

## COMPUTER NETWORKING TECHNOLOGY DIPLOMA

Course Length: 52 Weeks

### OBJECTIVE

The objective of this course is to provide the skills, knowledge and practical experience to work effectively in positions including technical support, computer maintenance/repair, hardware/software installation and network administration. Throughout the program, the essential technical skills are delivered. Motivated students will have the skills to successfully achieve industry certifications such as CompTIA (A+, Net+, and Linux+), MCP, MCTS, MCSA, MCSE, and CCNA as well as apply their core knowledge to learning new systems and skills in the workplace. The costs of the A+ Certification exams are included in the course.

### **IS 104 COMPUTER OPERATING SYSTEMS & APPLICATION SOFTWARE** **4 WEEKS**

This course is an introduction to the Windows XP® operating system as well as the Windows 7® operating system. Students install, configure and troubleshoot both operating systems and prepare for certifications in both systems.

### **IS 221 A+ CERTIFICATION PREP AND TROUBLESHOOTING I** **4 WEEKS**

**CompTIA A+ Essentials, 220-701** validates knowledge of basic computer hardware and operating systems, covering skills such as installation, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing and preventive maintenance, with additional elements of security and soft skills. The Essentials Exam validates the basic skills needed by any entry-level service technician regardless of job environment.

### **IS 222 A+ CERTIFICATION PREP AND TROUBLESHOOTING II** **3 WEEKS**

The CompTIA A+ 220-702 exam is targeted for individuals who work or intend to work in a mobile or corporate technical environment with a high level of face-to-face client interaction. Examples job roles include: Enterprise Technician, IT Administrator, Field Service Technician, and PC Technician. Ideally, the **CompTIA A+ 220-702** candidate has already passed the CompTIA A+ Essentials 220-701 examination. Candidates who pass both CompTIA A+ Essentials 220-701 and exam 220-702 will be CompTIA A+ certified with the IT Technician designation.

### **PD 200 CAREER DEVELOPMENT AND CLIENT SERVICES** **1 WEEK**

This course provides a critical examination of issues embedded in the practice of providing client service. Topics include research about best practice in customer service and communication techniques; psychologically based methods for dealing with the management of customer complaints; and the roles of a customer service employee and supervisor within ethical boundaries and common business practice. This course deals with the development of the student's career path, including job search skills.

### **IS 112 COMPUTER NETWORKS AND SECURITY (NET+)** **4 WEEKS**

This course provides instruction in network design and technologies using the Open Systems Interconnection (OSI) model. Topics include network fundamentals, the OSI model, network operating systems, TCP/IP fundamentals and utilities, network installation and upgrades, network remote access configuration and protocols, network administration and security, fault tolerance and disaster recovery considerations and procedures, and network troubleshooting procedures. The course also covers all aspects of computer network security, from physical security to local computer security to Internet related security methods. Emphasis is placed on the analytical skills required by a security specialist. **Certification: CompTIA Net+, CompTIA Security+**

### **NT 320 WIRELESS NETWORKING FUNDAMENTALS** **4 WEEKS**

This course provides instruction on both general and specific wireless technologies. Topics include wireless theory, including radio frequency and infrared transmissions. It also covers wireless topologies, access points, wireless bridges, antenna theory, wireless security, site surveys, and troubleshooting techniques.

## **IS 191 LINUX ADMINISTRATION**

**4 WEEKS**

This course introduces the capabilities and features of **Linux**® as a multi-user operating system. Topics include system planning and installing a **Linux**® system, managing desktop interfaces, working with the shell and text files, the role of the system administrator, performing system administrator tasks such as managing system resources and creating scripts, and performance tuning and troubleshooting techniques. **Certification: CompTIA Linux+**

## **NT 165 NETWORK/SERVER OPERATING SYSTEMS**

**4 WEEKS**

This is a course in the installation and operation of Windows® 2003/8 Server. Topics include installing, configuring, and troubleshooting Windows® 2003/8; access to resources; hardware devices and drivers; managing, monitoring, and optimizing system performance, reliability, and availability; managing, configuring, and troubleshooting storage use; configuring and troubleshooting network connections; and implementing, monitoring, and troubleshooting security.

## **NT 210 DIRECTORY SERVICES ADMINISTRATION**

**4 WEEKS**

This course is designed to provide instruction in implementing and administering a Windows® 2003/8 Directory Services infrastructure. Topics include installing, configuring, and troubleshooting Active Directory; installing, configuring, managing, monitoring, and troubleshooting DNS for Active Directory; installing, configuring, managing, monitoring, optimizing, and troubleshooting change and configuration management; managing, monitoring, and optimizing the components of Active Directory; and configuring, managing, monitoring, and troubleshooting Active Directory security.

## **NT 200 NETWORK INFRASTRUCTURE ADMINISTRATION**

**4 WEEKS**

This course is designed to provide instruction in implementing and administering a Windows® 2003/8 network infrastructure. Topics include installing, configuring, managing, monitoring, and troubleshooting DNS; installing, configuring, managing, monitoring, and troubleshooting network protocols; installing, configuring, managing, monitoring, and troubleshooting WINS; installing, configuring, managing, monitoring, and troubleshooting IP routing; installing, configuring, and troubleshooting Network Address Translation; and installing, configuring, managing, monitoring, and troubleshooting Certificate Services.

## **NT 370 WEB SERVER ADMINISTRATION**

**4 WEEKS**

This course provides an in-depth study of the knowledge and skills required to install and administer Web servers that support Internet-based application, data, and information services. Topics include Web server technology; selecting a Web server platform (Microsoft®, Netscape®, and Apache); establishing server services such as HTTP, FTP, SMTP, and NNTP; supporting server-side technologies (CGI, Servlets, server-side includes, ASP, and JSP); supporting Web client technologies (Java applets, ActiveX, and plug-ins); client configuration and browser support; indexing and index servers; virtual directories and content; Web server security and host access, SSL, and certificate authorities; supporting intranets with Web servers; Web server performance and troubleshooting; integrating proxy and Web servers; handling of different protocols by proxies; proxy caching, filtering, monitoring, and access control; and proxy security, performance, capacity planning, and load balancing.

## **IS 170 CISCO ROUTER FOUNDATIONS**

**4 WEEKS**

This course introduces the concepts and procedures required to configure Cisco® switches and routers in multi-protocol internetworks. Topics include using the Cisco® Internetwork Operating System (IOS); the Opens Systems Interconnection (OSI) reference model and layered communication; LAN design, technologies, and virtual LANs; bridging, switching, and Spanning Tree Protocol (STP); the TCP/IP protocol suite and IP and IPX addressing, sub netting, and configuration; routing basics, protocols, and configuration; access list security and configuration; and Wide Area Network (WAN) design, protocols, and technologies.

## **NT 330 SQL SERVER™ ADMINISTRATION**

**4 WEEKS**

This course provides instruction in the planning, installation, and administration of Microsoft® SQL Server™. Topics include planning SQL Server capacity and security, installing and configuring the SQL Server, security configuration and management, data maintenance and data management, monitoring performance, and troubleshooting various problems.

## **NT 340 MESSAGING SYSTEMS**

**4 WEEKS**

This course provides instruction in the implementation, administration, and troubleshooting of the Microsoft® messaging system and Exchange Server. Topics include the architecture and communication abilities of Exchange Server; installation of Exchange Server, backward integration and compatibility, client support, and configuration; Exchange Server management; Microsoft® Web Access and Web Storage System, real-time collaboration, and foreign mail system connectors; SMTP and Internet-based client access; and security techniques, performance monitoring, maintenance procedures, and troubleshooting issues.

## **WE 300 OPTIONAL INTERNSHIP**

The internship component of the program is the practical application of a student's knowledge and skills in a networking environment. This environment shall be directly related to the student's program of study. The internship may require full-time day attendance working in the industry setting.