

# **Administering Windows Server 2012 (ITNW 1371)**



**Credit:** 3 semester credit hours (2 hours lecture, 4 hours lab)

**Prerequisite/Co-requisite:** None

## **Course Description**

Knowledge and skills necessary for the entry-level server administrator or information technology (IT) professional to implement, monitor, maintain and provision services and infrastructure in a Windows Server 2012 environment.

## **Required Textbook and Materials**

1. *Exam 70-411, Administering Windows Server 2012 R2 with Lab Manual Set*, Microsoft Official Academic Course, John Wiley & Sons, 2014.
  - a. ISBN number for print book is 978-1-118-96633-4
2. Computer Networking and Troubleshooting Technology students are required to have one portable external Hard Drive with a capacity of 500GB or larger to be used for the duration of the time to complete their respective degree.

## **Course Objectives**

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

1. Plan server deployment, server management, application and data provisioning, business continuity and high availability.
2. Monitor and maintain servers.

## **Course Outline**

1. Deploying and Managing Server Images
  - a. Using Windows Deployment Services
2. Implementing Patch Management
  - a. Understanding Windows Updates and Automatic Updates
  - b. Deploying Windows Server Update Services (WSUS)
  - c. Managing Patch Management in Mixed Environments
  - d. Understanding System Center Configuration Manager (SCCM)
3. Monitoring Servers
  - a. Introducing the Microsoft Management Console (MMC)
  - b. Using Event Viewer
  - c. Using Reliability Monitor
  - d. Managing Performance
  - e. Monitoring the Network
  - f. Monitoring Virtual Machines (VMs)
4. Configuring Distributed File System (DFS)
  - a. Using Distributed File System
5. Configuring File Server Resource Manager (FSRM)

- a. Using File Server Resource Manager
6. Configuring File Services and Disk Encryption
  - a. Securing Files
7. Configuring Advanced Audit Policies
  - a. Enabling and Configuring Auditing
8. Configuring DNS Zones
  - a. Understanding DNS
  - b. Configuring and Managing DNS Zones
  - c. Using the DNSCMD Command to Manage Zones
9. Configuring DNS Records
  - a. Configuring DNS Record Types
  - b. Using the DNSCMD Command to Manage Resource Records
  - c. Troubleshooting DNS Problems
10. Configuring VPN and Routing
  - a. The Remote Access Roll
11. Configuring Direct Access
  - a. Understanding DirectAccess
12. Configuring a Network Policy Server
  - a. Configuring a Network Policy Server Infrastructure
13. Configuring NPS Policies
  - a. Managing NPS Policies
14. Configuring Network Access Protection (NAP)
  - a. Using Network Access Protection
15. Configuring Service Authentication
  - a. Configuring Server Authentication
  - b. Managing Service Accounts
16. Configuring Domain Controllers
  - a. Understanding Domain Controllers
  - b. Installing and Configuring an RODC
  - c. Cloning a Domain Controller
17. Maintaining Active Directory
  - a. Automating User Account Management
  - b. Backing Up and Restoring Active Directory
  - c. Managing Active Directory Offline
  - d. Optimizing an Active Directory Database
  - e. Cleaning Up Metadata
18. Configuring Account Policies
  - a. Working with Account Policies
19. Configuring Group Policy Processing
  - a. Understanding Group Policy Processing
20. Configuring Group Policy Settings
  - a. Configuring Group Policy Settings
21. Managing Group Policy Objects

- a. Managing Group Policy Objects
- 22. Configuring Group Policy Preferences
  - a. Using Group Policy Preferences

## **Grade Scale**

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

## **Course Evaluation**

Final grades will be calculated according to the following criteria:

Labs	30%
Study Guides	10%
Module Tests	30%
Final Exam	30%

## **Course Requirements**

1. Demonstrate proficiency through hands-on labs as assigned.
2. Completion of Study Guides as assigned.

## **Course Policies**

1. No food, drinks, or use of tobacco products in class.
2. Electronic devices not being used for the class, such as phones and headphones, must be turned off while in class.
3. Do not bring children to class.
4. Certification: If a student passes the certification test that is associated with this class, you will receive an “A” on the final exam and credit for 25% of your labs. If you have missed a previous test, you must still take the final exam to substitute for that grade.
5. Attendance Policy: Three absences are allowed. If a student is tardy to class or departs early three (3) times, it will be equal to one (1) absence. Each absence beyond three absences will result in a 2 point deduction from your final grade.
6. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an ‘F’ in the course.
7. Tools: Return all tools and/or software to their designated place.
8. A grade of ‘C’ or better must be earned in this course for credit toward degree requirement.
9. Additional course policies, as defined by the individual course instructor, will be outlined in the course addendum and provided by the instructor.

## Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

## Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-us/Learn/9.1\\_2014\\_04/Student/015\\_Browser\\_Support/015\\_Browser\\_Support\\_Policy](https://help.blackboard.com/en-us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy)

A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

## Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the LIT Catalog and Student Handbook. The LIT Catalog and Student Handbook may be accessed at [www.lit.edu](http://www.lit.edu) or obtained in print upon request at the Student Services Office. Please note that the online version of the LIT Catalog and Student Handbook supersedes all other versions of the same document.

## Certification Requirement

CNTT majors are required to earn certification in one of the following areas prior to graduation.

- A+ Certification
- Cisco Certified Entry Network Technician (CCENT)
- Cisco Certified Network Associate (CCNA)
- Microsoft Certified Solutions Associate (MCSA)

This course covers the material to prepare for Microsoft's Administering Windows Server 2012 certification, exam number 70-411. This exam, along with 70-410 and 70-412, applies as credit toward the MCSA: Windows Server 2012. Students are responsible for scheduling and paying for the certification through the LIT Testing Center. More information about the certification can be found online at <https://www.microsoft.com/en-us/learning/exam-70-411.aspx>.

## Course Schedule

Week of	Topic	Reference
Week 1	Syllabus and policies Course Introduction	

ITNW 1371  
Course Syllabus

Week of	Topic	Reference
	Lesson 1: Deploying and Managing Server Images	pp. 1-32
Week 2	Lesson 2: Implementing Patch Management	pp. 33-64
	Lesson 3: Monitoring Servers	pp. 65-106
Week 3	Lesson 4: Configuring Distributed File System (DFS)	pp. 107-133
Week 4	Lesson 5: Configuring File Server Resource Manager (FRSM)	pp. 134-154
	Lesson 6: Configuring File Services and Disk Encryption	pp. 155-176
Week 5	Lesson 7: Configuring Advanced Audit Policies	pp. 177-206
Week 6	Lesson 8: Configuring DNS Zones	pp. 207-231
	Lesson 9: Configuring DNS Records	pp. 232-253
Week 7	Lesson 10: Configuring VPN and Routing	pp. 254-285
Week 8	Lesson 11: Configuring DirectAccess	pp. 286-311
Week 9	Lesson 12: Configuring a Network Policy Server	pp. 312-337
Week 10	Lesson 13: Configuring NPS Policies	pp. 338-357
	Lesson 14: Configuring Network Access Protection (NAP)	pp. 358-382
Week 11	Lesson 15: Configuring Server Authentication	pp. 383-398
Week 12	Lesson 16: Configuring Domain Controllers	pp. 399-420
Week 13	Lesson 17: Maintaining Active Directory	pp. 421-446
	Lesson 18: Configuring Account Policies	pp. 447-461
Week 14	Lesson 19: Configuring Group Policy Processing	pp. 462-483
Week 15	Lesson 20: Configuring Group Policy Settings	pp. 484-510
	Lesson 21: Managing Group Policy Objects	pp. 511-522
Week 16	Lesson 22: Configuring Group Policy	pp. 523-539

---

Week of	Topic	Reference
	Preferences	

---

**Contact Information:**

**Program Director:** Lauri Arnold-Calder  
Program Director  
Computer Networking and Troubleshooting Technology

**Office:** Office 103C, TA-4

**Telephone:** (409) 839-2050

**E-mail:** ldarnold@lit.edu