# Bucks County Community College:
# CISC206 Introduction to Cybersecurity

## Department of Science, Technology, Engineering & Mathematics: Computer/Information Science

### I. Course Number and Title

CISC206 Introduction to Cybersecurity

### II. Number of Credits

4 credits

### III. Number of Instructional Minutes

3000

### IV. Prerequisites

CISC143 (C or better)

### Corequisites

None

### V. Other Pertinent Information

A significant portion of the course is dedicated to developing a hands-on proficiency with cybersecurity software tools. Laboratory work is designed to provide the student with practical experience developing and implementing comprehensive computer security strategies.

### VI. Catalog Course Description

Designed for students with no security experience or background, this course covers basic terminology and concepts. This course introduces students to cryptography, security management, wireless networking, and organizational policy. Topics include an overview of information security frameworks; network

infrastructure security; security and cryptography; information security policy; and defense in depth.

# VII. Required Course Content and Direction

## 1. Course Learning Goals

Students will:

1. describe the role of computers and networks in a security context;
2. identify computer system threats and evaluate their impact;
3. discuss the effectiveness of various cryptographic techniques and their impact on security;
4. develop basic organizational security policies; and
5. demonstrate how defense in depth can be used to implement security.

## 2. Planned Sequence of Topics and/or Learning Activities

- Core Security Principles
- Malware and Social Engineering
- User Authentication and
- Audit Policies and Network Auditing
- Protecting Clients and Servers
- Protecting a Network
- Wireless Security
- Physical Security
- Enforcing Confidentiality with Encryption, Certificates and PKI

## 3. Assessment Methods for Course Learning Goals

Students' level of proficiency in all course topics is evaluated by way of unit exams and laboratory exercises. A minimum of four unit exams is required. The unit exam grade makes up no more than 50% of the final grade. A comprehensive final examination is included in the course. The final is evaluated at 15 - 25% of the course grade. A minimum of six laboratory assignments and exercises is required. The laboratory grade makes up no more than one-third of the course grade.

## 4. Reference, Resource, or Learning Materials to be used by Student:

A departmentally-selected textbook and Internet-based resources are used in this course. Details on learning resources and reference materials are provided by the instructor at the beginning of each course section. See the course syllabus.