

HIBBING COMMUNITY COLLEGE COURSE OUTLINE

COURSE NUMBER & TITLE: CNT2010: Information Assurance 1

CREDITS: 3 (2 Lec / 1 Lab)

PREREQUISITES: CNT1010, CNT1020, CAPP2018, MCT2040, MCT2010, MCT2020

CATALOG DESCRIPTION:

In this class, students will be introduced to computer network vulnerabilities and threats and how to safeguard computer networks from those vulnerabilities and threats. This course will expose students to network security planning, network security technology, network security organization and the legal and ethical issues associated with network security. In this class, students will learn the skills necessary for Security + certification.

OUTLINE OF MAJOR CONTENT AREAS:

- I. Gain an overview of computer and network security issues.
- II. Computer and individual authentication
- III. Become familiar with common attacks and malicious code.
- IV. Configuring secure remote access to network resources
- V. Configuring secure access to common internet resources
- VI. Wireless networking and security
- VII. Hardware based solutions to security issues
- VIII. Secure network topologies
- IX. Hardening network services
- X. Cryptographic algorithms and methods of use
- XI. Physical security

COURSE GOALS/OBJECTIVES/OUTCOMES:

Students will

1. understand the goals of network security.
2. describe hardware and individual authentication.
3. recognize symptoms of malicious attacks.
4. describe secure methods of remote access.
5. explain security issues with common network protocols.
6. configure security over wireless networks.
7. describe router and firewall security.
8. assess vulnerability of a target system.
9. exhibit understanding of viruses and malware.
10. implement encryption techniques.
11. exhibit malware detection techniques.
12. analyze economic impact of intrusions and malware.

MNTC GOALS AND COMPETENCIES MET:

N/A

HCC COMPETENCIES MET:

Working Productively and Cooperatively

Thinking Creatively and Critically

STUDENT CONTRIBUTIONS:

The student is expected to prepare for class, attend all lectures and labs, participate in all class activities, complete assignments on time, and request assistance if needed.

**STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS
SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR**

**SPECIAL INFORMATION: (SPECIAL FEES, DIRECTIVES ON HAZARDOUS
MATERIALS, ETC.):**

AASC APPROVAL DATE: May 13, 2014

REVIEW DATE: May 2019

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