

## **DCOM 105**

### **Introduction to Cybersecurity**

3 Credits

Community College of Baltimore County  
Common Course Outline

#### **Description**

**DCOM 105 – Introduction to Cybersecurity:** is an introductory course aimed at providing cybersecurity essentials in today's digitally connected world. Staying safe online, and protecting digital assets is a valuable life skill. Students will learn how to identify and avoid phishing attempts, social engineering attacks, and common social engineering scams and will practice cyber hygiene. The national and global economic impact of cybercrime on business, education, healthcare, and financial sectors will be discussed.

**Co-requisites:** ACLT 053 or (ESOL 052 and ESOL 054)

#### **Overall Course Objectives**

Upon completion of this course, students will be able to:

1. demonstrate effective oral, written, and critical thinking skills as related to cybersecurity topics;
2. define cybersecurity;
3. analyze the impact of cybercrime at both local and global levels;
4. apply common cybersecurity terminology;
5. examine Internet fraud and scams;
6. evaluate the impact of social media on cybersecurity;
7. protect digital assets by applying security measures;
8. develop strategies for risk management related to cybersecurity ;
9. examine vulnerabilities and threats related to cybersecurity;
10. recognize cybersecurity attacks;
11. analyze the significance and impact of social engineering in cybercrimes;
12. apply cyber hygiene to protect digital assets;
13. evaluate the fundamental principles of network security;
14. examine techniques for effective cybersecurity training in any organization;
15. analyze legal and ethical ramifications related to cybersecurity threats;
16. explain the national and global economic impacts of cyber threats; and
17. find, evaluate, use, and cite appropriate resources for cybersecurity topics.

#### **Major Topics**

- I. Cybersecurity fundamental concepts
- II. Impact of cybercrime
- III. Cybersecurity Terminology
- IV. Impact of Social Media
  - a. Cyberbullying

The Common Course Outline (CCO) determines the essential nature of each course.

For more information, see your professor's syllabus.

- b. Identity theft
- V. Security Measures
  - a. multifactor authentication
  - b. Strong passwords
  - c. Encryption methods
- VI. Fundamental aspects of Network Security
  - a. Vulnerability
  - b. Network port scanning
- VII. Risk Assessment Methodologies
  - a. Incident Response and Recovery
  - b. Risk Mitigation
  - c. Data privacy laws and standards
- VIII. Cybercriminal activities
- IX. Social engineering threats
- X. Vulnerabilities and threats
  - a. Conduct regular vulnerability scans
  - b. Perform threat intelligence and analysis to monitor emerging risks
- XI. Defense against cyber attacks
- XII. Countermeasures and practicing cyber hygiene
- XIII. Global, national and local impacts of Cybersecurity threats
- XIV. Legal and Ethical considerations
  - a. Legal obligations to disclose data breach
  - b. Ethical obligations to prevent and address insider threats
  - c. Privacy protection related to user privacy
  - d. Potential legal actions following incidents
  - e. Ethical handling of sensitive information
- XV. Cybersecurity training activities

### **Course Requirements**

Grading will be determined by the individual faculty member, but shall include the following, at minimum:

- a multiple choice quiz that accompanies each Learning Module
- a project based assignment that accompanies each Learning Module
- a Midterm exam
- a cumulative final exam
- a presentation about a recent Cybersecurity threat that includes a research component which addresses General Education Outcomes

Written assignments and research projects: Students are required to use appropriate resources in their research and cite sources according to the style selected by their professor.

### **Other Course Information**

One or more assignments will infuse CCBC General Education Program outcomes and will account for a minimum of 10% of the total course grade.

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