



## INTRODUCTION TO IT SECURITY — ISTC 1061

### A. Course Description

- **Credits:** 3.00
- **Lecture Hours/Week:** 2.00
- **Lab Hours/Week:** 1.00
- **OJT Hours/Week:** 0
- **Prerequisites:**
  - ISTC 1045: Network Systems I: Introduction to Networking
- **Corequisites:** None
- **MnTC Goals:** None

This course is designed to investigate the analysis and implementation of network security policies, procedures and guidelines for establishing, monitoring and controlling methodologies for local and wide area networks. The course covers authentication methods, communication security, infrastructure security, cryptography, operational security and firewalls. Prerequisites: ISTC 1045 Network Systems I

B. **Course Effective Dates:** 8/2/19 – Present

### C. Outline of Major Content Areas

As noted on course syllabus

### D. Learning Outcomes

1. Describe different types of malware.
2. Describe how end-user training can increase security.
3. Describe the basic steps of an attack.
4. Describe the five basic principles of cyber defense.
5. Examine IT security policies and procedures.
6. Examine access control methods.
7. Examine authentication methods.
8. Examine business-continuity plans.
9. Examine cryptography methods and algorithms.
10. Examine disaster-recovery plans.
11. Examine methods for securing (hardening) data, applications, operating systems, and networks.
12. Examine various "attacks" against IT systems.

13. Explain the differences between vulnerability scanning and penetration testing.
14. Identify challenges for IT security.
15. Identify the types of attackers (hackers, crackers, etc.)
16. List techniques for mitigation and deterring attacks.

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

**F. Learner Outcomes Assessment**

As noted on course syllabus

**G. Special Information**

None noted