

Cyber Security

CSIA 200

Computer Forensics Fundamentals [RE] • 5.0 Credits

This course provides students with the fundamentals of computer forensics, cyber crime scene analysis, and electronic discovery, along with associated investigation tools and techniques. Students explore computer forensic theory and focus on various forensic skills including conducting security incident investigations, file system and storage analysis, and data hiding techniques. Students also learn about legal issues and standards. \$35 virtual desktop fee. **Prerequisite: A grade of 2.5 or better in CS 150, and a grade of 2.0 or better in MATH 50, 70, or 72, or a grade of 0.7 or better in a higher math class, or appropriate placement.**

CSIA 250

Networking Fundamentals [RE] • 5.0 Credits

This course focuses on implementing, managing, protecting, and troubleshooting small to medium size enterprise branch networks. Topics covered include OSI model, Cisco devices, wireless networks, switching, IP routing, troubleshooting routing, and advanced TCP/IP configuration. This course prepares students for the Cisco Certified Network Associate (CCNA) exam. \$35 virtual desktop fee. **Prerequisite: Completion of CS 228 and CS 231, both with a with a 0.7 or higher. CS 231 can be taken concurrently.**

CSIA 300

Cyber Security and Information Assurance [RE] • 5.0 Credits

This course provides students with the tools and resources needed to develop an understanding of the CISSP certification body of knowledge. Using a variety of pedagogical features, students learn security basics such as security laws, access control, cryptography, and security architecture and design. \$35 virtual desktop fee. **Prerequisite: Completion of CS 150, CS 231, and CSIA 250, all with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 310

E-Commerce Security [RE] • 5.0 Credits

This course provides students with tools and resources they need to develop a thorough understanding of four major aspects of security: policies and procedures, technology orientation, computer and network security, and managing organizations securely. \$35 virtual desktop fee. **Prerequisite: Completion of CS 150, CS 206, and CS 232, all with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 320

Ethical Hacking [RE] • 5.0 Credits

This course provides students with the tools and resources needed to develop an understanding of ethical hacking. Students are taken through an interactive environment where they are shown how to scan, test, hack, and secure information systems. \$35 virtual desktop fee. **Prerequisite: Completion of CS 232 and CSIA 300, both with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 330

Wireless Security [RE] • 5.0 Credits

This course provides students with the conceptual knowledge and hands-on skills needed to secure wireless technology. Topics include network security design models, managed wireless endpoints, WLAN discovery, intrusion, and attack techniques. It also details 802.11 protocol analysis, wireless intrusion prevention systems (WIPS) implementation, and Layer 2 and Layer 3 VPNs. \$35 virtual desktop fee. **Prerequisite: Completion of CS 150 and CS 231 with a 2.5 or higher, concurrent enrollment in or**

completion of CSIA 300 with a 2.0 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.

CSIA 410

Cryptology [RE] • 5.0 Credits

This course provides students with an operational understanding of basic cryptographic systems. Students learn about symmetric cryptography, block ciphers and secure hash functions, asymmetric cryptography, key exchange and public-key systems, and authentication and encryption in an adversarial model. \$35 virtual desktop fee. **Prerequisite: Completion of CS 150, CS 231, and CSIA 250, all with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 420

Cyber Crime and Terrorism [RE] • 5.0 Credits

This class begins with a broad introduction to the field of computer crime, discussing the history of computer crime, basic criminal techniques, and the relevant laws. It walks students through forensics, litigation, depositions, expert reports, trials, and how to select an appropriate expert witness. This class also covers specific techniques and tricks that hackers use and how to defend against such attacks. \$35 virtual desktop fee. **Prerequisite: Completion of CSIA 250, CS 232, CSIA 300, and CSIA 320, all with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 430

Unix Administration and Security [RE] • 5.0 Credits

Students study UNIX and Linux system administration and security. System administration topics include installation, kernel configuration and customization, user administration, package management and backup, automating and scheduling tasks, file system management and maintenance, and system initialization and services. Students also learn how to assess security on UNIX and Linux systems, take appropriate actions to correct security deficiencies, and prepare administrative reports. \$35 virtual desktop fee. **Prerequisite: Completion of CS 232, CSIA 250, CSIA 300, and CSIA 320, all with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 440

Cyber Testing and Penetration [RE] • 5.0 Credits

This course covers a broad base of topics in advanced penetration testing and information security analysis. Students are exposed to techniques and tools to perform a thorough penetration test along with legal requirements, rules of engagement, how to plan and schedule a test, how to perform vulnerability analysis, external and internal penetration testing, and techniques to produce a professional report from the engagement. \$35 virtual desktop fee. **Prerequisite: Completion of CSIA 300, CSIA 320, and CSIA 330, all with a 0.7 or higher, and meets the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**

CSIA 450

Cyber Security Capstone [RE] • 5.0 Credits

This course integrates all the various cyber security knowledge and skills learned in previous courses into a project. Emphasis is placed on security policy, process planning, procedure definition, business continuity, and systems security architecture. Upon completion, students should be able to design and implement comprehensive information security architecture from the planning and design phase through

Cyber Security

implementation. \$35 virtual desktop fee. **Prerequisite: Must be taken senior year, or after 25 credits of CSIA classes are taken, and meet the criteria for acceptance into a BAS/BSN program and completion of a two-year degree or equivalent.**