

**APPLIED INFORMATION TECHNOLOGY  
TOWSON UNIVERSITY**

**AIT 612:** Information Systems Vulnerability and Risk Analysis

**Credit Hours:** 3

**Prerequisite:** AIT 610

**Course Description:** This course introduces the fundamental core concepts of information security and also views them from an auditing and risk management perspective. Security issues in distributed information systems including distributed database systems, financial systems, e-commerce, application software, operating systems, networks, and ways to make software systems more secure. The course also examines legal, ethical, and business issues that motivate and constrain the definition and implementation of information security management systems.

**Learning Objectives:**

1. To understand the concepts of threat, vulnerability, and risk management
2. To understand identification, authentication and access control
3. To understand the importance of an awareness program and a security policy
4. Know the current methods used for intrusion detection
5. Know the steps involved in responding to and recovering from an intrusion
6. To understand the basic concepts of cryptography, biometrics, wireless security, and forensics
7. To be aware of current attack trends, and how to defend against such attacks
8. Acquire the knowledge of the legal frameworks and ethical issues associated with information security
9. Learn the various best security practices used in government and industry

**Bibliography:**

1. Pfleeger, *Security in Computing*, 4<sup>th</sup> edition, Prentice-Hall