

# COMPUTER SYSTEMS SECURITY (CSS)

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## **CSS 200 Introduction to Network Security - Security+ (4 Credits)**

60 lecture, 4 total contact hours

In this course, students learn the fundamentals of network security. Topics to be covered include understanding security measures and threats, techniques and tools for testing and securing systems, legal and ethical issues, basic intrusion detection and incident response methods. Many of the topics required for the CompTIA Security+ certification will be covered. This course helps students prepare for the CompTIA Security+ Certification. The student is expected to have a basic knowledge of Linux, Windows, working at the command line of any operating system and networking. Level I Prerequisite: Academic Reading and Writing Levels of 6; Academic Math Level 1 Level II Prerequisite: CIS 120 minimum grade "C"

## **CSS 205 Essentials of Network Penetration Testing (4 Credits)**

60 lecture, 4 total contact hours

In this course, students are introduced to the techniques of network penetration testing using open source tools. Through various hands-on exercises, the student will be introduced to the concepts, techniques, tools and methodologies for evaluating and auditing network vulnerabilities and properly securing networks from attack. Students are expected to have knowledge of Linux, Windows, working at the command line of any Operating System and networking. Level I Prerequisite: Academic Reading and Writing Levels of 6; Academic Math Level 1; CSS 200 minimum grade "C", may enroll concurrently

## **CSS 210 Network Perimeter Protection - CCNA Security (4 Credits)**

60 lecture, 4 total contact hours

In this course, students learn how to implement security solutions that reduce the vulnerability of computer networks. Topics include principles of network security, packet filtering with Access Control Lists (ACLs), configuring networks and deploying multiple firewall topologies using Cisco devices, implementing virtual private networks (VPNs) and user authentication. This course uses the Cisco Networking Academy curriculum. Level I Prerequisite: Academic Reading and Writing Levels of 6; Academic Math Level 1; CNT 206 and CNT 216, minimum grade "C"

## **CSS 225 Cybersecurity Operations - CCNA Cyber Ops (4 Credits)**

60 lecture, 4 total contact hours

In this course, students are introduced to Cybersecurity Operations. Students will develop the knowledge and skills needed to work as a Security Analyst with a Security Operations Center team. Security skills needed for monitoring, detecting, investigating, analyzing and responding to security events, thus protecting systems and organizations from cybersecurity risks, threats and vulnerabilities will be discussed. This course helps prepare students to take the Cisco Certified Network Associate (CCNA) exam. Level I Prerequisite: Academic Reading and Writing Levels of 6; Academic Math Level 1; CSS 200 minimum grade "C"

## **CSS 285 Essentials of Automotive Penetration Testing (4 Credits)**

60 lecture, 4 total contact hours

In this course, students will gain an understanding of the automotive cybersecurity threat-landscape. Automotive attack surfaces will be highlighted, with a focus on attack techniques to provide insight into creating secure automotive systems. Students will complete hands-on exercises including reverse engineering in a lab environment. Emphasis will be placed on offensive methodologies with a follow-up on defensive strategies. Level I Prerequisite: Academic Reading and Writing Levels of 6; ASV 131 and CST 185, minimum grade "C"

## **CSS 295 Cybersecurity Industry Certification Preparation (1 Credit)**

15 lecture, 1 total contact hours

In this course, students will apply their knowledge of cybersecurity principles to application and preparation for the CompTia Security+ certification exam. Level I Prerequisite: Academic Reading and Writing Levels of 6; CSS 200, CSS 205 and CSS 210, minimum grade "C"; CSS 210 may enroll concurrently

## **CSS 296 Cybersecurity Operations Certification Preparation (1 Credit)**

15 lecture, 1 total contact hours

In this course, students will apply their knowledge of advanced cybersecurity concepts to application and preparation for the Cisco CCNA Cyber Operations Associate Examination. Level I Prerequisite: Academic Reading and Writing Levels of 6; CSS 225, CNT 290 and CPS 141, minimum grade "C"; CNT 290 may enroll concurrently