

IT 4843: Ethical Hacking for Effective Defense

3 Credit Hours

Prerequisite: IT 4323 or ECET 3400 or CS 4622

This course focuses on detection of network and system vulnerabilities by taking an attacker-like approach to system, network, and data access. Topics include network attacks and defenses, Operating System and application vulnerabilities, social engineering attacks, and malware. Ethical, legal implications of network attacks are also discussed.

IT 4853: Computer Forensics

3 Credit Hours

Prerequisite: IT 4323 or CS 4622 or ECET 3400

This course studies techniques and tools in computing investigation, digital evidence collection, recovery, and analysis. Topics include: Legal issues relating to digital evidence, recover deleted files and discover hidden information, reconstruct user activity from e-mail, temporary Internet files and cached data, assess the integrity of system memory and process architecture to reveal malicious code.

IT 4863: Web and Mobile Application Security

3 Credit Hours

Prerequisite: IT 3203

This course introduces web and mobile application security issues, hands-on practices to explore security vulnerabilities, and best practices to defend against vulnerabilities in web and mobile.

IT 4883: Infrastructure Defense

3 Credit Hours

Prerequisite: IT 4323 or ECET 3400 or CS 4622

This course provides an overview of the infrastructure assessment and penetration testing process and the processes and techniques for improving the defensibility of that infrastructure.