

ITT Technical Institute
NT1230
Client-Server Networking I
Onsite Course

SYLLABUS

Credit hours: 4.5

Contact/Instructional hours: 56 (34 Theory Hours, 22 Lab Hours)

Prerequisite(s) and/or Corequisite(s):

Prerequisite or Corerequisite: NT1210 Introduction to Networking or equivalent

Course Description:

This course introduces operating principles for the client-server based networking systems. Students will examine processes and procedures involving the installation, configuration, maintenance, troubleshooting and routine administrative tasks of popular desktop operating system(s) for standalone and network client computers, and related aspects of typical network server functions.

Where Does This Course Belong?

1st QTR

GS1140 Problem Solving Theory
NT1110 Computer Structure and Logic
GS1145 Strategies for the Technical Professional

2nd QTR

NT1210 Introduction to Networking
NT1230 Client-Server Networking I
MA1210 College Mathematics I

3rd QTR

NT1310 Physical Networking
NT1330 Client-Server Networking II
MA1310 College Mathematics II

4th QTR

PT1420 Introduction to Programming
NT1430 Linux Networking
EN1320 Composition I

5th QTR

PT2520 Database Concepts
NT2580 Introduction to Information Security
EN1420 Composition II

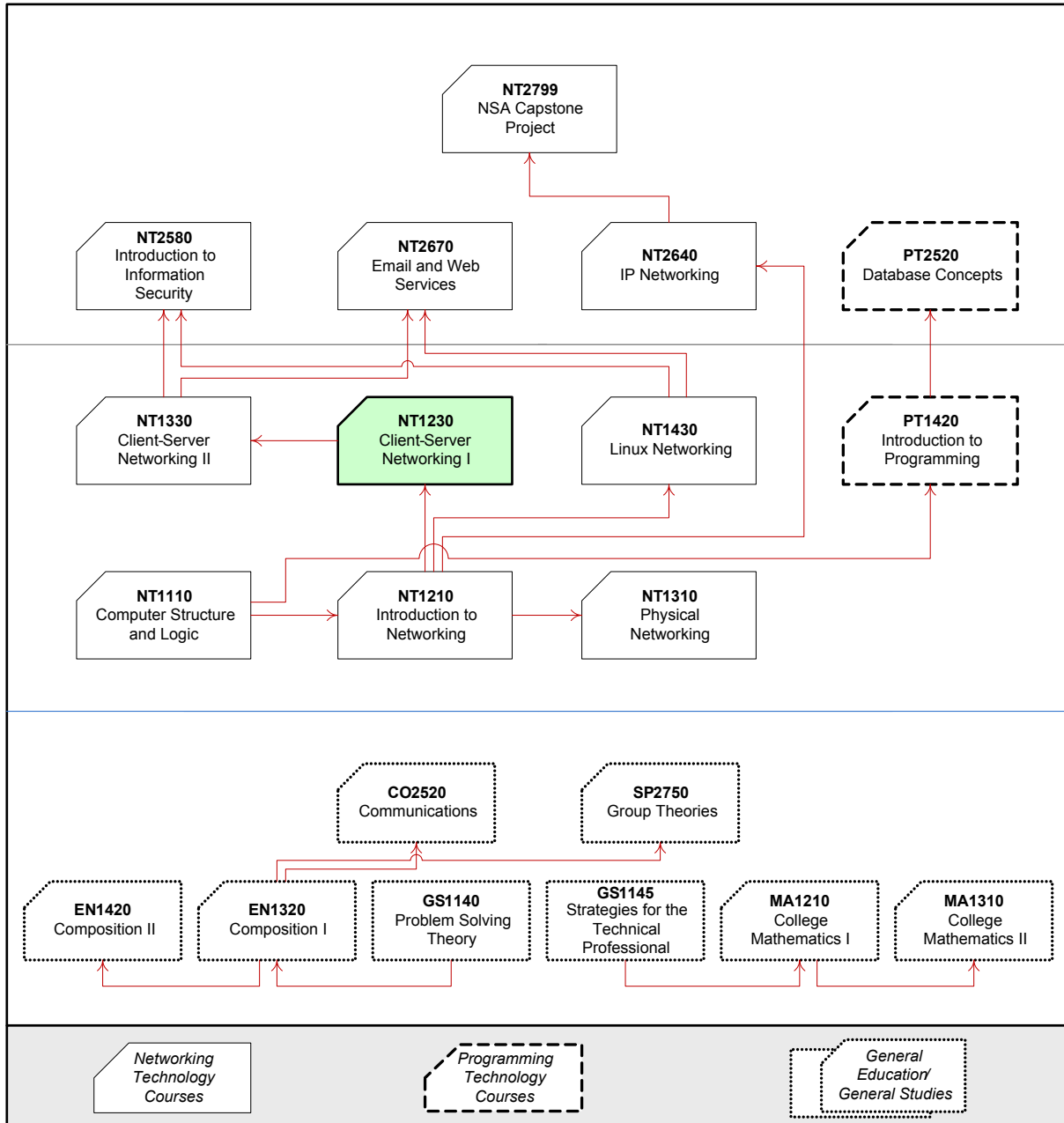
6th QTR

NT2640 IP Networking
NT2670 Email and Web Services
CO2520 Communications

7th QTR

NT2799 Network Systems Administration Capstone Project
SP2750 Group Theory

The follow diagram indicates how this course relates to other courses in the NSA program:



Course Summary

Major Instructional Areas

1. Installing and configuring Windows 7
2. Devices, Peripherals, Disks, and File Systems
3. Connecting to a Network
4. Working with Workgroups and Domains
5. Client Security and Access Control
6. Administering Windows 7
7. Server Functions
8. Installing and Managing Server 2008
9. Monitoring and Troubleshooting

Course Objectives

1. Explain the system requirements, installation and upgrade paths for the different editions of Windows 7.
 2. Install and configure Windows 7 Professional Edition.
 3. Monitor disks, volumes, and devices to optimize utilities and system performance.
 4. Connect a Windows 7 system to a network.
 5. Distinguish users and groups.
 6. Analyze different techniques to secure a Windows 7 system.
 7. Configure Windows 7 Professional networking.
 8. Configuring Windows 7 Professional workgroup membership.
 9. Analyze different techniques to secure a Windows 7 Professional system.
 10. Back up a Windows 7 Professional Workstation.
 11. Use Microsoft Management Consoles (MMC).
 12. Install and configure Microsoft Server 2008.
 13. Configure Active Directory.
 14. Join a Windows 7 Professional workstation to an Active Directory domain.
 15. Monitor a Windows Server 2008 Domain Controller.
 16. Create and configure Shared Folders in a Domain environment.
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Learning Materials and References

Required Resources

Textbook Package	New to this Course	Carried over from Previous Course(s)	Required for Subsequent Course(s)
Zacker, C. (2011). <i>Custom Windows 7 Configuration: Microsoft certified technology specialist. Exam 70-680</i> . Hoboken, NJ: John Wiley and Sons, Inc.	■		
Microsoft Official Academic Course (2011). <i>Exam 98-365: Windows Server Administration Fundamentals</i> . Hoboken, NJ: John Wiley and Sons, Inc.	■		
Zacker, C. (2011). <i>Custom Lab Manual: customized excerpts from Windows 7 Configuration: Microsoft certified technology specialist Exam 70-680 labs and Windows Server 2008 Active Directory Configuration Microsoft certified technology specialist Exam 70-640 labs</i> . Hoboken, NJ: John Wiley and Sons, Inc.	■		

Recommended Resources

Internal

- ITT Tech Virtual Library:
<http://myportal.itt-tech.edu/library/Pages/HomePage.aspx>.

External

- Wiley Portal:
 - Wiley Student Companion Site
Wiley offers a Student Companion Site for the course's required text. Students can log on to:
<http://bcs.wiley.com/he-bcs/Books?action=index&bcsId=5716&itemId=047089122X>
(Note: Do NOT use the lab manual worksheets from this site. Your custom Lab Manual has different worksheets for this course)
- Periodicals:
 - 8 security considerations for IPv6 deployment. (2011). *Network World (Online)*.
 - International data corporation; IT managers have their heads in the clouds: Worldwide cloud server revenue to reach \$9.4 billion by 2015, according to IDC. (2011). *Computers*.
 - Solid passwords, PC firewalls stop ID thieves. (2011, Jun 25). *Chattanooga Times Free Press*, pp. C.1.
 - Turn Off Automatic Window Resizing and Docking in Windows 7. (2011). *PC World*, 29(7), 93.
 - Romero, D., & Molina, A. (2011). Collaborative networked organisations and customer communities: value co-creation and co-innovation in the networking era. *Production Planning & Control*, 22(5/6), 447-472.
 - Research and markets; 98-366: Networking fundamentals - covers the fundamentals of

local area networking. (2011). *Computers, Networks & Communications*.

- Kaufmann, M. and Beaumont, L. (2205) *Content networking: Architecture, protocols, and practice*. Amsterdam, Boston Elsevier, 2005.
- Saran, C. (2008). Microsoft revamps certification for Server 2008. *Computer Weekly*, 32. Retrieved from EBSCOhost.
- Computer networks; HP improves performance, reduces costs with support for virtualized server environments. (2010). *Computer Weekly News*.
- PR, N. (2011, April 7). Facebook Launches Open Compute Project to Share Custom-Engineered, Highly Efficient Server and Data Center Technology With the World. PR Newswire US.
- Brodtkin, J. (2011). Microsoft: Next level of virtualization unlocks server OS, applications. *Network World (Online)*.
- Parui, U. (2010, Installing client tools on a SQL server 2008 failover cluster. *SQL Server Magazine*, 12(2), 9-9.

Information Search

Use the following keywords to search for additional online resources that may be used for supporting your work on the course assignments:

Installing and Configuring Windows
Disk Partitions
IP Addressing
Firewalls
Open Systems Interconnections (OSI) Model
Transmission Control Protocol (TCP)
Internet Protocol
Active Directory
Authentication
Encryption
Server

NOTE: All links to Web references are subject to change without prior notice.

Course Plan

Instructional Methods

This course is designed to promote learner-centered activities and support the development of cognitive strategies and competencies necessary for effective task performance and critical problem solving. The course utilizes individual and group learning activities, performance-driven assignments, problem-based cases, projects, and discussions. These methods focus on building engaging learning experiences conducive to the development of critical knowledge and skills that can be effectively applied in professional contexts.

Suggested Learning Approach

In this course, you will be studying individually and within a group of your peers. As you work on the course deliverables, you are encouraged to share ideas with your peers and instructor, work collaboratively on projects and team assignments, raise critical questions, and provide constructive feedback.

Use the following advice to receive maximum learning benefits from your participation in this course:

DO	DON'T
<ul style="list-style-type: none"> ▪ Do take a proactive learning approach ▪ Do share your thoughts on critical issues and potential problem solutions ▪ Do plan your course work in advance ▪ Do explore a variety of learning resources in addition to the textbook ▪ Do offer relevant examples from your experience ▪ Do make an effort to understand different points of view ▪ Do connect concepts explored in this course to real-life professional situations and your own experiences 	<ul style="list-style-type: none"> ▪ Don't assume there is only one correct answer to a question ▪ Don't be afraid to share your perspective on the issues analyzed in the course ▪ Don't be negative about the points of view that are different from yours ▪ Don't underestimate the impact of collaboration on your learning ▪ Don't limit your course experience to reading the textbook ▪ Don't postpone your work on the course deliverables – work on small assignment components every day

Course Outline

Unit	Reading Assignments	Graded Activities & Deliverables
Unit 1: Install and Configure Windows 7	Windows 7 Configuration MOAC 70-680 <ul style="list-style-type: none"> Lesson 1 – Introducing Windows 7 Lesson 2 – Installing Windows 7 	<ul style="list-style-type: none"> Unit 1. Lab 1. Preparing a Virtual Workstation Image† Unit 1. Problem Set 1. Unit 1 Problems Unit 1. Assignment 1. Home Computer Analysis Unit 1. Exercise 1. Upgrading
Unit 2: Devices, Peripherals, Disks, and File Systems	Windows 7 Configuration MOAC 70-680 <ul style="list-style-type: none"> Lesson 4 – Working with Disks and Devices 	<ul style="list-style-type: none"> Unit 2. Lab 1. Working with Disks and Devices Unit 2. Problem Set 1. Unit 2 Problems Unit 2. Assignment 1. Disk Redundancy Research
Unit 3: Connecting to a Network	Windows 7 Configuration MOAC 70-680 <ul style="list-style-type: none"> Lesson 5 – Connecting to a Network 	<ul style="list-style-type: none"> Unit 3. Lab 1. Configuring Network Connections Unit 3. Problem Set 1. Unit 3 Problems Unit 3. Assignment 1. IPv6 Addressing
Unit 4: Working with Workgroups and Domains	Windows 7 Configuration MOAC 70-680 <ul style="list-style-type: none"> Lesson 9 – Working with Workgroups and Domains 	<ul style="list-style-type: none"> Unit 4. Lab 1. Working Workgroups, Users and Groups Unit 4. Problem Set 1. Unit 4 Problems Unit 4. Exercise 1. User-Profile Scenario
Unit 5: Client Security and Access Control	Windows 7 Configuration MOAC 70-680 <ul style="list-style-type: none"> Lesson 10 – Securing Windows 7 	<ul style="list-style-type: none"> Unit 5. Lab 1. Working with Firewalls, Encrypted File Systems (EFS) and User Account Control (UAC) Unit 5. Problem Set 1. Unit 5 Problems Unit 5. Exercise 1. Security
Unit 6: Administering Windows 7	Windows 7 Configuration MOAC 70-680 <ul style="list-style-type: none"> Lesson 11 – Administering Windows 7 	<ul style="list-style-type: none"> Unit 6. Lab 1. Remote Windows 7 Administration and Performing Backups Unit 6. Problem Set 1. Unit 6 Problems Unit 6. Exercise 1. Ticket Escalation
Unit 7: What is a Server?	MOAC 98-365 <ul style="list-style-type: none"> Lesson 1 	<ul style="list-style-type: none"> Unit 7. Lab 1. Preparing a Virtual Server Image† Unit 7. Assignment 1. Client Server Configuration Unit 7. Exercise 1. Data Center
Unit 8: Installing Server 2008	MOAC 98-365 <ul style="list-style-type: none"> Lesson 1 	<ul style="list-style-type: none"> Unit 8. Lab 1. Configuring a Windows Server 2008 Machine Unit 8. Assignment 1. DNS Zone File

		<ul style="list-style-type: none"> ▪ Unit 8. Assignment 2. Active Directory Benefits ▪ Unit 8. Exercise 1. Active Directory
Unit 9: Managing Server 2008	MOAC 98-365 <ul style="list-style-type: none"> ▪ Lesson 2 	<ul style="list-style-type: none"> ▪ Unit 9. Lab 1. File and Print Services ▪ Unit 9. Exercise 1. Print Server ▪ Unit 9. Exercise 2. File Server
Unit 10 Monitoring and Troubleshooting Essential Services File/Print Services	MOAC 98-365 <ul style="list-style-type: none"> ▪ Lesson 4 ▪ Lesson 5 ▪ Lesson 6 	<ul style="list-style-type: none"> ▪ Unit 10. Lab 1. Monitoring Servers ▪ Unit 10. Assignment 1. Backup Criteria ▪ Unit 10. Exercise 1. Backup Plan
Unit 11 Course Review and Final		<i>Final Exam</i>

‡ Please retain these installation instances with all future configurations as the candidate for the ePortfolio.

Evaluation and Grading

Evaluation Criteria

The graded assignments will be evaluated using the following weighted categories:

Category	Weight
Lab	20%
Assignment	21%
Problem Set	12%
Exercise	27%
Exam	20%
TOTAL	100%

Grade Conversion

The final grades will be calculated from the percentages earned in the course, as follows:

Grade	Percentage	Credit
A	90–100%	4.0
B+	85–89%	3.5
B	80–84%	3.0
C+	75–79%	2.5
C	70–74%	2.0
D+	65–69%	1.5
D	60–64%	1.0
F	<60%	0.0

Graded Activities and Deliverables

Grading Category	Category Weight	Graded Deliverable	Weight
Lab	20%	Unit 1. Lab 1. Preparing a Virtual Workstation Image ⁺	2%
		Unit 2. Lab 1. Working with Disks and Devices	2%
		Unit 3. Lab 1. Configuring Network Connections	2%
		Unit 4. Lab 1. Working Workgroups, Users and Groups	2%
		Unit 5. Lab 1. Working with Firewalls, Encrypted File Systems (EFS) and User Account Control (UAC)	2%
		Unit 6. Lab 1. Remote Windows 7 Administration and Performing Backups	2%
		Unit 7. Lab 1. Preparing a Virtual Server Image ⁺	2%
		Unit 8. Lab 1. Configuring a Windows Server 2008 Machine	2%
		Unit 9. Lab 1. File and Print Services	2%
		Unit 10. Lab 1. Monitoring Servers	2%
Problem Set	12%	Unit 1. Problem Set 1. Unit 1 Problems	2%
		Unit 2. Problem Set 1. Unit 2 Problems	2%
		Unit 3. Problem Set 1. Unit 3 Problems	2%
		Unit 4. Problem Set 1. Unit 4 Problems	2%
		Unit 5. Problem Set 1. Unit 5 Problems	2%
		Unit 6. Problem Set 1. Unit 6 Problems	2%
Assignment	21%	Unit 1. Assignment 1. Home Computer Analysis	3%
		Unit 2. Assignment 1. Disk Redundancy Research	3%
		Unit 3. Assignment 1. IPv6 Addressing	3%
		Unit 7. Assignment 1. Client Server Configuration	3%

Grading Category	Category Weight	Graded Deliverable	Weight
		Unit 8. Assignment 1. DNS Zone File	3%
		Unit 8. Assignment 2. Active Directory Benefits	3%
		Unit 10. Assignment 1. Backup Criteria	3%
Exercise	27%	Unit 1. Exercise 1. Upgrading	3%
		Unit 4. Exercise 1. User-Profile Scenario	3%
		Unit 5. Exercise 1. Security	3%
		Unit 6. Exercise 1. Ticket Escalation	3%
		Unit 7. Exercise 1. Data Center	3%
		Unit 8. Exercise 1. Active Directory	3%
		Unit 9. Exercise 1. Print Server	3%
		Unit 9. Exercise 2. File Server	3%
		Unit 10. Exercise 1. Backup Plan	3%
Exam	20%	Final Exam	20%
			100%

Academic Integrity

All students must comply with the policies that regulate all forms of academic dishonesty, or academic misconduct, including plagiarism, self-plagiarism, fabrication, deception, cheating, and sabotage. For more information on the academic honesty policies, refer to the Student Handbook and the Course Catalog.

(End of Syllabus)