

# Common Course Outline

## DCOM 211

### Introduction to Firewalls

4 Semester Hours

## The Community College of Baltimore County

### Description

**DCOM 211 – 4 Credits – Introduction to Firewalls** explores both hardware- and software-based firewall systems. This course provides the broad-based knowledge and skills necessary to prepare students to design, implement, and maintain firewall systems.

**4 credits; 4 lecture hours per week**

**Prerequisite: CINS 142 and DCOM 258 or consent of the program coordinator**

### Overall Course Objectives

Upon completion of this course the student will be able to:

1. define the characteristics of the Transmission Control Protocol (TCP)/Internet Protocol (IP) suite packets;
2. discuss ingress and egress filtering and demonstrate when to use each;
3. compare and contrast packet filters, proxies, and stateful inspection technologies and how they function;
4. identify the differences between normal and anomalous traffic on a firewall/network;
5. determine the limitations of firewall technologies and define when other security measures need to be put in place;
6. utilize network diagrams; and
7. demonstrate appropriate and ethical behavior and good work habits.

### Major Topics

- I. Transmission Control Protocol (TCP)/Internet Protocol (IP) suite overview
- II. Network security overview
- III. Firewalls for network security
- IV. Firewall technologies
- V. Firewall architectures
- VI. Firewall design
- VII. Bastion hosts
- VIII. Internet services and firewalls
- IX. Software-based firewalls
- X. Hardware-based firewalls
- XI. Preventive measures

## **Course Requirements**

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:

Minimum of five laboratory projects  
Minimum of three exams

Writing: The individual faculty member will determine specific writing assignments, such as writing an Acceptable Usage Policy.

## **Other Course Information**

Individual faculty members may include additional course objectives, major topics, and other course requirements to the minimum expectations stated in the Common Course Outline.