

SYLLABUS

DIVISION: Business and Engineering Technology

REVISED: SPRING 2014

CURRICULA IN WHICH COURSE IS TAUGHT: IST, Information Systems Technology

COURSE NUMBER AND TITLE: ITN 103 – Administration of Networked Servers

CREDIT HOURS: 4 **HOURS/WK LEC:** 3 **HOURS/WK LAB:** 2 **LEC/LAB COMB:** 5

I. CATALOG DESCRIPTION: ITN 103 - Provides instruction on how to install server operating systems, including virtual environments, and how to configure its services. The server platforms that will be utilized include Windows 2008 Server and Linux operating systems.

II. RELATIONSHIP OF THE COURSE TO CURRICULA OBJECTIVES: ITN 102 will address the following Information Technology Outcomes:

- Implement Information Technology skills required by software applications.
- Apply methodologies to stay current in IT offerings, trends and certifications.
- Apply analytical and problem solving skills for computer system design, planning and support.
- Design, code, test, debug, and document software needed for computer system implementation and maintenance.
- Apply current IT industry standards, protocols, and techniques.
- Use instructional applications and material which could lead towards industry certification.

Please Note: The overall Learner Outcomes from all of the course requirements for the A.A.S. Degrees in IT are more in-depth than those of the Career Studies Certificates. However, the IT courses that are the same in both the A.A.S. Degrees and the Certificate Programs carry the same Learner Outcomes and are identical in content. Please review the DCC Catalog or visit the DCC Web Site for more details.

III. REQUIRED BACKGROUND: ITN 102

IV. COURSE CONTENT:

- Basic concepts in local area networking using the Windows 2008 server network operating system as the platform of choice
- Network topologies, protocols, components, cabling, network operating systems, directories, security, printing, data backup, and installation of file servers, workstations and applications
- Installation, configuration, and administration, monitoring, and troubleshooting Windows 2008 Server

V. THE FOLLOWING GENERAL EDUCATION OBJECTIVES WILL BE ADDRESSED IN THIS COURSE. STUDENTS WILL:

- X Communication
- X Critical Thinking
- Cultural and Social Understanding Information Literacy
- X Personal Development
- X Quantitative Reasoning
- X Scientific Reasoning

VI. LEARNER OUTCOMES**VII. EVALUATION**

Upon conclusion of this course the student will be able to define, discuss, and demonstrate knowledge in the following concepts.	
Planning for server hardware	Lab exercises and written test – Perform analysis of hardware requirements including CPU, RAM, Video, Hard Drive, and software.
Planning network protocols, compatibility, and security	Lab exercises and written test – Configure TCP/IP and other networking protocols including RIP to allow network access. Determine compatibility between protocols and security issues that may arise.
Begin Server installation	Lab exercises and written test – Using instructor provided software install the OS onto a PC, configure base components, and documentation of all settings. Also create a deployment of the server OS using deployment services provided by the OS and deploy additional software installation. OS installation including deployment services as required. This course will utilize Oracle Virtual Machine and Windows Hyper-V virtualization software with Windows 8 installed as a client.
Set Server configurations - Active Directory, DNS, DHCP, IIS	Lab exercises and written test – Utilize DCPROMO tool to configure AD onto server including configuring DNS settings for local and remote translations. Configure DHCP and SCOPE on server to provide IP addressing for clients. Install and configure IIS to support web based information to clients.
Create Storage, backup, and performance charts	Lab exercises and written test – Create partitions/volumes for storage and utilize backup software to demonstrate system recovery. Analyze server performance to determine bottlenecks and other sources of inadequate system devices.
Set up accounts and client connectivity	Lab exercises and written test – Create user accounts on server OS and test client connectivity utilizing the settings.
Set up groups, folders, files	Lab exercises and written test – Create group accounts and assign user accounts accordingly. Create permissions for accessing folders/files based on group membership.
Manage DFS, disk quotas, and Group Policies	Lab exercises and written test – Create/Manage the Distributed File System, configure and implement disk quotas, and create group policies for specific user rights.
Install and managing printers	Lab exercises and written test – Configure software in OS for local printer and allow for the sharing of the printer for others on the network to utilize. Demonstrate how to pause, cancel, and resubmit print jobs.
Set Network monitoring and optimization	Lab exercises and written test – Utilize Performance Monitor to determine network performance and configure as necessary to promote optimization.
Build Networks – Design	Class Project – Utilize network diagramming software to build a custom network design that reflects an enterprise network environment. Submit design for grading