

# COMPUTER TECHNOLOGY AND SKILLS (CTS)

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## CTS1111C LINUX + (4.00 Credits)

This course provides students with the knowledge and skills necessary to effectively administer Linux workstations and servers. Students will plan, install, maintain, and troubleshoot Linux operating system services. The skills developed by students completing this course will help prepare them for the CompTIA Linux+ certification exam.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$38.00

## CTS1133C A+ COMPREHENSIVE (4.00 Credits)

This course provides students with the knowledge required to assemble components based on customer requirements, install, configure and maintain devices, PCs and software for end users, understand the basics of networking and security/ forensics, properly and safely diagnose, resolve and document common hardware and software issues while applying troubleshooting skills. Successful candidates will also provide appropriate customer support; understand the basics of virtualization, desktop imaging, and deployment. Practice will also be provided to thoroughly prepare students for the A+ certification exam offered by CompTIA.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$50.00

## CTS1134C NETWORK+ (4.00 Credits)

This course provides students with important knowledge and skills required to implement a defined network architecture with basic network security to configure, maintain, and troubleshoot network devices using appropriate network tools, to understand the features and purpose of network technologies, and to make basic solution recommendations, analyze network traffic, and be familiar with common protocols and media types.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$57.00

## CTS1146C CLOUD COMPUTING PRACTITIONER (4.00 Credits)

This course will provide students with an overall understanding of cloud computing concepts, independent of specific technical roles. This course provides a detailed overview of AWS core services, security architecture, pricing, students will learn the required skills to support virtualized systems. This course will assist the student in preparing for the AWS Cloud Practitioner certification.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CIS1513C (minimum grade: C) and CTS1111C (minimum grade: C) and CTS1134C (minimum grade: C)

## CTS1190C AZURE FUNDAMENTALS (3.00 Credits)

The course is intended for candidates who are just beginning to work with cloud-based solutions and services or are new to Azure. You should be familiar with the general technology concepts, including concepts of networking, storage, compute, application support, and application development.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

## CTS1212C ADOBE PHOTOSHOP (3.00 Credits)

This Adobe course teaches students how to fully utilize the latest Adobe Photoshop image editing tool to create and manipulate images. The course includes hands-on experiences with exercises and projects to provide students with a thorough working knowledge of Adobe Photoshop. In this course students learn to paint and retouch images, use layers, support video, work with vector tools, manage digital assets, work with RAW camera files, manage color, and prepare images for output to the web. The skills developed by students completing this course will help prepare them for the Adobe Certified Associate certification exam.

Total Contact Hrs: 48.00

Lecture Hrs: 36.00

Lab Hrs: 12.00

Fees: LABORATORY FEE \$100.00

CTS1214C PROJECT MANAGEMENT APPLICATIONS & TOOLS (3.00 Credits)

In this course, students will learn to manage project resources, task assignments and scheduling using industry relevant application tools in support of workforce skills. They will also learn best practices and techniques used to tracking and manage projects. The course covers a combination of applications, to include waterfall, and agile project management environments.

Total Contact Hrs: 48.00

Lecture Hrs: 36.00

Lab Hrs: 12.00

Complete all the courses in the following option:

- Pre or Corequisite: CIS1513C (minimum grade: C)

CTS1661C CISCO CCNA1 (4.00 Credits)

Cisco Networking Academy participants develop workforce readiness skills and build a foundation for success in networking-related careers and degree programs. With the support of video and rich interactive media, participants learn, apply and practice CCNA knowledge and skills through a series of in-depth hands-on experiences and simulated activities that reinforce their learning. Upon completion of this offering, learners will be prepared to take the Cisco CCNA certification exam.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$47.00

CTS1831C WEB AUTHORING I (4.00 Credits)

\_This course is an entry - level course that provides students with baseline knowledge\_and skill in web page development. students will code web pages using HTML and CSS, without the use of third-party software. This course will also introduce students to JavaScript.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$36.00

CTS1851C CIW WEB FOUNDATIONS (4.00 Credits)

This course is an entry-level course that provides students with baseline technical knowledge and skills of Internet, intranet, and extranet technologies. Students will gain a basic knowledge and/or competency of Internet skills and tasks in 3 core content areas: Internet Business Foundations, Site Development Foundations, and Network Technology Foundations. The skills developed by students completing this course will prepare them for the CIW Foundations certification exam.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

CTS1861C WEB AUTHORING II (3.00 Credits)

This course teaches students the concepts of web development and how to apply structure and design skills using HTML and CSS. It will also introduce strategies and tactics necessary to design user interfaces, with particular emphasis on creating user interfaces for mobile devices. It focuses on teaching specific development techniques and strategies.

Total Contact Hrs: 48.00

Lecture Hrs: 24.00

Lab Hrs: 24.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in the following option:

- Pre or Corequisite: CTS1831C (minimum grade: C)

CTS2120C SECURITY+ (4.00 Credits)

This course provides the student with an understanding of the computer, network, infrastructure, and information security issues faced by industry worldwide. Expertise necessary to combat and protect intellectual property from theft and destruction are also developed. The skills developed by students who complete this course will prepare them for the Security+ certification exam.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$55.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: CTS1134C (minimum grade: C)
- Option 2 - Prerequisite: CTS1661C (minimum grade: C)

**CTS2126C PENTEST+ (4.00 Credits)**

This course will help the students learn concepts and techniques of penetration testing like planning and scoping a penetration testing assessment, exploiting wired and wireless networks, exploiting application-based vulnerabilities, performing exploitation techniques, understanding how to finalize a penetration test, and more. This course will help to prepare to pass the CompTIA PenTest+ certification exam.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$100.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: CTS1134C (minimum grade: C) and CTS2120C (minimum grade: C)

**CTS2366C MICROSOFT MOBILITY AND SECURITY (4.00 Credits)**

This course prepares individuals to accomplish the following technical tasks: implement modern device services; implement Microsoft 365 security and threat management; and manage Microsoft 365 governance and compliance. Practice will also be provided to thoroughly prepare students for the Microsoft MCSA certification exam MS-101 Mobility and security.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in the following option:

- Prerequisite: CTS2376C (minimum grade: C)

**CTS2375C CLOUD+ (3.00 Credits)**

This course will provide students with the knowledge and skills required to understand standard Cloud terminologies/methodologies, to implement, maintain, and deliver cloud technologies and infrastructures (e.g. server, network, storage, and virtualization technologies), and to understand aspects of IT security and use of industry best practices related to cloud implementations and the application of virtualization. Successful students in this class will be prepared to sit for the CompTIA Cloud+ exam.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: CTS1134C (minimum grade: C)
- Option 2 - Prerequisite: CTS1661C (minimum grade: C)

**CTS2376C MICROSOFT 365 ADMINISTRATOR (3.00 Credits)**

This course prepares individuals to perform the duties of a Microsoft 365 Administrator. To deploy and manage Microsoft 365, perform Microsoft 365 tenant-level implementation and administration of cloud and hybrid environments. To perform the functions as the integrating hub for multiple Microsoft 365 workloads. To work with architects and other administrators responsible for workloads, infrastructure, identity, security, compliance, endpoints, and applications. This course will prepare student to have functional experience with all Microsoft 365 workloads and Azure Active Directory (Azure AD), part of Microsoft Entra, and have administered at least one of these. It will also include a working knowledge of networking, server administration, DNS, and PowerShell. Practice will be provided to prepare students for the Microsoft MCSA certification exam MS-102, Microsoft 365 Administrator.

Total Contact Hrs: 48.00

Lecture Hrs: 24.00

Lab Hrs: 24.00

Fees: LABORATORY FEE \$38.00

Complete all the courses in the following option:

- Prerequisite: CTS1134C (minimum grade: C)

**CTS2380C CLOUD ARCHITECTING I (3.00 Credits)**

The objective of this course is to provide the fundamental knowledge of building an IT infrastructure using Amazon Web Services, AWS Part I. This course is designed to teach students how to optimize the use of AWS Cloud systems by deeply understanding AWS services and how they fit into cloud-based solutions. This course emphasizes the best implementation practices depending on industry, type of application, and size of the business. This course will assist the student in preparing for the AWS Cloud Architect certification.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: COP1000C (minimum grade: C) and COP1700C (minimum grade: C) and CTS1146C (minimum grade: C)

CTS2382C WINDOWS SERVER ADMINISTRATION (3.00 Credits)

This course is intended for Information Technology (IT) Professionals who have some experiencing working with Windows Server and are looking for a course that covers core administration components and technologies in Windows Server. This course also helps server administrators from previous Windows Server versions to update their knowledge and skills related to Windows Server 2019. Additionally, this course can help individuals looking for preparation materials to pass exams related to Windows Server. The course is also to individuals from a service desk role who wish to transition into server maintenance.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Fees: LABORATORY FEE \$100.00

Complete all the courses in the following option:

- Prerequisite: CTS1134C (minimum grade: C)

CTS2383C MANAGING A SERVER NETWORK OPERATING SYSTEM (3.00 Credits)

This course provides students with the knowledge and skills necessary to install and configure a network server and perform post-installation and day-to-day administrative tasks. The course gives the student the background needed to provide technical support for network servers. This course is taught using a network operating dictated by industry conditions. When taught using the Windows 2008 platform this course will assist the student in preparing for the related Microsoft certification examination.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: CET2742C (minimum grade: C)
- Option 2 - Prerequisite: CTS1134C (minimum grade: C)

CTS2628C CCNP ENTERPRISE: CORE NETWORKING (4.00 Credits)

CCNP Enterprise: Core Networking (ENCOR) provides students with a broad scope of architectural understanding and implementation skills required by enterprise networks. The course covers switching, routing, wireless, and related security topics along with the technologies that support software-defined, programmable networks.

Total Contact Hrs: 64.00

Lecture Hrs: 48.00

Lab Hrs: 16.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in the following option:

- Prerequisite: CTS1661C (minimum grade: C)

CTS2629C CCNP ENTERPRISE: ADVANCED ROUTING (4.00 Credits)

CCNP Enterprise: Advanced Routing (ENARS) provides students with an in-depth knowledge to support the implementation and troubleshooting of advanced routing technologies and services including layer 3 VPN services, infrastructure security and infrastructure services used in enterprise networks.

Total Contact Hrs: 64.00

Lecture Hrs: 48.00

Lab Hrs: 16.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in the following option:

- Prerequisite: CTS2628C (minimum grade: C)

**CTS2852C CLIENT-SIDE SCRIPTING (4.00 Credits)**

This course teaches developers how to use the features of the JavaScript language, design client-side, and platform independent solutions. Students learn how to write JavaScript programs, script for the JavaScript object model, control program flow, validate forms, animate images, target frames, and create cookies. Students will also understand and use the most popular applications of JavaScript.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$38.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: COP1000C (minimum grade: C) and CTS1831C (minimum grade: C)
- Option 2 - Prerequisite: COP1250C (minimum grade: C) and CTS1831C (minimum grade: C)
- Option 3 - Prerequisite: COP1334C (minimum grade: C) and CTS1831C (minimum grade: C)
- Option 4 - Prerequisite: COP1000C (minimum grade: C) and CTS1851C (minimum grade: C)
- Option 5 - Prerequisite: COP1334C (minimum grade: C) and CTS1851C (minimum grade: C)
- Option 6 - Prerequisite: COP1250C (minimum grade: C) and CTS1851C (minimum grade: C)

**CTS2881C CLOUD ARCHITECTING II (4.00 Credits)**

The objective of this course is to provide the fundamental knowledge of building an IT infrastructure using Amazon Web Services, AWS Part II. This course is designed to teach students how to optimize the use of AWS Cloud systems by deeply understanding AWS services and how they fit into cloud-based solutions. This course emphasizes the best implementation practices depending on industry, type of application, and size of the business. This course will assist the student in preparing for the AWS Cloud Architect certification.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in the following option:

- Option 1 - Prerequisite: COP1000C (minimum grade: C) and COP1700C (minimum grade: C) and CTS1146C (minimum grade: C) and CTS2380C (minimum grade: C)

**CTS3103C VIRTUALIZATION CONCEPTS AND IMPLEMENTATION (3.00 Credits)**

This course offers an in-depth look at virtualization concepts, with an overview of virtualization products. Students will learn to create, configure and manage various types of virtual machines.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

**CTS3128C CISSP (4.00 Credits)**

This course supports the Certified Information Systems Security Professional (CISSP) exam, an ISO/IEC 17024 ANSI accredited, internationally recognized benchmark information security certification designed for information security professionals. Students will explore an internationally accepted common body of knowledge encompassing eight (8) security domains which include Security and Risk Management, Asset Security, Security Engineering, Communication and Network Security, Identity and Access Management, Security Assessment and Testing, Security Operations, and Software Development Security.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: CTS2120C (minimum grade: C)
- Option 2 - Prerequisite: CET2688C

**CTS3322C RED HAT SYSTEM ADMINISTRATION 2 (3.00 Credits)**

This course focuses on the key tasks needed to become a full time Linux Administrator and to validate those skills via the Red Hat Certified System Administrator exam. This course goes deeper into Enterprise Linux administration including filesystems and partitioning, logical volumes, SELinux, firewalling, and troubleshooting.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Prerequisite: CTS1111C (minimum grade: C)

CTS3350C IMPLEMENTING ADVANCED SERVER 2012 INFRASTRUCTURE (3.00 Credits)

This course will give students the skills and knowledge necessary for planning, designing and deploying a Windows Server 2012 highly virtualized infrastructure including the Active Directory, storage, security and networking services.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Prerequisite: CTS3357C (minimum grade: C)

CTS3357C DESIGNING AND IMPLEMENTING A SERVER INFRASTRUCTURE (3.00 Credits)

This course will give students the skills and knowledge necessary to design, implement and maintain a Windows Server 2012 Infrastructure in an enterprise scaled, highly virtualized environment.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Prerequisite: CTS2389C (minimum grade: C)

CTS3363C MICROSOFT SYSTEM CENTER CONFIGURATION MANAGER (3.00 Credits)

This course provides students with the knowledge and skills to deploy and manage software and assets using the Microsoft System Center Configuration Manager. The skills developed by students completing this course will help prepare them for the Microsoft System Center Configuration Manager.

Total Contact Hrs: 48.00

Lecture Hrs: 32.00

Lab Hrs: 16.00

Complete all the courses in the following option:

- Prerequisite: CTS2389C (minimum grade: C)

CTS3859C CIW E-COMMERCE SPECIALIST (4.00 Credits)

This is a comprehensive course teaching students how to conduct business online and manage the technical issues associated with constructing an e-commerce Web site. Topics include designing and implementing commerce- driven Web sites; identifying the similarities and differences between traditional and electronic commerce, exploring e-commerce technologies at various levels of sophistication, and construction of a fully functional e-commerce web site using skills taught in this and previous classes. This course helps prepare students for the CIW E-Commerce Strategies and Practices certification exam.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in the following option:

- Pre or Corequisite: CTS3870C (minimum grade: C)

**CTS3870C SERVER-SIDE SCRIPTING (4.00 Credits)**

This course will help students understand and utilize Server Side Scripting technology. Students will work with Server Side Scripting to create Internet-based applications. Students will learn to connect to databases, work with files, extract data from HTML forms, and how to build secure applications.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in one of the following options:

- Option 1 - Prerequisite: COP1000C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP2071C (minimum grade: C)
- Option 2 - Prerequisite: COP1250C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP2071C (minimum grade: C)
- Option 3 - Prerequisite: COP1334C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP2071C (minimum grade: C)
- Option 4 - Prerequisite: COP1000C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP1700C (minimum grade: C)
- Option 5 - Prerequisite: COP1000C (minimum grade: C) and CTS1851C (minimum grade: C), Pre or Corequisite: COP1700C (minimum grade: C)
- Option 6 - Prerequisite: COP1250C (minimum grade: C) and CTS1851C (minimum grade: C), Pre or Corequisite: COP1700C (minimum grade: C)
- Option 7 - Prerequisite: COP1334C (minimum grade: C) and CTS1851C (minimum grade: C), Pre or Corequisite: COP1700C (minimum grade: C)
- Option 8 - Prerequisite: COP1000C (minimum grade: C) and CTS1851C (minimum grade: C), Pre or Corequisite: COP2071C (minimum grade: C)
- Option 9 - Prerequisite: COP1250C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP2071C (minimum grade: C)
- Option 10 - Prerequisite: COP1334C (minimum grade: C) and CTS1851C (minimum grade: C), Pre or Corequisite: COP2071C (minimum grade: C)
- Option 11 - Prerequisite: COP1250C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP1700C (minimum grade: C)
- Option 12 - Prerequisite: COP1334C (minimum grade: C) and CTS1831C (minimum grade: C), Pre or Corequisite: COP1700C (minimum grade: C)

**CTS4338C MICROSOFT EXCHANGE SERVER (4.00 Credits)**

This course will provide students with the knowledge and skills to install, configure, route and manage a Microsoft Exchange environment. They will also learn how to provide client access, back up and restore databases, and manage recipient objects such as mailboxes, distribution groups, and contacts. Practice will also be provided to thoroughly prepare students for the Microsoft Exchange certification exam offered by Microsoft.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Complete all the courses in the following option:

- Prerequisite: CTS2389C (minimum grade: C)

**CTS4348C RED HAT SYSTEM ADMINISTRATION 3 (4.00 Credits)**

This course is designed to give students working knowledge to install and configure Ansible on a management workstation and prepare managed hosts for automation. Students will write Ansible Playbooks to automate tasks, and run them to ensure servers are correctly deployed and configured. Examples of approaches to automate common Linux system administration tasks will be explored. This course is aligned with the Red Hat System Administration III: Linux Automation(RH294) certification.

Total Contact Hrs: 64.00

Lecture Hrs: 32.00

Lab Hrs: 32.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in the following option:

- Prerequisite: CTS1111C (minimum grade: C)

**CTS4379C ADVANCED CLOUD INFRASTRUCTURE AND SERVICES (3.00 Credits)**

The Cloud Systems Operations course prepares the student for system administration in cloud computing operation roles. The students will acquire skills to maintain cloud computing workloads, perform operations through console and command-line interface, implement cloud security controls and compliance requirements, monitor and troubleshoot cloud computing systems, apply network concepts, implement architectural requirements, implement recovery procedures and provide solutions for various incidents. The course will help the student prepare to take the AWS Certified SysOps Administrator-Associate certification exam.

Total Contact Hrs: 48.00

Lecture Hrs: 24.00

Lab Hrs: 24.00

Complete all the courses in the following option:

- Pre or Corequisite: CTS1134C (minimum grade: C)

CTS4383C CONFIGURING WINDOWS SERVER HYBRID ADVANCED SERVICE (4.00 Credits)

In this course, students will configuring and managing Windows Server on-premises, hybrid, and Infrastructure as a Service (IaaS) platform workloads. The Windows Server hybrid administrator is tasked with integrating Windows Server environments with Azure services and managing Windows Server in on-premises networks. This role typically collaborates with Azure administrators, enterprise architects, Microsoft 365 administrators, and network engineers.

Total Contact Hrs: 64.00

Lecture Hrs: 48.00

Lab Hrs: 16.00

Fees: LABORATORY FEE \$36.00

Complete all the courses in the following option:

- Prerequisite: CTS2382C (minimum grade: C)