

EEL 4789 – Ethical Hacking and Countermeasures



Topics Covered

- Ethics of Hacking and Cracking
- Reconnaissance
- Scanning Tools
- Sniffers
- TCP/IP Vulnerabilities
- Encryption and Password Cracking
- Spoofing
- Session Hijacking
- Hacking Network Devices
- Trojan Horses
- Denial-of-Service Attacks
- Buffer Overflows
- Programming Exploits
- Mail Vulnerabilities
- Web Application Vulnerabilities
- Windows Vulnerabilities
- Linux Vulnerabilities



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Course Overview

This course is intended to provide a practical survey of network security applications and standards. The emphasis is on applications that are widely used on the Internet for corporate networks, and on standards that have been widely deployed. It also provides students with the knowledge and skills to begin supporting network security and best practices for implementing security.

Objectives

1. Exposure to security issues in telecommunications and networks.
2. Understanding the design aspects of security including threat identification and risk assessment.
3. Understanding the best practices and guidelines for developing and verifying effective security policies and procedures, security goals, threats and vulnerabilities, standards and security policy development, forensics, privacy implications, and ethics.
4. Understand different ways of securing Communication.



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