

Prepared by the Department of Business

Date of Departmental Approval: November 8, 2010

Date approved by Curriculum and Programs: January 31, 2011

Effective: Fall 2011

1. **Course Number:** BIT237  
**Course Title:** Windows Server Administration
2. **Description:** Using a hands-on approach, students learn current Windows Server architecture, installation, configuration, upgrading, proactive maintenance, security and environmental issues, troubleshooting and problem determination, and disaster recovery. Concepts covered include the differences between versions of Windows, installation, protocols, devices and drivers, disk and data storage, user and computer accounts, domain user and group accounts, group policy, and file system access and security. This course begins preparing students for MCSA/MCSE Certification Exams.
3. **Student Learning Outcomes (instructional objectives: intellectual skills):**  
Upon successful completion of this course, students are able to do the following:
  - Describe windows-based server-based networks, the client-server model, functions, benefits, classes of servers
  - Perform windows-based server planning including cost-benefit analysis, user demand, interoperability issues, placement, network diagramming, site placement, power issues, and disaster recovery
  - Install, configure, and upgrade windows-based servers
  - Explain server hardware issues including motherboard architecture, BIOS, processors, memory management, other resources
  - Explain server power issues and rack installations
  - Describe server storage and RAID including drives, partitions/volumes, file systems, IDE, SCSI, SATA, RAID
  - Perform server upgrades including planning, implementation, and support
  - Describe server networking including topologies, protocols, network media, access methods and equipment
  - Describe server operating system interoperability configuration including general concepts, issues for Novell, Unix/Linux, OS/2, and Windows
  - Explain NOS services and applications including services, application servers, monitoring System services, application services, protocols, servers as routers and firewalls
  - Explain disaster recovery concepts including backups, fault tolerance, disaster recovery
  - Do performance monitoring and optimization including monitoring tools, baselines, capacity planning, proactive maintenance
  - Explain network management, and use maintenance and support tools
  - Identify network security issues
  - Identify troubleshooting and problem determination approaches
4. **Credits:** 3 credits
5. **Satisfies General Education Requirement:** No
6. **Prerequisite:** BIT187. NOTE: Open for credit to students who have completed BIT223; not open for credit to students who have completed BIT223 and BIT234.
7. **Semester(s) Offered:** Fall
8. **Suggested General Guidelines for Evaluation:** Final grade is based on tests, class participation, hands-on projects and project reports, and a comprehensive final examination.
9. **General Topical Outline (Optional):**
  - a. Defining a Server

- b. Server Planning
- c. Motherboard Architecture, Processors, Memory and BIOS
- d. Server Power and Rack Installation
- e. Hard Disk Interfaces and RAID
- f. Server Upgrades
- g. Networking
- h. Configuring a Network Operating System
- i. Network Operating System Services and Applications
- j. Disaster Planning
- k. Performance Monitoring and Optimization
- l. Troubleshooting and Problem Determination 1. Defining a Server
- m. Server Planning
- n. Motherboard Architecture, Processors, Memory and BIOS
- o. Server Power and Rack Installation
- p. Hard Disk Interfaces and RAID
- q. Server Upgrades
- r. Networking
- s. Configuring a Network Operating System
- t. Network Operating System Services and Applications
- u. Disaster Planning
- v. Performance Monitoring and Optimization
- w. Troubleshooting and Problem Determination