

ITNW 1354

Implementing and Supporting Servers

Fall 2016

Instructor: Michael Slaughter
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Office Number: (806) 716-2242
Course Name: ITNW 1454.271
Course Days: Wednesday (Hybrid)
Course Time: 01:00 PM – 04:30 PM

Course Description

In this course, the student will learn to implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

Hybrid Format

This is a hybrid format class. This means we will meet for class once a week, and the remaining part of the course will be online. You must check Blackboard regularly for updates, otherwise you may miss an important announcement. Our in class meeting will be a mix between in class labs and lectures.

Textbook and Hardware Requirements

We will be using TestOut LabSim for this course. You will need to purchase an activation code from the SPC bookstore or online at the link mentioned below. Once activated, you will need to enroll in the course mentioned below. Also below is a link to a video with instructions on how to enroll in the LabSim course. This software will provide you with a virtual environment that we will use for labs, homework assignments and exams. It will also provide you with a wealth of information, reading materials, and videos to aid in your learning experience. This particular LabSim course will also prepare you for the TestOut Windows Server Pro: Install and Configure Certification and the first test (70-410) for the MCSA Server 2012 certification. MCSA 70-410 objectives can be found [here](#).

LabSim:

Promo Code: 14-232TA
Course Product: TestOut Windows Server Pro: Install and Configure 3.1x
ISBN: 978-1-935080-46-6
School Name: South Plains College
Instructor Name: Michael Slaughter
Course Name: FA2016-ITNW1454.271
Purchase Link: <http://www.testout.com/home/student-resources/student-purchasing>
Instructions Link: <http://www.testout.com/home/student-resources/how-to-tutorials>
(View the “Students Not Activated by Teachers” PDF)

Textbook:

Title: Installing and Configuring Windows Server 2012 R2 Training Guide by Mitch Tulloch
ISBN: 978-0-7356-8433-1

Assumed Knowledge

It is assumed that you possess basic computer skills relating to using the internet, applications and other basic computing tasks. It is also assumed that you have taken or possess the needed knowledge equal to ITNW1325 Fundamentals of Networking and ITSC1325 PC Hardware. If you have not taken those courses, or question your knowledge, please contact me ASAP about how to proceed. It is also assumed that if you run into content you do not understand; you will research that content on your own as well as ask the instructor for assistance.

Software Requirements

Because some of the assignments will be done and submitted outside of class, you will need access to the following programs outside of the classroom:

- Internet Connection and Web Browser (Chrome or IE)
- TestOut Account

Communication

Communication for this class will be conducted through SPC email. All students will be required to check their SPC student email accounts regularly for course updates and announcements. Please include your name, course name, and section number in all email communication. Other important announcements may be given during in class meetings, so attendance is key for complete communication.

Attendance Policy

You will be **dropped** from the course with an “X” or an “F” after **four** absences, or if I feel the objectives cannot be met due to excessive absence. If you are not sure how many absences you have accumulated, please be sure to notify me so that I can provide you with an absentee count.

If you are absent, you are still required to complete the assigned work by the indicated due date. You’ll want to be sure to ask a classmate what material you missed on the day you were absent so that you’ll be caught up when you return. I will not repeat the information you missed when you return. Frequent tardiness will result in an absence.

Reading/Study Assignments

Mandatory, assigned reading is a requirement for this course. Reading assignments includes all material in the LabSim course content that is assigned for a given week, as well as the chapters assigned in the Microsoft Press textbook. Study assignments include all lectures in LabSim, demonstrations in LabSim, notes taken from your in-class lectures, and other content presented throughout the course. Although reading/study assignments are not taken for a grade, they are required to be successful in this course.

Assignments and Lab Projects

Procrastination will not serve you well in this course. Most assignments will be available through the LabSim software. Each chapter will have several small assignments and labs that will count toward your homework grade. For the TestOut LabSim section assigned, all labs and exams are pulled for homework grades.

There will also small homework assignments and projects that will be assigned periodically throughout the semester. These assignments and/or projects will be announced in class and

available in Blackboard. **NO LATE WORK IS ACCEPTED!** In-class labs will also be completed throughout this course. It is expected that you take care of all equipment and check that equipment in/out with the instructor.

Quizzes

Quizzes will be given throughout the semester. You are required to be in class to take a quiz. No make-up quizzes will be given.

Exams

There will be two exams given in this class, a midterm and a final exam. **Make-up exams will not be given.** If the midterm exam is missed, then the final exam grade will count as both the final and midterm grade. Also, if a student does better on the final than the midterm, I will substitute the final grade as the midterm grade.

Grades

Grades will be calculated as follows:

	Possible Points
Assignments/Lab Projects	30%
Midterm	30%
Final Exam	40%

All assignments are mandatory. **I reserve the right to drop or fail you if homework assignments are frequently missed or incomplete.**

Grades will be available through LabSim (Homework/Exam Grades) and Blackboard. Blackboard grades will show a running average of how you are performing throughout the semester. Blackboard grades will be updated regularly throughout the semester.

Instructional and Outside Course Time Estimation:

In-Class Instructional/Lab/Quiz Time: $3.3\text{hrs/wk} \times 16\text{wks} = 52.8\text{ hrs}$

TestOut LabSim Time: $2.5\text{hrs/wk} \times 16\text{wks} = 40\text{ hrs}$

Midterm Exam Prep: $4\text{ hrs/wk} \times 2\text{ wks} = 8\text{hrs}$

Final Exam Prep: $4\text{hrs/wk} \times 3\text{wks} = 12\text{ hrs}$

Server Pro: I&C Cert Exam: $2\text{hrs} \times 1 = 2\text{ hrs}$

Exam Time: $2\text{hrs/exam} \times 2 = 4\text{ hrs}$

Total Course Time = 118.8 hrs

Total Time/Week = 7.425 hrs

In-Class Computer, Cell Phone and iPod Use

Students will **not** be allowed to surf the web, check their personal e-mail or social media accounts, or do work for any other course while class is in session.

Students will not be allowed to use their cell phones during class. If the student is found using social media, surfing the web, or using their cell phone, they will be asked to leave the class and they will be counted absent for that day. If the incident reoccurs, they will be reported to the dean of students. In cases of emergency, the student is asked to leave the classroom to use their cell phone. **If a student has a cell phone or other device out during an exam, they will be asked to leave and will get a zero for that exam.**

Food and Drinks

No food or drinks are allowed in the Technology Center. Do not bring those to class. If you do, you will be asked to leave class and counted as absent. If this happens more than once you may be dropped from the class.

Drop Policy

You may be dropped from this course for the following reasons:

- Attendance
 - You have four or more absences
- Participation, completion of homework, exams, and team project
 - You have missed 2-3 classes and several homework assignments
 - You have missed several homework assignments
 - You have missed two or more exams without rescheduling with the instructor
- Academic Integrity
 - Cheating, plagiarism, or sharing your work with others

NOTICE

Texas SB11 (Campus Concealed Carry) does not go into effect for community colleges until August 1st, 2017.

Academic Integrity

It is the aim of the faculty at South Plains College to foster a spirit of complete honesty and a high standard of integrity. The attempt of any student to present as his or her own any work which he or she has not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offender liable to serious consequences and possible suspension. Please refer to the SPC General Catalog regarding consequences for cheating and plagiarism. **I reserve the right to administratively drop with an "F" any student whom I suspect of academic dishonesty.**

****Do not, under any circumstances, turn in another student's file as your own. Do not, under any circumstances, give your file to anyone else to turn in as their own. Both situations are representative of academic dishonesty and will be treated as such.****

Disclaimer

Because we will use Blackboard to conduct a portion of this class, please note that the materials you may be accessing in chat rooms, bulletin boards or unofficial web pages are not officially sponsored by South Plains College. The United States Constitution rights of free speech apply to all members of our community regardless of the medium used. We disclaim all liability for data, information or opinions expressed in these forums.

Diversity Statement

In this course, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world, and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should be and can be.

Special Services

4.1.1.2 Disabilities Statement

Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Disability Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodations must provide acceptable documentation of his/her disability to the Disability Services Office. For more information, call or visit the Disability Services Office through the Guidance and Counseling Centers at Reese Center (Building 8) 716-4606, or Levelland (Student Services Building) 716-2577.

Counseling

If at any point in the semester you find yourself having trouble with stress or feel depressed please stop in and see a counselor. Counseling services are available at all campuses. The number for the counseling office is 806-716-2366. Below is a link to SPC's personal counseling services.

<http://www.southplainscollege.edu/information-for/current-spc-students/counseling-current/personal-counseling.php>

ITNW1354: Implementing and Supporting Servers

Learning Outcomes

WECM Course Catalog

Course Description: Implement, administer, and troubleshoot information systems that incorporate servers in a networked computing environment.

End-of-Course Outcomes: Configure peripherals and devices; set up servers; configure directory replication; manage licensing; create and manage system policies and profiles; administer remote servers and disk resources; create and share resources; implement fault-tolerance; configure servers for interoperability; install and configure Remote Access Service (RAS); and identify and monitor performance bottlenecks and resolve configuration problems.

Course Competencies:

1. Students will learn and demonstrate understanding of server interface.
2. Students will learn and demonstrate understating of server installation and configuration including:
 - Installation and configuration
 - Server roles
 - Remote and offline servers
 - NIC teaming
 - Tradition storage and storage pools
3. Students will learn and demonstrate understanding of virtual server and instances including:
 - Virtual machine storage
 - Virtual networks
4. Students will learn and demonstrate understanding of directory service and replication including:
 - Directory overview
 - Domain Controllers (DCs)
 - Sites, Services, and Organization Units (OUs)
 - User and computer accounts
5. Students will learn and demonstrate knowledge of name resolution, particularly relating to the domain naming service (DNS).
 - Name resolution overview

- DNS records and zone management
 - DNS server properties and troubleshooting
6. Students will learn and demonstrate knowledge of file and sharing resources including:
 - File access, access base enumeration (ABE) and volume shadow copy (VSS)
 - Shares and effective permissions
 7. Students will learn and demonstrate knowledge of print and document services including:
 - Print servers
 - Print management
 8. Students will learn and demonstrate knowledge of Group Policy Objects (GPO) including
 - Group policy management and policies
 - Password and audit policies
 - Configuring security options
 - Application restriction policies
 9. Students will learn and demonstrate knowledge of networking as it pertains to servers, including:
 - IPv4 Addressing
 - IPv6 Addressing
 - Dynamic Host Configuration Protocol (DHCP)

Course Schedule

Week	Date	Chapter
1	Aug 29-Sep 4	TestOut 1.0-1.3 Training Guide Ch. 2 Lesson 1
2	Sep 5-11	TestOut 2.0-2.5 Training Guide Ch. 3 Lessons 1-3
3	Sep 12-18	TestOut 2.6-2.8 Training Guide Ch. 8 Lesson 1
4	Sep 19-25	TestOut 3.0-3.3 Training Guide Ch. 7
5	Sep 26-Oct 2	TestOut 4.0-4.5 Training Guide Ch. 4 Lessons 1-2
6	Oct 3-9	TestOut 4.6-4.9 Training Guide Ch. 5 Lessons 1-2 CLASS THIS WEEK WILL BE IN LEVELLAND FOR LAB (TC107)
7	Oct 10-16	TestOut 5.0-5.6 Training Guide Ch. 6 Lessons 2 Midterm Review
8	Oct 17-23	TestOut 6.0-6.5 Training Guide Ch. 8 Lessons 2-3 MIDTERM EXAM
9	Oct 24-30	TestOut 7.1-7.2 Training Guide Ch. 9 Lesson 1
10	Oct 31- Nov 6	TestOut 8.0-8.4 Training Guide Ch. 10 Lessons 1-3 CLASS THIS WEEK WILL BE IN LEVELLAND FOR LAB (TC107)
11	Nov 7-13	TestOut 8.5-8.10 Training Guide Ch. 11 Lessons 1-2
12	Nov 14-20	TestOut 9.0-9.3 Training Guide Ch. 6 Lessons 1-2
13	Nov 21-27	TestOut 10.0-10.4 Final Review
14	Nov 28-Dec 4	TestOut Windows Server Pro Practice Exam Final Review CLASS THIS WEEK WILL BE IN LEVELLAND FOR LAB (TC107)
15	Dec 5-11	TestOut Windows Server Pro Practice Exam (TESTOUT SERVER PRO: INSTALL AND CONFIGURE CERT EXAM OPEN IF STANDARDS ARE MET) Final Review
16	Dec 12-15	FINALS

These dates are subject to change. All HOMEWORK IS DUE on Sunday night at 11:59 PM.

Approximate Time for the Course

The total time for the LabSim Windows Server Pro: Install and Configure course is approximately 46 hours and 46 minutes. The time is calculated by adding the approximate time for each section which is calculated using the following elements:

- Video/demo times
- Approximate time to read the text lesson (the length of each text lesson is taken into consideration)
- Simulations (5 minutes assigned per simulation)
- Questions (1 minute per question)

The total amount of LabSim content we will be covering comes to about 45 hours, which breaks down to about 3 hours of homework per week, plus time to read the content from the accompanying Microsoft Press book. The reason for the intensity in this course, is because this is what the industry expects you to know coming out of school. Dedicate the time to LEARNING the content and you will appreciate it when you graduate. –M. Slaughter

The breakdown for this course is as follows

Module	Sections	Time	Total	HR:MM
1.0 Introduction				
	1.1 Windows as a Server	10		
	1.2 Windows Server 2008 R2 Interface Overview	25		
	1.3 Windows Server 2012 Interface Overview	25	60	1:00
2.0 Installation and Configuration				
	2.1 Installation	20		
	2.2 PowerShell	35		
	2.3 Server Roles	35		
	2.4 Server Core	35		
	2.5 Remote and Offline Servers	50		
	2.6 NIC Teaming	45		
	2.7 Traditional Storage	75		

2.8 Storage Pools	50	345	5:45
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3.0 Hyper-V

3.1 Virtual Machines	55
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3.2 Virtual Machine Storage	55
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3.3 Virtual Networks	60	170	2:50
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4.0 Active Directory

4.1 Active Directory	20
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4.2 Domain Controllers	60
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4.3 Sites	10
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4.4 Organizational Units	30
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4.5 User Accounts	50
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4.6 Bulk User Operations	45
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4.7 Computer Accounts	30
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4.8 Groups	55
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4.9 Rights Delegation	20	320	5:20
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5.0 DNS

5.1 Single-label Names	25
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5.2 Name Resolution	50
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5.3 Zone Management	40
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5.4 DNS Records	30
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5.5 DNS Server Properties	25
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5.6 DNS Troubleshooting	20	190	3:10
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6.0 File and Share Access

6.1 File Access	65		
6.2 Access-based Enumeration (ABE) and Volume Shadow Copy (VSS)	35		
6.3 Shares	50		
6.4 Sharing on Server 2012	50		
6.5 Effective Permissions	35	235	3:55
7.0 Print and Document Services			
7.1 Print Servers	30		
7.2 Print Management	45	75	1:15
8.0 Group Policy			
8.1 Group Policy Foundation	50		
8.2 Group Policy Management	40		
8.3 Password Policies	35		
8.4 Audit Policies	35		
8.5 User Rights Assignment	10		
8.6 Security Options	40		
8.7 Restricted Groups	15		
8.8 Windows Firewall Policies	30		
8.9 Application Restriction Policies	50		
8.10 Group Policy Preferences	10	315	5:15
9.0 Networking			
9.1 IPv4 Addressing	50		
9.2 IPv4 Custom Addressing	40		

9.3 IPv6 Addressing	40	130	2:10
10.0 DHCP			
10.1 DHCP Basics	40		
10.2 DHCP Exclusions and Reservations	25		
10.3 DHCP Centralization	40		
10.4 DHCP Troubleshooting	20	125	2:05

Windows Server Pro: Install and Configure Practice Exams

Objective 1: Configure Windows Servers (6 simulation questions)	30		
Objective 2: Hyper-V (6 Simulation questions)	30		
Objective 3: Active Directory (10 simulation questions)	50		
Objective 4: DNS (7 simulation questions)	35		
Objective 5: File and Print Services (19 simulation questions)	95		
Objective 6: Group Policy (9 simulation questions)	45		
Objective 7: Networking and DHCP (9 simulation questions)	45		
Windows Server Pro: Install and Configure Certification Practice Exam (15 simulation questions)	75	405	6:45

Microsoft 70-410 Practice Exams

Objective 100: Install and Configure Servers (70 questions)	70		
Objective 200: Configure Server Roles and Features (69 questions)	69		

Objective 300: Configure Hyper-V (35 questions)	35		
Objective 400: Deploy and Configure Core Network Services (83 questions)	83		
Objective 500: Install and Administer Active Directory (58 questions)	58		
Objective 600: Create and Manage Group Policy (61 questions)	61		
Microsoft 70-410 Certification Practice Exam (60 questions)	60	436	7:16
	Total Time	2806	46:46