CYBERSECURITY (CYBER)

Courses

CYBER 101   INTRODUCTION TO CYBERSECURITY   3 Units
This course offers a broad introduction to important topics in Cybersecurity. It is centered on how modern information systems can be attacked and protected in practice. The main topics include network attacks and defense, host attacks and defense, basic cryptography, authentication and access management, intrusion detection, forensics, security policies and risk management, assessment and penetration testing, and cybercrime and cyberwar. This course lays the foundation for further study in Cybersecurity.

CYBER 358   SECURITY OPERATIONS IN THE CLOUD   3 Units
This course studies operations for making cloud computing and storage secure. The detailed topics include data privacy implementation, identity and access management, vulnerability assessment, intrusion detection, incident response, regulatory compliance, and secure application redesign in cloud. The course includes large amounts of hands-on labs and projects for security operations in selected clouds.
PREREQ: COMPSCI 354 AND ITSCM 452, OR CONSENT OF INSTRUCTOR

CYBER 459   SYSTEMS SECURITY ENGINEERING   3 Units
This course focuses on the design and implementation of a secure application system that will be assessed by other peers in the course. Students will work in teams through the entire life cycle of a security system project that includes security requirement analysis, security architecture design, attack prevention and detection implementation, penetration testing, incident response, and recovery. The lecture will target the tactics needed to be taken by the students in their weekly lab practicum. Students will apply both technical and writing skills through this course.
PREREQ: COMPSCI 354 AND ITSCM 452, OR CONSENT OF INSTRUCTOR