

# Minnesota State University Moorhead

## CSIS 441: Network Security

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

CSIS 349 - Networks and Data Communications

Corequisites: None

MnTC Goals: None

This class addresses those fundamental issues confronting today's network administrator. Topics covered include LAN subnetting and router configuration, security policy development, data security and encryption, access control, packet filtering, perimeter protection, intrusion detection, and disaster recovery. The amount of time spent on each topic and on current issues will vary with the interests/composition of the class. Junior standing in a CSIS major is required.

**B. COURSE EFFECTIVE DATES:** 08/25/2008 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. System administration basics.
2. System security issues.
3. LAN subnetting and organization for access control.
4. Web security issues.
5. Vulnerability testing.
6. Perimeter protection.
7. Intrusion detection.
8. Forensics.
9. Disaster recovery.
10. Project presentation and demonstration.

### D. LEARNING OUTCOMES (General)

1. Create acceptable use and security policies for an example enterprise.
2. Create network diagrams for segmenting and providing security for an example enterprise.
3. Demonstrate at least two of
  - Install and configure an ACL based packet filter
  - Install and configure intrusion detection software
  - Install and configure VPN software
  - Install and configure Web Proxy server
  - Install, configure, and demonstrate the use of TLS and pgp software
4. Describe the behavior and strategies of symmetric and asymmetric encryption.

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

None

**F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted