Computer Sci./Cyber Security

CSS 101
Cybersecurity Fundamentals. . . . . 3.00 credits
This course covers the importance of cybersecurity in today's business operations and explores the job responsibilities and skills of an entry-level cybersecurity analyst. There is an emphasis on how cybersecurity professionals use frameworks and controls to protect business operations. Additionally, Security Information and Event Management (SIEM) data and the use of a playbook to respond to identified threats, risks, and vulnerabilities is also covered.

CSS 146
Legal Issues/Information Security. . . . . 3.00 credits
This course will focus on an overview of the legal processes involved in implementing and maintaining an e-commerce website. In addition, the course examines security issues involved in maintaining a web or intranet/internet site and potentials for misuse. Prerequisite(s): ITE 145 or CSS 101

CSS 201
Operating System and Asset Security. 3.00 credits
This course introduces Linux, an operating system commonly used by cybersecurity professionals. It provides an overview of the Linux command line through the Bash shell and how to perform actions such as to navigate and manage the file system and authenticate users. It will also provide an overview of how to interact with a database using SQL. Additionally, the course will build an understanding of how assets are classified. There will be an emphasis on common threats and vulnerabilities, and the security controls used by organizations to protect valuable information and mitigate risk. Pre-requisite(s): CSS 101

CSS 207
Incident Response. . . . . 3.00 credits
This course will focus on incident detection and response. Topics will include: defining a security incident and explaining the incident response lifecycle, including the roles and responsibilities of incident response teams, analyzing and interpreting network communications to detect security incidents using packet sniffing tools. It will also explore the incident investigation and response processes and procedures and the use of Intrusion Detection Systems (IDS) and Security Information Event Management (SIEM) tools. Pre-requisite(s): CSS101

CSS 230
Managing Risk Information Systems. . 3.00 credits
This course will focus on the broad topic of risk management and how risk, threats, and vulnerabilities impact information systems. Areas of instruction include how to assess and manage risk based on defining an acceptable level of risk for information systems. Elements of a business impact analysis, business continuity plan, and disaster recovery plan will also be discussed. Prerequisite(s): ENG 101, and ITE 145 or CSS 101

CSS 245
Security Policies & Implem. Issues. . . . 3.00 credits
The course will focus on security policies that can be used to help protect and maintain a network, such as password policy, e-mail policy and Internet policy. Topics also include organizational behavior and crisis management.Prerequisite(s): ITE 145 or CSS 101

CSS 345
Auditing IT Infrastrct for Complnc. . . . . 3.00 credits
This course will focus on the principles, approaches, and methodology in auditing information systems to ensure compliance with pertinent laws and regulatory provisions, especially in the context of information systems security (ISS). Prerequisite(s): ENG 101, ENG 102, ITE 220. and ITE 145 or CSS 101.

CSS 346
Access Controls,Authentication &PKI. 3.00 credits
This course will focus on the concept of access control to information systems. Applications, authentication, and accounting for end users and system administrators will be covered. In addition, security controls for access control including tokens, biometrics, and use of public key infrastructures (PKI) will be covered. Prerequisite(s): ENG 101, ENG 102, and ITE 145 or CSS 101. Recommended Prerequisite(s): ITE 220

CSS 347
Security Strtgs in Wndws OS/Appl. . . . 3.00 credits
This course will focus on security implementations for various Windows platforms and applications. Areas of study involve identifying and examining security risks, security solutions, and tools available for various Windows platforms and applications. Prerequisite(s): ENG 101, ENG 102, and ITE145 or CSS 101. Recommended Prerequisite(s): ITE 220.

CSS 348
Security Strategies in Linux OS/App. . 3.00 credits
This course will focus on the securing of Linux platforms and applications. Areas of study include identifying and examining methods of securing Linux platforms and applications and implementing those methods. Prerequisite(s): ENG 101, ENG 102, and ITE145 or CSS 101. Recommended Prerequisite(s): ITE 220.

CSS 435

Network Security Strategies. . . . . 3.00 credits

This course offers an introduction to firewalls and virtual private networks (VPNs) for securing a network. Various network security-related issues, such as threats and business challenges, are introduced and examined. The course addresses firewall functionality and how to select, construct, configure, and manage a firewall. Different types of VPNs for securing data in an organization are also addressed, as well as the benefits and architecture of a VPN and implementation considerations. In addition, students will learn the essentials of secure network design and management. (Formerly titled: Fundamentals of Network Security) Prerequisite(s): ENG 101; ENG 102, and ITE 145 or CSS 101. Recommended Prerequisite(s): ITE 220.

CSS 436

System Forensics, Invest and Rspns. . 3.00 credits

This course will focus on examining the fundamentals of system forensics, i.e.: what forensics is, an overview of computer crime, and the types of laws that affect forensic investigations. A significant part of the course is devoted to examining the tools, techniques, and methods used to perform computer forensics and investigations. Students will learn how to collect, preserve, analyze, and document all types of digital evidence, from computers running various operating systems, mobile devices, e-mail, and more. Prerequisite(s): ENG 101, ENG 102, and ITE 145 or CSS 101. Recommended Prerequisite(s): ITE 220.

CSS 437

Hacker Tech,Tools/Incident Handling. 3.00 credits

This course will focus on an introduction to hacking tools and incident handling. Areas of instruction include various tools and vulnerabilities of operating systems, as well as the software and networks used by hackers to access unauthorized information. This course also addresses incident handling methods used when information security is compromised. Prerequisite(s): ENG 101, ENG 102 , and ITE 145 or CSS 101. Recommended Prerequisite(s): ITE 220

CSS 438

Scrity Strtg for Web Aps & Soc Ntw. . . 3.00 credits

This course will focus on how internet and web-based applications have transformed the way businesses, organizations, and people communicate. With this transformation comes new risks, threats, and vulnerabilities for web-based applications and the people who use them. This course presents security strategies to mitigate the risk associated with Web applications and social networking. Prerequisite(s): ENG 101, ENG 102, and ITE145 or CSS 101. Recommended Prerequisite(s): ITE 220.

CSS 448

Cyberwarfare. . . . . 3.00 credits

This course will focus on the cyberwarfare landscape, offensive and defensive cyberwarfare techniques, and the future of cyberwarfare. It also addresses military doctrine and strategies, intelligence operations, and cyberwarfare-related laws and ethics. Students will be exposed to many cybersecurity technologies, processes, and procedures that help to protect endpoints, networks, and data. They will also learn how to identify and analyze threat and vulnerabilities, and create appropriate mitigation strategies. Prerequisite(s): ENG 101, ENG 102, and ITE145 or CSS 101. Recommended Prerequisite(s): ITE 220.

CSS 490

Cybersecurity Capstone. . . . . 3.00 credits

This is the capstone course for the Cybersecurity major. The student can have no more than 6 credits remaining in their major to complete in their degree program prior to enrolling in this course. This course serves as a comprehensive assessment of knowledge and skills in information systems and cybersecurity. Activities include research into selected security problems and planning, designing and implementing security solutions for a user organization. The course must be taken at Charter Oak State College. Prerequisite(s): ENG 101; ENG 102, and ITE 145 or CSS 101.