

York Technical College

Course Syllabus

Course Information

Course Prefix/Number: IST 291
Course Title: Fundamentals of Network Security I
Lecture Hours/Week: 3.0
Lab Hours/Week: 0.0
Credit Hours/Semester: 3.0

DL Attendance/VA Statement Textbook Information

Course Description: This course is the study of intro levels of security processes based on a security policy, emphasizing hands-on skills in the areas of secure perimeter, security connectivity, security management, identity services, and intrusion detection. The course prepares students to manage network security.

Course Competencies:

Upon successful completion of this course, the student should be competent to perform the following tasks:

Module 1 – General Security Concepts

Explain popular access control models.
Discuss and recognize popular methods of authentication.
Demonstrate an understanding of essential and non-essential services and protocols.
Identify popular attacks and malicious code.
Demonstrate a working knowledge of auditing.

Module 2 – Communication Security

Demonstrate an understanding of remote access technologies, email and FTP.
List security techniques used in securing wireless communication.
Evaluate ways of securing email and websites.
Identify ways of securing network directory services, such as Active Directory or Novell.

Module 3 – Infrastructure Security

List the attributes of current security devices and media.
Demonstrate a working knowledge of intrusion detection and security baselines.
Review and evaluate tools and software to help establish and maintain your security baseline.

Module 4 – Basics of Cryptography

Demonstrate basic knowledge of algorithms
Differentiate PKI, key management techniques, and certificate life cycles.
Demonstrate a working knowledge of basic concepts relating to the use of cryptography.

Module 5 – Operational/Organizational Security

Identify possible risks associated with physical security and disaster recovery.
Demonstrate basic knowledge of security policies and procedures as well as risk identification.
Demonstrate a working knowledge of business continuity, forensics and IT documentation security.

Minimal Standards/Performance Objectives

Students must read the assigned material prior to class and complete all assignments. The instructor will discuss the concepts and demonstrate the methods as appropriate. Students must participate in independent as well as team activities. Students may exempt a module by completing both theory and performance pre-assessments, if applicable, with a score of at least 80% on each assessment. Students who do not exempt the modules through pre-assessment must complete each module, learning activities, and post-assessment. Computer Technology students must attain a grade of "C" or better in this course for the degree and certificates.

Course Requirements*Attendance*

The student will attend class as stated in the York Technical College Handbook's attendance policy. Online students will participate in discussions and complete all assigned activities in a timely manner as evidence of virtual class attendance.

Academic Integrity

The student is bound by the policies stated in the York Technical College Catalog and Handbook. A student violating these policies will be subject to academic discipline.

Evaluation Strategies and Grading

Grades will be based on the average of the five module assessments. The following scale will be the standard:

Score:	Grade:
90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
<60	F

Final Grade:

Module 1 Assessment		% Module Grade	Course Grade
Theory/Hands on Tests (maximum of 2)	100	60%	
Homework & Learning Activities	100	30%	
Discussions	<u>100</u>	<u>10%</u>	
Module Grade		100%	20.0%
Module 2 Assessment		% Module Grade	
Theory/Hands on Tests (maximum of 2)	100	60%	
Homework & Learning Activities	100	30%	
Discussions	<u>100</u>	<u>10%</u>	
Module Grade		100%	20.0%
Module 3 Assessment		% Module Grade	Course Grade
Theory Test (maximum of 2)	100	60%	
Homework & Learning Activities	100	30%	
Discussions	<u>100</u>	<u>10%</u>	
Module Grade		100%	20.0%
Module 4 Assessment		% Module Grade	Course Grade
Theory Test (maximum of 2)	100	60%	
Homework & Learning Activities	100	30%	
Discussions	<u>100</u>	<u>10%</u>	
Module Grade		100%	20.0%
Module 5 Assessment		% Module Grade	
Theory Test (maximum of 2)	100	60%	
Homework & Learning Activities	100	30%	
Discussions	<u>100</u>	<u>10%</u>	
Module Grade		100%	20.0%
Final Grade			100.0%

Entry Level Skills

Keyboarding ability and fundamentals of the Windows operating system.

Prerequisites

IST 101, IST 103 and IST 251.

Co-Requisites

None

Effective: FA2005