

# 2009 Course Catalogue



**Data Center College**

[Anixter.com/dccemea](http://Anixter.com/dccemea)

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Anixter's Data Center College (DCC)<sup>™</sup> is a free and unique educational institution and curriculum designed to create awareness and to provide general solutions for current and future data center infrastructure issues. Topics covered include 10 Gigabit, wireless, Power-over-Ethernet, thermal management, access control, video surveillance, just to name a few. The format for DCC brings a comprehensive array of technical and informational courses directly to the customer's site.



### **The Anixter Difference**

Anixter has the experience, knowledge and contacts to bring together expert presenters on a wide variety of current and relevant topics. In addition, our experienced sales and marketing organizations have the ability to coordinate comprehensive solutions to the most difficult of data center issues. We encourage our customers to rely on our expertise to help them optimise the performance and reliability of their data center. Anixter can provide knowledge and products to make your data center secure, productive and future-ready. We can manage the entire process from providing comprehensive and timely knowledge of data center issues, helping to specify the best products for your applications, including sourcing and supply of the most progressive products and services in the industry.

Anixter's data center product and technical expertise can help reduce the time and cost of:

- ❑ Specifying the right product for your application
- ❑ Sourcing products for the entire bill of material for your project
- ❑ Selecting and coordinating product combinations to ensure that your components work together effectively
- ❑ Seeing the future and anticipating changes and trends in the market.

The Anixter Infrastructure Cabling Lab in Glenview, IL USA is the premier testing facility in the network cabling industry. The highly qualified professionals who staff the lab perform testing, as well as research and development to provide our customers with consistently reliable cabling systems. Anixter is listed as a UL verified participant in the Certificate Services Program for verified cabling products.

### **Academics & Faculty**

The Anixter Data Center College is an esteemed group of marketing and engineering professionals from around the industry. The companies expertise combines academic and real-world knowledge of how to design and manage state-of-the-art, modern data centers.

**For additional information, contact your local Anixter sales**



## **Course Catalogue**

### **Data Center Design (DCD)**

Data Center Design will illustrate the importance of the data center and introduce relevant standards and glossary terms unique to this environment. Data center reliability tiers, design, layout, space considerations and Total Cost of Ownership for data center infrastructure will be major topics covered in detail, as will recommendations for dealing with tough cable management situations and a comprehensive look at power distribution and the challenges of cooling. Finally, topology and media selection will be covered.

### **Uptime Institute Tier Classifications (UITC)**

The Uptime Institute has developed a series of tier classifications to define levels of operational availability for data centers. The concept of "Five Nines" availability was founded in the tier classifications. The tier classifications have been included in the TIA-942 Data Center Standard. This class summarizes the information contained in the standard and outlines the differences between the four tiers, from a number of different perspectives. The class provides definitions of the various terms commonly used to define data center availability. In addition, it provides a summary of the criteria associated with each of the four availability tiers.

### **Thermal Management (TM)**

Ever increasing complexity of installations demands creative solutions for thermal management issues. Proper thermal management is critical to component life and network availability. This course will cover:

- Basic facts
- Server and chip density trends
- Thermal sources and suggested solutions
- Cable management
- Power distribution issues and recommendations
- Data center layout recommendations
- General conclusions

### **Video Surveillance (VS)**

Receive an overview of the analogue, digital, and IP based products and technologies being deployed in the security market. Also, gain an understanding of the importance of installing a cabling infrastructure that will support future migration to newer digital and IP based video surveillance systems. Trends in video surveillance systems will also be discussed.

Upon completion, participants will be able to:

- Understand the difference between analogue, digital, and IP based products and the advantages/disadvantages of each.
- Relay the importance of installing a cabling infrastructure that can meet your video requirements today and 5–10 years in the future.



### **Access Control (AC)**

Learn about the various internal/external security threats companies face while protecting their people, bytes, and assets and what they can do to minimize these security risks by installing a state-of-the art access control system. Trends in access control systems will also be discussed.

Upon completion, participants will be able to:

- ❑ Define what critical areas need to be protected in corporations via access control
- ❑ Understand the importance of selecting an open, integrated IP-based access control system

### **Cabling Infrastructure Design (CID)**

The proliferation of information being generated and transmitted by all types of enterprises today has been further increased by the introduction of new legislation and regulations regarding the storage and use of this information. As a result, more and more businesses are finding it necessary to build data centers as well as storage area networks to allow access to, and provide storage for all types of data. Until recently most data centers were designed and constructed according to the business needs and technology expected to be deployed, without a common or standardized methodology or a clear migration path to future systems and technologies.

The ISO 11801/EN 50173 and the TIA/EIA-568 series of standards have delivered and continue to deliver enormous benefits to commercial building owners and operators. The recent TIA-942 "Telecommunications Infrastructure Standard for Data Centers" provides similar benefits to the mission-critical applications and systems deployed in data centers and storage area networks.

This presentation will provide a step by step guide to the advantages of following a structured approach to cabling infrastructure in the data center. Following the TIA-942 and EN50173 draft standard we will identify design elements and system components that will provide the highest levels of flexibility, critical asset protection, performance advantages, and deployment options. Topics will include:

- ❑ Copper or fiber – where do I use each to their fullest advantage?
- ❑ Copper cabling options for 10 Gigabit Ethernet – multiple choices to meet individual requirements
- ❑ 10 Gigabit Ethernet and Fiber Channel – how the careful choice of fiber, cable, and apparatus can provide the most flexible solution
- ❑ Density, deployment and adaptability – which fiber cabling installation option is best for your application
- ❑ Fire safety and electronic asset protection – limited combustible advantage



### **Designing a Telecomm Grounding System for Network Reliability (DTGS)**

Correct data center grounding improves network performance and reliability, protects valuable network equipment and safeguards against potential personnel injury. This course will cover the purpose of grounding, the practical applied theory behind grounding, the harmful effects of improper grounding and key elements of the industry grounding standards. We will also introduce a new structured ground system for data center and telecomm room grounding and demonstrate how to implement this solution properly. Once you complete this course, you will understand the purpose of grounding and how to apply the proper grounding specifications according to TIA-942 and EN50310.

### **Infrastructure Management and Monitoring Solutions (IMMS)**

As we move from the centralized computing environments of the early 1990's to the more distributed computing environments of today's modern enterprise, the need to properly manage both the logical and physical elements of the network become more critical. The increased number of dispersed network assets such as Web servers, policy servers, switches, routers, etc., in addition to the physical infrastructure needed to support them, have forced organizations to reconsider the methods needed to manage these devices and systems while ensuring network resiliency.

This presentation will cover the latest trends within the computing industry such as the migration towards the consolidation of network resources within the data center. It will also provide an overview of the most recent regulatory requirements that are pushing organizations to achieve greater oversight and management of IT systems (e.g. Sarbanes Oxley, HIPAA). A technical overview of infrastructure management solutions that include intelligent cabling systems and software, KVM and console management, as well as environmental monitoring will also be included.

### **Power Distribution (PD)**

The huge growth in data center power consumption and continually increasing densities has made it necessary to understand the various power distribution options available from our current and future technology. The power distribution class teaches students how to configure a power distribution system for modern-day data centers, as well as options for the future.

This course will cover the following:

- Basic facts
- Vulnerability of the national power grid
- Trends in public sector power generation
- Trends in server evolution
- Single vs. three-phase power distribution systems
- Why the interest in data center power systems
- Basic power system designs
- The relationship of power, density and real estate costs



## Leveraging Supply Chain Principles for Data Center Deployments (SC)

We will discuss how supply chain management "best practices" from diverse industries can be applied to a data center deployment. Project Managers will learn to baseline a scalable supply chain model for technology deployments that will help them balance material management, labour efficiency and completion within the time, cost and space constraints of the data center deployment.



Upon completion participants will be able to incorporate the supply chain model into the data center deployment, including:

### Sourcing

- ❑ Materials selection

### Logistics

- ❑ Lead time management

### Inventory management

- ❑ Minimize inventory investment, eliminate excess, manage piece part distribution

### Product enhancement and packaging

- ❑ Maximize installation productivity, improve on-time performance

### Deployment

- ❑ Strategies and supply chain implementation support

### Information support

- ❑ Integrated IT solution to support supply chain metrics



# Application Form:

## DCC 2009

**Please complete and return to your local Anixter sales representative.**

**To apply on-line at [www.anixter.com/dccemea](http://www.anixter.com/dccemea).**

**Title (e.g.: Mr., Ms.):** \_\_\_\_\_

**First Name:** \_\_\_\_\_

**Last Name:** \_\_\_\_\_

**Job Title:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**1<sup>st</sup> Line of Address:** \_\_\_\_\_

**2<sup>nd</sup> Line of Address:** \_\_\_\_\_

**Town/City:** \_\_\_\_\_

**State/Province:** \_\_\_\_\_

**Zip Code / Country:** \_\_\_\_\_

**Phone No:** \_\_\_\_\_

**Fax No:** \_\_\_\_\_

**Email Address:** \_\_\_\_\_

Which best describes your job function?

- |   |   |   |  |  |
|---|---|---|--|--|
| <input type="checkbox"/> Business Development   | <input type="checkbox"/> Buyer                  | <input type="checkbox"/> Chairman/President/Owner/Partner | <input type="checkbox"/> Computer Systems/Operations | <input type="checkbox"/> Consultant      |
| <input type="checkbox"/> Contracts Manager      | <input type="checkbox"/> Director/VP/Management | <input type="checkbox"/> Engineer                         | <input type="checkbox"/> Facilities Manager          | <input type="checkbox"/> Finance         |
| <input type="checkbox"/> Information Technology | <input type="checkbox"/> Marketing              | <input type="checkbox"/> MIS-DP Manager                   | <input type="checkbox"/> Network Manager             | <input type="checkbox"/> Project Manager |
| <input type="checkbox"/> Research & Development | <input type="checkbox"/> Sales                  | <input type="checkbox"/> Specifier                        | <input type="checkbox"/> Telecom Manager             | <input type="checkbox"/> Other           |

Which best describes your organisation?

- |  |  |   |   |   |
|--|--|---|---|---|
| <input type="checkbox"/> Academic            | <input type="checkbox"/> Advertising   | <input type="checkbox"/> Architecture         | <input type="checkbox"/> Banking              | <input type="checkbox"/> Competitor     |
| <input type="checkbox"/> Computer Technology | <input type="checkbox"/> Consultants   | <input type="checkbox"/> Education            | <input type="checkbox"/> Electrical Installer | <input type="checkbox"/> Financial      |
| <input type="checkbox"/> Food                | <input type="checkbox"/> Government    | <input type="checkbox"/> Health Care          | <input type="checkbox"/> Information Services | <input type="checkbox"/> Insurance      |
| <input type="checkbox"/> Legal               | <input type="checkbox"/> Manufacturing | <input type="checkbox"/> Municipal Government | <input type="checkbox"/> Pharmaceutical       | <input type="checkbox"/> Press          |
| <input type="checkbox"/> Real Estate         | <input type="checkbox"/> Retailing     | <input type="checkbox"/> Technology           | <input type="checkbox"/> Telecommunications   | <input type="checkbox"/> Transportation |

How many people are employed at your location?

- |                                       |   |                                    |                                     |                                      |
|---------------------------------------|---|------------------------------------|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> 1 to 10      | <input type="checkbox"/> 11 to 50       | <input type="checkbox"/> 51 to 100 | <input type="checkbox"/> 101 to 500 | <input type="checkbox"/> 501 to 1000 |
| <input type="checkbox"/> 1001 to 5000 | <input type="checkbox"/> 5001 to 10,000 | <input type="checkbox"/> 10,000+   |                                     |                                      |

How did you learn about DCC?

- |   |   |   |  |   |
|---|---|---|--|---|
| <input type="checkbox"/> Search Engine      | <input type="checkbox"/> Brochures            | <input type="checkbox"/> Press                  | <input type="checkbox"/> Web Link      | <input type="checkbox"/> Events             |
| <input type="checkbox"/> Invitation by Mail | <input type="checkbox"/> Anixter Sales Person | <input type="checkbox"/> While on This Web Site | <input type="checkbox"/> Word of Mouth | <input type="checkbox"/> Newspaper/Magazine |
| <input type="checkbox"/> Other              |   |   |  |   |

Do you have a current project?

- |                              |                             |                                  |
|------------------------------|-----------------------------|----------------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Planned |
|------------------------------|-----------------------------|----------------------------------|

When will the project start?

- |                                       |                                       |  |   |                                     |
|---------------------------------------|---------------------------------------|--|---|-------------------------------------|
| <input type="checkbox"/> 1 - 2 Months | <input type="checkbox"/> 3 - 6 Months | <input type="checkbox"/> 7 - 12 Months | <input type="checkbox"/> 12 - 18 Months | <input type="checkbox"/> 18+ Months |
|---------------------------------------|---------------------------------------|--|---|-------------------------------------|

What is the size of the project?

- |  |   |  |  |  |
|--|---|--|--|--|
| <input type="checkbox"/> <1000 sq mtrs       | <input type="checkbox"/> 1100 - 2000 sq mtrs  | <input type="checkbox"/> 2100 - 3000 sq mtrs | <input type="checkbox"/> 3100 - 4000 sq mtrs | <input type="checkbox"/> 4100 - 5000 sq mtrs |
| <input type="checkbox"/> 5100 - 7000 sq mtrs | <input type="checkbox"/> 7100 - 10000 sq mtrs |  |  |  |

What type of project?

- |                              |                                   |
|------------------------------|-----------------------------------|
| <input type="checkbox"/> New | <input type="checkbox"/> Retrofit |
|------------------------------|-----------------------------------|

Please provide project location and/or additional project information in the space below



**Enterprise Cabling & Security Solutions • Electrical and Electronic Wire & Cable • Fasteners • Supply Chain Services**

Anixter Inc. is the world's leading supplier of Supply Chain Services and products used to connect voice, video, data and security systems. Anixter is also the leading provider of specialty electrical and electronic wire and cable for building construction, industrial maintenance and repair, and original equipment manufacturing, as well as the leader in providing fasteners and "C" Class components to OEMs and production lines.

We bundle our products with our innovative Supply Chain Services to help control the cost of our customers' business processes, reduce their investment in inventory, and ensure they get the right product when they need it.

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