

Minnesota State University Moorhead

CSIS 464: Software Security Analysis

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:

This course requires the following prerequisite

CSIS 462 - Software Security

Corequisites: None

MnTC Goals: None

The intent of this course is to provide students with an understanding of the tools and methods for analyzing software, in either source code or binary form. This course will provide students with a thorough understanding of system vulnerabilities including what they are, how they can be found, and/or identified, the different types of vulnerabilities, how to determine the root cause of a vulnerability, and how to mitigate their effect on an operational system.

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

C. OUTLINE OF MAJOR CONTENT AREAS

1. Software Security Analysis
2. Vulnerability Analysis

D. LEARNING OUTCOMES (General)

1. Describe software security analysis tools and techniques.
2. Apply their knowledge to perform software security analysis, using common tools, against previously unknown software components.
3. Apply tools and techniques for identifying vulnerabilities.
4. Create and apply a vulnerability map of a system.
5. Apply techniques to trace a vulnerability to its root cause.
6. Propose and analyze countermeasures to mitigate vulnerabilities.
7. Explain the circumstances under which a vulnerability must be disclosed.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted