       Feedback and Diagnostics
       IT Equipment Integration
       Best Practices
2:10   Break (10 minutes)
2:20   17. Assessment Process (60 minutes)
       Role and Purpose of DCEPs
       Objectives of DCEP Assessment
       DCEP Assessment Process
3:20   18. Modeling Data Center HVAC Systems (75 minutes)
       Levels of Modeling Detail
       Modeling Energy Usage
       Annual Energy Usage vs. Annual Energy Cost
       Abbreviations and Acronyms
4:35   End of HVAC Specialist Training Day 1
### DCEP HVAC-Specialist Training (Day 2)

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<th>Time</th>
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