

Inver Hills Community College

ITC 2840: Advanced Network Security

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites:

ITC 2830 - Implementing Cisco Network Security (CCNA Security)

Corequisites: None

MnTC Goals: None

Expands the scope and depth of the skills and knowledge acquired in previous network security courses by focusing on the advanced capabilities of network defense strategies including Virtual Private Networks (VPN), Host Intrusion Detection Systems (HIDS) and Network Intrusion Detection Systems (NIDS). Students will learn the evolution and current best practices of applying these technologies, which are universally deployed in networks of all sizes. Prerequisites: ITC 2830 or CCNA Security Certification

B. COURSE EFFECTIVE DATES: 08/26/2013 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Perimeter Security (40%) - ACLs, Protocol Security, IOS Firewall, ASA Security
2. Identity Security and Access Management (15%) - AAA/RADIUS/TACACS, Multifactor Authentication, Wireless Network Security, Network Access Control
3. Data Privacy (8%) - Cryptography, Virtual Private Networking
4. Security Monitoring (24%) - IDS, IPS, HIPS, Anomaly Detection & Mitigation
5. Security Management Utilities (8%)
6. Regulatory Compliance (5%)

D. LEARNING OUTCOMES (General)

1. Describe and implement the advanced features of access control lists and IOS Firewall as used for securing network resources
2. Demonstrate the ability to appropriately configure network security appliances such PIX or ASA devices
3. Describe typical network attack vectors and suggest appropriate mitigation strategies
4. Describe the importance of secure authentication
5. List and describe types of Virtual Private Networks
6. Design and implement a VPN
7. Describe the importance of and configure intrusion protection and detection systems
8. Students will practice business soft skills including written, active listening, and oral presentation. Students will document evidence of business skill practice in an electronic portfolio.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted