

Microsoft Datacenter Academy








Microsoft

CO+I Workforce Development

Overview

The Microsoft Datacenter Academy (DCA) Program is designed to augment existing IT curriculum at our partner schools with the goal of providing features unique to IT support in a large datacenter cloud environment. Although the DCA curriculum may vary slightly between institutions, we ensure that the curriculum is aligned to the core competencies required for datacenter roles focused on IT support and troubleshooting. While some features may be specific or unique to Microsoft, the curriculum, certifications acquired, and real-world hands-on experience gained through DCA, will provide benefits to all students seeking a high-tech IT career.

Microsoft DCA includes five core pillars -

-  Curriculum Alignment
-  DC Skills Scholarships
-  Hardware Donations
-  Work Experience
-  Mentorship

Datacenter Academy Curriculum

Partner Schools: SOUTHERN VIRGINIA HIGHER EDUCATION CENTER (SVHEC)
SOUTHSIDE VIRGINIA COMMUNITY COLLEGE (SVCC)

REQUIRED COURSE LIST

Foundations for IT Professionals/CompTIA A+

Description: The foundational course for individuals planning a career in information technology. The curriculum and hands-on labs cover the most common personal computing hardware and software technologies, introduce students to enterprise server hardware and prepares participants for the CompTIA A+ certification exams.

Module 1: CompTIA A+ (Exam 220-901)

Hardware
Networking
Mobile Devices
Hardware & Network Troubleshooting

Module 2: CompTIA A+ (Exam 220-902)

Windows Operating Systems
Other Operating Systems and Technologies
Security
Software Troubleshooting
Operational Procedures

Server Foundations for IT Professionals/CompTIA Server+

Description: Provides program participants with the skills relating to the most commonly used server and storage systems in the IT industry. This course and hands-on labs prepare participants for the CompTIA Server+ certification exam. Topics include: Server Architecture, Server Administration, Storage, Security, Networking, Disaster Recovery, and Troubleshooting.

Networking Foundations for IT Professionals/CompTIA Network+

Description: A short-term, non-credit, hands-on course to prepare individuals with the essential skills and knowledge to configure, manage, and troubleshoot an IP network. The curriculum and hands-on labs prepare participants for the CompTIA Network+ exam. Classroom instruction and online study tools are paired with hands-on activities in a fully equipped repair center and data center, creating an environment that simulates the workplace. All training is delivered by certified instructors. Topics include: Network Architecture, Network Operations, Network Security, Troubleshooting, and Industrial Standards, Practices and Network Theory.

Security Foundations for IT Professionals/CompTIA Security+

Description: A short-term, non-credit, hands-on course that teaches the essential principals of network security and risk management. The curriculum and hands-on labs prepare participants for the CompTIA Security+ exam. Classroom instruction and online study tools are paired with hands-on activities in a fully equipped repair center and data center, creating an environment that simulates the workplace. All training is delivered by certified instructors. Topics include: Threats, Attacks and Vulnerabilities, Technologies & Tools, Architecture and Design, Identity and Access Management, Risk Management, and Cryptography and PKI.

ELECTIVE COURSES

INTRO ELECTIVES

ITE 115 – Intro to Computer Applications and Processes

Description: Covers computer concepts and internet skills, and uses a software suite which includes word processing, spreadsheet, database, and presentation software to demonstrate skills. Recommended prerequisite keyboarding skills. Lecture 3-4 hours, Lab 0-2 hours, Total 3-6 hours per week

ITE 140 – Spreadsheet Software

Description: Covers the use of spreadsheet software to create spreadsheets with formatted cells and cell ranges, control pages, multiple sheets, charts, and macros. Topics include type and edit text in a cell, enter data on multiple worksheets, work with

formulas and functions, create charts, pivot tables, and styles, insert headers and footers, and filter data. Lecture 3-4 hours per week.

ITE 150 – Desktop Database Software

Description: Incorporates instruction in planning, defining, and using a database; performing queries; producing reports; working with multiple files; and concepts of database programming. Includes database concepts, principles of table design and table relationships, entering data, creating and using forms, using data from different sources, filtering, creating mailing labels. Lecture 3-4 hours per week.

ADVANCED ELECTIVES

ITN 154 – Networking Fundamentals – Cisco

Description: Provides introduction to networking using the OSI reference model. Includes data encapsulation, TCP/IP suite, routing, IP addressing, and structured cabling design and implementation. Lecture 3-4 hours per week.

ITN 156 – Basic Switching and Routing – Cisco

Description: Centers instruction in LAN segmentation using bridges, routers, and switches. Includes fast Ethernet, access lists, routing protocols, spanning tree protocol, virtual LANS and network management. Lecture 3-4 hours per week.

ITN 261 Network Attacks, Computer Crime and Hacking

Description: Encompasses in-depth exploration of various methods for attacking and defending a network. Explores network security concepts from the viewpoint hackers and their attack methodologies. Includes topics about hackers, attacks, Intrusion Detection Systems (IDS) malicious code, computer crime and industrial espionage. Lecture 3-4 hours per week.

ITN 267 Legal Topics in Network Security

Description: Conveys an in-depth exploration of the civil and common law issues that apply to network security. Explores statutes, jurisdictional, and constitutional issues related to computer crimes and privacy. Includes rules of evidence, seizure and evidence handling, court presentation and computer privacy in the digital age. Lecture 3-4 hours per week.

CERTIFICATIONS & EXAMS

CompTIA A+

Description: CompTIA A+ is the preferred qualifying credential for technical support and IT operational roles. It is about much more than PC repair. Candidates are better prepared to troubleshoot, and problem solve. Technicians understand a wide variety of issues ranging from networking and operating systems to mobile devices and security.

EXAM 1: COMPTIA A+ 220-901

Description: Covers PC hardware and peripherals, mobile device hardware, networking and troubleshooting hardware and network connectivity issues.

Exam Length: 90 minutes

Passing Score: 675 (on a scale of 900)

EXAM 2: COMPTIA A+ 220-902

Description: Covers installing and configuring operating systems including Windows, iOS, Android, Apple OS X and Linux. It also addresses security, the fundamentals of cloud computing and operational procedures.

Exam Length: 90 minutes

Passing Score: 700 (on a scale of 900)

CompTIA Server+

Description: CompTIA Server+ certified candidates can work in any environment because it is the only vendor-neutral certification covering the major server platforms. It is the only industry certification that covers the latest server technologies including virtualization, security and network-attached storage. CompTIA Server+ certification validates the skills necessary to be a server administrator. Successful candidates will have mastered the following concepts:

- Virtualization
- Storage
- Security
- Troubleshooting

EXAM: COMPTIA SERVER+ SK0-004

Description: Server+ covers server architecture, administration, storage, security, networking, troubleshooting as well as disaster recovery.

Exam Length: 90 minutes

Passing Score: 750 (on a scale of 900)

CompTIA Network+ N10-007

Description: CompTIA Network+ has been updated and reorganized to address the current networking technologies with expanded coverage of several domains by adding:

- Critical security concepts to helping networking professionals work with security practitioners
- Key cloud computing best practices and typical service models
- Coverage of newer hardware and virtualization techniques
- Concepts to give individuals the combination of skills to keep the network resilient

EXAM: COMPTIA NETWORK+ N10-007

Exam Length: 90 minutes

Passing Score: 720 (on a scale of 900)

CompTIA Network+ N10-006

Description: Network+ ensures an IT professional has the knowledge and skills to: Design and implement functional networks, Configure, manage, and maintain essential network devices, Use devices such as switches and routers to segment network traffic and create resilient networks, Identify benefits and drawbacks of existing network configurations, Implement network security, standards, and protocols, Troubleshoot network problems, and Support the creation of virtualized networks.

EXAM: COMPTIA NETWORK+ N10-006

Exam Length: 90 minutes

Passing Score: 720 (on a scale of 900)

CompTIA Security+ SY0-501

Description: CompTIA Security+ is the first security certification IT professionals should earn. It establishes the core knowledge required of any cybersecurity role and provides a springboard to intermediate-level cybersecurity jobs. Security+ incorporates best practices in hands-on troubleshooting to ensure security professionals have practical security problem-solving skills. Cybersecurity professionals with Security+ know how to address security incidents – not just identify them. Security+ is compliant with ISO 17024 standards and approved by the US DoD to meet directive 8140/8570.01-M requirements.

EXAM: COMPTIA SECURITY+

Description: CompTIA Security+ exam will certify the successful candidate has the knowledge and skills required to install and configure systems to secure applications, networks, and devices; perform threat analysis and respond with appropriate mitigation techniques; participate in risk mitigation activities; and operate with an awareness of applicable policies, laws, and regulations. The successful candidate will perform these tasks to support the principles of confidentiality, integrity, and availability.

Exam Length: 90 minutes

Passing Score: 750 (on a scale of 900)

CAREER OPPORTUNITIES

Our goal is to provide the best learning experiences and outcomes for students taking the Datacenter Academy Curriculum. The curriculum is designed to prepare successful learners to confidently enter the growing IT sector. DCA provides a hands-on experience utilizing real world datacenter equipment donated from our Cloud Computing datacenters. Most participating education providers build a mock datacenter lab that introduces students to dynamics of a datacenter environment which includes, physical security protocols, trouble ticket tasks and device location techniques. Students are therefore prepared to enter the IT field as Datacenter Technicians, Computer Support Technicians, System Administrators, Datacenter Logistics Technicians, Cable Installers and Deployment Specialists.

The education and opportunities provided by DCA go beyond Microsoft as graduates have been sought after for internships and employment at other local high-tech companies and businesses.