COMPUTER SYSTEMS TECHNOLOGY (CST)

CST 120 Command Line Fundamentals (3 Credits)
45 lecture, 3 total contact hours
In this course, students are introduced to the Windows command line used by system users and network administrators. Students will learn Windows internal and external commands by implementing them to satisfy various challenges or tasks. This will include the proper use of the command line, command syntax, parameters, and switches. Activities will also cover redirection, understanding error messages, file types, file/directory structures, and batch file creation. Students will also be introduced to the use of PowerShell and basic Linux commands as well as the differences between the two operating systems. The title of this course was previously Microsoft Command Line Fundamentals. This course contains material previously taught in CST 118. Level I Prerequisite: Academic Reading and Writing Levels of 6

CST 160 Computer Systems Technology I (4 Credits)
60 lecture, 4 total contact hours
In this course students will learn the foundations of computer systems and digital technology as well as install, configure, upgrade, and troubleshoot personal computers. Students learn the fundamentals of various types of computer hardware and their respective subsystems, including the motherboard, power supply, central processing unit (CPU), memory, storage devices, add-on cards, BIOS/UEFI, interfaces, configuration settings, binary, octal and hexadecimal numbering systems. Additionally, students learn the fundamentals of the Windows operating system including operating system functions, structure, major system files, the Registry and the POST and boot sequence. The title of this course was previously Computer Technology I. Level I Prerequisite: Academic Reading and Writing Levels of 6; Academic Math Level 2

CST 165 Computer Systems Technology II (4 Credits)
60 lecture, 4 total contact hours
In this course, students will expand on their knowledge of personal computer and digital technology as applied to servers and data centers through hands-on experiences. Students will install server hardware and server operating systems after determining system performance specifications. Students will also install Type I and II hypervisors, perform bandwidth tests and calculations, determine data center power usage efficiency, and manage data storage subsystems. Through lab practice, students will learn to mount, configure, and maintain servers in racks and cabinets optimizing performance and efficiency. Students with experience equivalent to CST 160 may contact the instructor for permission to waive the prerequisite. The title of this course was previously Computer Technology II. Level I Prerequisite: Academic Reading and Writing Levels of 6; CST 160 minimum grade "C", may enroll concurrently

CST 174 CST Co-op Education I (1-3 Credits)
120 to 360 clinical/other, 1 to 3 total contact hours
In this course, students gain skills from a new experience in an approved, compensated, industry-related position. Together with the instructor and employer, students set up work assignments and learning objectives to connect classroom learning with career-related work experience. Level I Prerequisite: Academic Reading and Writing Levels of 6; consent required

CST 185 Local and Mobile Networking Essentials (4 Credits)
60 lecture, 4 total contact hours
In this course, students learn basic networking concepts including the roles of various network devices, how they are connected and how they communicate. Students are introduced to concepts of peer-to-peer, client/server relationships, network topologies, media, network architectures, the open systems interconnection (OSI) and Transmission Control Protocol (TCP)/ Internet Protocol (IP) models, Ethernet, TCP/IP protocols, IPv4/IPv6, Media Access Control (MAC) addressing, routing, Network Address Translation (NAT), virtual private networks (VPNs), wireless technologies, wireless access points and security, Bluetooth, Near Field Communication (NFC), and Dedicated Short-Range Communication (DSRC). The course also provides a strong foundation towards preparation for the CompTIA Network+ Exam. Level I Prerequisite: Academic Reading and Writing Levels of 6 Level II Prerequisite: CST 160

CST 270 Computer Forensics (4 Credits)
60 lecture, 4 total contact hours
In this course, students will learn the practice of identification, handling, recovery, analysis and reporting of data on digital storage devices. Students will be introduced to identifying the types and locations of evidentiary data, from analysis of hexadecimal file structures to directory and registry location. Topics include analysis of file systems, evidence data, including recovery of password protected and deleted files, Internet artifacts, thumb files, shadow files, and basic registry analysis. Hands-on exercises guide discussions and reinforce the subject matter. Common forensic acquisition and analysis tools are introduced and utilized in this course, including Forensic Tool Kit Suite (FTK) Imager, FTK and Autopsy. Other tools include freeware password recovery and hexadecimal analysis programs that are widely used for forensic purposes. Legal considerations of this profession are also covered. The title of this course was previously Computer Forensics I. Level I Prerequisite: Academic Reading and Writing Levels of 6; CST 160 minimum grade "C+"