COMPUTER SCIENCE (CSCI)

CSCI 501 Overview of Computer Security 3 Credit Hour(s)
This course surveys major topics in Computer and Network Security.
Note: Admission into program
Offered: Resident and Online

CSCI 511 Digital Forensics 3 Credit Hour(s)
This course covers the basics of digital forensics, including the technical aspects of evidence gathering for legal testimony and usage of digital forensics tools.
Note: Admission into program
Offered: Resident and Online

CSCI 561 Ethics, Legal Issues, and Policy 3 Credit Hour(s)
This course covers ethical issues in computer and network security, legal issues, and business policy. It will teach students what the laws are concerning computer and network security, including the legal boundaries for breaking into systems without authorization. It will also cover the issues related to creating security policies for organizations, as well as the ethical responsibilities of protecting network and computer systems, and the ethical boundaries related to accessing other organizations systems.
Note: Admission into program
Offered: Resident and Online

CSCI 601 Applied Network Security 3 Credit Hour(s)
Prerequisite: CSCI 501
In this course the students will learn hands on, practical techniques for securing a network. Topics include installing, configuring and using Intrusion Detection software, firewalls, anti-virus, etc.
Offered: Resident and Online

CSCI 605 Applied Cryptography 3 Credit Hour(s)
Prerequisite: CSCI 601
This course covers topics in modern cryptography with an emphasis on learning how to implement cryptographic protocols using mainstream cryptographic libraries such as OpenSSI.
Offered: Resident and Online

CSCI 611 Secure Software Engineering 3 Credit Hour(s)
Prerequisite: CSCI 501
This course is primarily concerned with how to write secure software, including common pitfalls in major languages.
Offered: Resident and Online

CSCI 612 Security Engineering 3 Credit Hour(s)
Prerequisite: CSCI 501
This course covers issues related to validation and verification of the security of the software.
Offered: Resident and Online

CSCI 620 Issues in Security, Privacy, and Anonymity 3 Credit Hour(s)
Prerequisite: CSCI 501 and (CSCI 502 or CSCI 605)
This course covers security and privacy issues that arise in the field and how to mitigate them, including privacy of data, privacy preserving data mining, routing security, sensor network security, anonymous routing, and social networking.
Offered: Resident and Online

CSCI 631 Web Security 3 Credit Hour(s)
Prerequisite: CSCI 601
This course deals with web security issues, such as SQL injection and cross site scripting along with how to defend and protect against such attacks.
Offered: Resident and Online

CSCI 632 Ethical Hacking 3 Credit Hour(s)
Prerequisite: CSCI 601
This course goes into the how and why of ethical hacking, and how it is used to strengthen security of systems, including issues in penetration testing, such as physical security and social engineering.
Offered: Resident and Online

CSCI 651 Advanced Topics in Computer Security 3 Credit Hour(s)
Prerequisite: CSCI 601
A study of advanced technical challenges in cyber security as the field continues to evolve. Current developments in the industry and research advances will dictate specific areas of emphasis in the course per semester.
Offered: Resident and Online

CSCI 681 Capstone Project 3 Credit Hour(s)
The capstone is an opportunity for the student to demonstrate the Cyber Security skills gained throughout the program. The student will learn how to apply the tools, techniques, and knowledge gained throughout the program in a practical, real world setting. The goal for this course is to evaluate the knowledge and skills gained by students in the Cyber Security program.
Registration Restrictions: Final Semester
Offered: Resident and Online

CSCI 697 Special Topics in Cybersecurity 3 Credit Hour(s)
Topics of special interest not included in the regular department offerings. May be taken more than once, but no topic may be repeated.
Offered: Resident