

COMPUTER NETWORKING SYSTEMS (CNTS)

CNTS1101 | Introduction to Operating Systems | Lecture/Laboratory (4 Credits)

Examine maintenance and repair concepts of computer operating systems, hardware, peripherals, and component selection/installation for machines commonly found in a business. Practice using the file systems and command line interfaces of Linux and Windows operating systems to gain a basic understanding of how they work and their similarities and differences.

CNTS1102 | Introduction to Operating Systems | Lecture/Laboratory (2 Credits)

Examine concepts of computer operating systems found in the datacenter. Navigation and manipulating of the file systems using command line and GUI interfaces of current Linux and Windows operating systems to gain an understanding of how they work, their similarities and differences. Portions of this course help to prepare for the CompTia A+ exam.

CNTS1123 | Introduction to Networking | Lecture/Laboratory (2 Credits)

Introduction to the concepts and terminology of data communications in a datacenter. Examine client-server networking, communication hardware, software, and security. Analyze services and models supporting data communications interoperability. Configure and troubleshoot network connections and the associated hardware/software.

CNTS1202 | Scripting | Lecture/Laboratory (3 Credits)

Apply programming best practices to managing computer systems and networks. Topics include: development of real world scripts used to manage enterprise networks with a focus on Python and PowerShell.

CNTS1211 | Server Systems | Lecture/Laboratory (5 Credits)

Install, configure, maintain, and manage the primary services in the Server operating system. Introduction to the sharing of system resources, remote administration techniques to facilitate efficient and effective management of business computer systems.

CNTS1212 | Server Systems | Lecture/Laboratory (3 Credits)

Install, configure, maintain, and manage the core services in current Linux and Windows server operating systems. Introduction to the sharing of system resources, remote administration, directory services security and backups. Portions of this course help to prepare for the Microsoft Identity and Access Administrator exam.

CNTS1231 | Network Systems | Lecture/Laboratory (4 Credits)

Expansion of concepts and terminology of business data communications and how they apply to the business environment. Intermediate to advanced client-server networking concepts, including its associated networking hardware, addressing and services; logical addressing, IP routing, and network protocols. Install and configure client-server networking systems.

CNTS1232 | Network Systems | Lecture/Laboratory (3 Credits)

Expansion of concepts and terminology of business data communications and how they apply to the business environment. Intermediate to advanced client-server networking concepts, including its associated networking hardware, addressing and services; logical addressing, IP routing, and network protocols. Install and configure client-server networking systems. Portions of this course help to prepare for the CompTIA Network+ exam.

CNTS2101 | Routing & Switching | Lecture/Laboratory (5 Credits)

Examine concepts and application of bridging, switching, and routing in an industry-standard networking environment. Install, configure, and manage networks, routers, and switches to facilitate basic network communication architectures. Portions of this course help to prepare for the Cisco Certified Networking Associate (CCNA) exam.

CNTS2103 | Enterprise Routing & Services I | Lecture/Laboratory (3 Credits)

Examine concepts and application of bridging, switching, routing, and firewalls in an industry-standard networking environment. Install, configure, and manage networks, routers, switches, and firewalls to facilitate basic network communication architectures. Portions of this course help to prepare for the Cisco Certified Networking Associate (CCNA) exam.

CNTS2112 | Advanced Server Systems | Lecture/Laboratory (5 Credits)

Install, configure, maintain, and manage enterprise servers and services. Configure and deploy cloud-based servers and services. Configure and deploy virtual server environments. Configure and deploy highly available server and service solutions. Utilize automation in the management of Directory services.

CNTS2113 | Enterprise Linux Administration | Lecture/Laboratory (3 Credits)

Install, configure, maintain, and manage a wide variety of Open Source Software (OSS) with an emphasis on common web, file and database servers found in industry; the history of the open source movement. Configure OSS operating systems to support common client-servers, Web hosting, and other services commonly found at the enterprise and ISP levels of industry. In-depth coverage of technologies related to hosting websites including programming language support, database support/connectivity, and remote access. Portions of this course help to prepare for the Red Hat Certified Engineer exam.

CNTS2131 | Virtualization | Lecture/Laboratory (3 Credits)

Install, configure, maintain, and manage a variety of virtualization software; examine the underlying principles of virtualization; create a virtual IT infrastructure; advantages and disadvantages of moving to a virtualized environment; comparison of major virtualization software systems. Portions of this course help to prepare for the Professional VMware vSphere Exam.

CNTS2140 | Securing Enterprise Server Environments | Lecture/Laboratory (3 Credits)

Proactively secure enterprise and hybrid environments, implement and manage security and compliance solutions, respond to threats, and enforce data governance. Portions of this course help to prepare for the Microsoft 365 Certified: Security Administrator Associate exam.

CNTS2201 | Advanced Routing & Switching | Lecture/Laboratory (5 Credits)

Advanced concepts and application of bridging, switching, and routing in an industry-standard networking environment. Practice advanced business network communication architectures. This course helps to prepare for the Cisco Certified Networking Associate (CCNA) exam.

CNTS2202 | Advanced Routing & Switching | Lecture/Laboratory (4 Credits)

Examine advanced concepts and application of bridging, switching, and routing in an industry-standard networking environment. Practice advanced business network communication architectures. Assists in preparation for the Cisco Certified Networking Associate (CCNA) exam.

CNTS2203 | Enterprise Routing & Services II | Lecture/Laboratory (3 Credits)

Advanced concepts and application of bridging, switching, routing, and firewalls in an industry-standard networking environment. Practice advanced business network communication architectures. This course helps to prepare for the Cisco Certified Networking Associate (CCNA) exam.

CNTS2212 | Enterprise Systems | Lecture/Laboratory (5 Credits)

Install, configure, maintain, and manage Enterprise email services and the considerations needed to optimize deployment. Manage and maintain Enterprise databases. Develop and deploy Enterprise Content management services including, site security, database connectivity; site administration and monitoring for use in a business setting. Develop skills in Cloud service Architecture as part of the AWS Academy curriculum.

CNTS2213 | Enterprise Systems | Lecture/Laboratory (4 Credits)

Install, configure, and manage Enterprise databases. Develop and deploy Enterprise IT management services including, site security, database connectivity, site administration, and monitoring. Develop advanced skills in AWS Cloud Architecture and Microsoft Azure.

CNTS2214 | Advanced Server Infrastructure | Lecture/Laboratory (3 Credits)

Evaluate, plan, migrate, deploy, and manage Microsoft 365 services. Portions of this course help to prepare for the Microsoft 365 Certified: Enterprise Administrator Expert exam.

CNTS2224 | Enterprise Linux Administration | Lecture/Laboratory (3 Credits)

Install, configure, maintain, and manage a wide variety of Open Source Software (OSS) with an emphasis on common web, file and database servers found in industry; the history of the open source movement. Configure OSS operating systems to support common client-servers, Web hosting, and other services commonly found at the enterprise and ISP levels of industry. In-depth coverage of technologies related to hosting websites including programming language support, database support/connectivity, and remote access.

CNTS2231 | Introduction to Cybersecurity | Lecture/Laboratory (2 Credits)

Explore the field of cybersecurity through such topics as computer system architectures, critical infrastructures, cyber threats and vulnerabilities, cryptography, information assurance, network security, and risk assessment and management. Identify fundamental security concepts, technologies, and practices; develop a foundation for further study in cybersecurity.

CNTS2242 | Managing the Software-Defined Datacenter | Lecture/Laboratory (3 Credits)

Advanced IT operations, including networking, virtualization, identity, security, business continuity, disaster recovery, data platforms, and governance. Portions of this course help to prepare for the Designing Microsoft Azure Infrastructure Solutions exam.

CNTS2290 | Capstone Project | Lecture/Laboratory (3 Credits)

Portfolio or external project work to exhibit all skills gained throughout program.