Minnesota State University Moorhead

CSIS 362: Cybersecurity Fundamentals

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course will provide students with a high-level introduction to the fundamental concepts behind cybersecurity, basic information about the threats that may be present in the cyber realm and a basic understanding of how mathematical logic can be applied to the design of secure systems.

B. COURSE EFFECTIVE DATES: 01/02/2021 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Cybersecurity Foundations
2. Formal Methods

D. LEARNING OUTCOMES (General)

1. Demonstrate an understanding of the fundamental concepts of the cybersecurity discipline, used to provide system security.
2. Explain potential system attacks and their characteristics.
3. Describe and identify the bad actors in cyberspace and analyze their resources, capabilities, techniques and motivations.
4. Describe cyber defense tools and methodologies, and apply cyber defense methods to prepare a system to fend off attacks.
5. Describe appropriate measures to be taken should a system compromise occur.
6. Properly use the vocabulary associated with cybersecurity.
7. Apply formal security policy models to real world scenarios.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted