Companies, Small Businesses, Military & Governments are desperate to secure their computers, networks and data assets

For more information on this course, please contact Dr. Madan at bmadan@odu.edu or visit the Department of Modeling, Simulation, and Visualization Engineering in ECSB Room 1300.

MSIM 795/895
TOPICS: Networked Systems Security
Dr. Bharat Madan
Instructor
Spring 2014 Offering

COURSE DESCRIPTION:
The course will focus on techniques and software tools required to secure networks & networked information systems. The lectures will be supported by computer based exercises to hone your skills necessary for preventing, detecting, tolerating attacks on networks and post-attack forensics.

TOPICS TO BE COVERED WILL INCLUDE:
• Network threats & security overview
• Intrusion Prevention & Detection: Firewalls, Host & Network based intrusion detection, Snort, Packet filters
• Cryptography: Private/public crypto systems, Hash functions, Message integrity, Digital certificates
• Network Security Protocols—IPSec, SSL, HTTPS, PKI, VPNs, Tor, Wireless network security
• Network Access Control: Kerberos, Single sign-on, Shibboleth, SAML
• Modeling of Attacks: Attack graphs, Attack response graphs, Attack trees
• Network penetration testing tools: Port scanning, nmap, Packet sniffers, Wireshark, Netcat, Metasploit

PRE-REQUISITES:
C or C++ or Java programming knowledge; Engineering, Science or Math Major.

http://eng.odu.edu/msve