Common Course Outline
DCOM 263
Virtualization and Cloud Computing using VMware
4 Credits

The Community College of Baltimore County

Description

DCOM 263 - Virtualization and Cloud Computing using VMware enables students to install, configure, manage, maintain, and troubleshoot a virtual network infrastructure/cloud computing platform using VMware vSphere. Students install and configure virtual machines, virtual networks, and virtual hard disks on datacenter and cloud servers. The course is designed for students pursuing a career in network engineering, virtualization, or cloud computing. The course is designed to help students prepare for the VMware certification exam.

4 Credits

Prerequisites: DCOM141 or DCOM101

Overall Course Objectives

Upon completion of this course students will be able to:
1. identify the benefits of virtualization;
2. install datacenter servers and cloud servers;
3. create and configure virtual machines;
4. migrate and clone virtual machines;
5. install and configure guest operating systems;
6. configure virtual switches;
7. configure security parameters;
8. install and configure storage area networks (SAN’s) and virtual hard disks;
9. monitor, analyze, and optimize system performance;
10. implement fault tolerance;
11. upgrade software and perform host maintenance; and
12. implement a virtual network infrastructure.

Major Topics

I. Principles of cloud computing and virtualization
II. Components of a datacenter
III. Datacenter server installation
IV. Virtual machines
V. Virtual networks and virtual switches
VI. Storage area networks and virtual hard disks
VII. Performance monitoring and optimization
VIII. Security
IX. Fault tolerance
X. Scalability
XI. Updates and host maintenance

**Course Requirements**

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

- Midterm exam
- Final exam
- One project

**Other Course Information**

This course is an elective in the A.A.S. degree in Network Technology.

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