THE OHIO STATE UNIVERSITY
COLLEGE OF ENGINEERING

Information Security Projects

CSE 5472

Credit Hours:
3.00

Course Levels:
Undergraduate (1000-5000 level)
Graduate (5000-8000 level)

Course Components:
Lecture
Lab

Course Description:
Team-based projects: solve information security problems (mobile/static host/network hardening, intrusion detection and vulnerability scanning, forensics); results communicated through report writing and presentation.

Prerequisites and Co-requisites:
Prereq: 3901, 3902, or 3903, and 3461, 5461, or 4471; or Grad standing.

Course Goals / Objectives:
- Be competent with the use of VMWare to create flexible, complex virtual computer networks
- Be competent with techniques for hardening various operating systems (Linux and Windows) and services running on these systems (web, database, others)
- Be familiar with issues involved in the configuration and use of firewalls, intrusion detection/prevention, and vulnerability scanning/exploit tools
- Be familiar with common software vulnerabilities and techniques for finding and fixing them
- Be familiar with host security standards and laws such as HIPAA, PCI, Ohio House Bill 104, OWASP, NSA, CSI and so on
- Be familiar with general goals of and issues pertaining to computer forensic analysis and incident response
- Be exposed to a wide variety of computer security tools, especially forensics and investigation tools and scanning tools

Course Topics:

- Host hardening: configuration, patching, logging & monitoring, host-based intrusion detection, etc.
- Network Security: vulnerability scanning and enumeration, web application scanning, VPN, sniffing, network-based intrusion detection, etc.
- Computer Investigations: incident response, forensics, malware analysis, etc.
- Miscellaneous topics relating to information security
- VMware, project objectives

Designation:

Elective