

Common Course Outline
DCOM 150
Digital Forensics I
3 Credits
Community College of Baltimore County

Description

DCOM 150 - Digital Forensics I provides the student with an overview of the field of digital forensics. Students perform forensic procedures for seizure, preservation, and documentation of electronic evidence. Students use forensic hardware and software tools to authenticate and analyze digital information for possible use as evidence in civil, criminal, or administrative cases. Students perform hands-on laboratory exercises using digital forensics tools and evidence preservation techniques.

3 Credits

Prerequisites: (ESOL 042 and ESOL 044) or ACLT 052 and MATH 081

Overall Course Objectives:

Upon completion of this course the student will be able to

1. define digital forensics;
2. identify the steps involved in digital investigation;
3. describe forensics procedures for processing a crime and incident scene;
4. establish a chain of custody document;
5. identify the physical requirements and equipment needed for digital forensics labs;
6. compare and contrast various digital forensics tools used in forensics investigation;
7. identify characteristics of the file system used in operating systems such as Windows, Linux, and Mac computers;
8. perform forensic acquisition and validate data acquisition using digital algorithms;
9. analyze digital media using forensic tools;
10. write a digital forensics report;
11. identify legal and privacy issues; and
12. define privileged communications and confidentiality.

Major Topics

- I. Overview of digital forensics profession and investigation
- II. Processing crime and incident scenes
- III. Safely handle and preserve digital media

- IV. Computer forensics examination process
- V. Data carving and recovering files and folders
- VI. Digital forensics tools
- VII. Windows file systems
- VIII. Linux and Macintosh file systems
- IX. Data acquisition and validation
- X. Digital forensics analysis and documentation
- XI. Report writing
- XII. Cloud forensics

Course Requirements

Grading procedures will be determined by the individual faculty member but at a minimum will include the following:

Grading/Exams

- A minimum of five laboratory projects
- A minimum of two exams

Written Assignments: Students are required to use appropriate academic resources.

Other Course Information

This course is a program elective for the following programs:

- Network Technology A.A.S. Degree
- Cybersecurity A.A.S. Degree
- Network Technology for Cisco Certificate
- Information Systems Security Certificate

This course is the first course in a three-course sequence and is taught in a computerized environment.