

**Common Course Outline**  
**DCOM 218**  
**Cisco II: Routing Protocols and Concepts**  
**4 Semester Hours**

**The Community College of Baltimore County**

**Description**

**DCOM 218 – 4 Credits – Cisco II: Routing Protocols and Concepts** introduces the student to the architecture, components, and operation of routers. This class also explains the principles of routing and the primary routing protocols. The course is designed to help students prepare for professional careers in the information and communication technology (ICT) field and the Cisco Certified Network Associate (CCNA) certification exam.

Prerequisite: DCOM 217 or consent of the program coordinator

**Overall Course Objectives**

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

1. configure and verify router interfaces;
2. demonstrate comprehensive Routing Information Protocol (RIP)v1 configuration skills;
3. design and implement a classless IP addressing scheme for a network;
4. use advanced configuration commands with routers implementing Enhanced Interior Gateway Routing Protocol (EIGRP);
5. apply the basic RIPv2 configuration commands and evaluate RIPv2 classless routing updates; and
6. identify the characteristics of distance vector routing protocols.

**Major Topics**

- I. Introduction to routing and packet forwarding
- II. Static routing
- III. Introduction to dynamic routing protocols
- IV. Distance vector routing protocols
  - V. Routing Information Protocol (RIP) versions 1 and 2
- VI. Variable Length Subnet Mask (VLSM) and Classless Inter-Domain Routing (CIDR)
- VII. The routing table
- VIII. Enhanced Interior Gateway Routing Protocol (EIGRP)
- IX. Link-state routing protocols
- X. Open Shortest Path First (OSPF)

## **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 an Acceptable Usage Policy.

## **Other Course Information**

This course is a program requirement for the Network Technology Security and Cisco degree options, as well as the Network Technology Cisco certificate.

This course is the second course in a four-course sequence.

This course is taught in a computerized environment.

Date Revised: 04/29/09