

DCOM 215

Ethical Hacking and System Defense

4 Credits

Community College of Baltimore County Common Course Outline

Description

DCOM 215 – Ethical Hacking and System Defense: covers planning, scoping and methodology using hands-on tools to perform passive and active reconnaissance. Students use various tools to exploit network-based and host-based system vulnerabilities for given scenarios after conducting a vulnerability analysis. Students complete post-exploit tasks then analyze and report penetration test results for given scenarios. Students develop mitigation strategies for vulnerabilities that are discovered based on best practices. This course prepares students for the CompTIA PenTest+ certification exam.

Pre-requisites: DCOM 224 or permission of the Program Coordinator

Overall Course Objectives

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

1. describe the importance of planning and scoping penetration testing process;
2. discuss common hacking methodologies to conduct passive and active reconnaissance to carry out a penetration test;
3. perform various scenario-based network and hosts attacks using penetration tools;
4. construct mitigation strategies for various types of attacks;
5. prepare incident response reports;
6. analyze penetration test reports based on best practices;
7. explain the importance of communication during the penetration testing process;
8. analyze how penetration testing and ethical hacking fit into a comprehensive enterprise information security program; and
9. describe ethical behavior appropriate to security-related technologies.

Major Topics

- I. Planning and scoping penetration tests
- II. Information gathering and vulnerability identification
- III. Passive and active reconnaissance
- IV. Scanning
- V. Attacks and exploits
- VI. Post-exploitation
- VII. Penetration test reports

The Common Course Outline (CCO) determines the essential nature of each course.
For more information, see your professor's syllabus.

VIII. Penetration test best practices

Course Requirements

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

- five comprehensive laboratory projects
- one collaborative project that includes analyzing reports
- two exams

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