ITNW 2350
Enterprise Network
Spring 2017

Instructor: Michael Slaughter
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Office Number: (806) 716-2242
Course Name: ITNW 2350.001
Course Days: Wednesday (Hybrid)
Course Time: 01:00 – 04:50 PM

Course Description

A case study in Convergence Technologies requiring a network engineer to study a problem and design a network solution for an enterprise network. We will apply network concepts to an enterprise network; evaluate a network problem identified by a business; work as a member of a design team to study a network problem and design an efficient network that will increase productivity; and document the process for the network design. Throughout the course, we will work collaboratively to develop a network, solve problems and create an integrated network using different equipment and technologies.

Hybrid

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 and a supplemental text by Pearson for this course. You will need to purchase an activation code from the SPC bookstore. 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 Pro Certification and the MCSA 70-412 certification exam.

LabSim:

Promo Code: 14-232TA
Course Product: TestOut Network Pro 4.0   ISBN: 978-1-935080-43-5
School Name: South Plains College
Instructor Name: Michael Slaughter
Course Name: SP2017-ITNW 2350.001
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 "Getting Started - Student Accounts Not Activated by Teachers" PDF)

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 Explorer 11
- TestOut Account

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 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.

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. 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.

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	20%
Midterm	20%
Team Project	30%
Final Exam	30%

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: 3.3hrs/wk x 16wks = 52.8 hrs
TestOut LabSim Time: 3.0hrs/wk x 16wks = 48 hrs
Midterm Exam Prep: 4 hrs/wk x 2 wks = 8hrs
Final Exam Prep: 4hrs/wk x 3wks = 12 hrs
TestOut Pro Cert Exam: 2hrs x 1 = 2 hrs
Exam Time: 2hrs/exam x 2 = 4 hrs
Total Course Time = 126.8 hrs
Total Time/Week = 7.925 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

Course Schedule

Week	Date	Chapter
1	Jan 17 - 22	1.1 – 1.3 AD Infrastructure
2	Jan 23 - 29	1.4 – 1.8 AD Infrastructure
3	Jan 30 – Feb 5	2.0 File and Storage Solutions
4	Feb 6 - 12	3.0 Disaster Recovery
5	Feb 13 - 19	4.0 Advance DHCP
6	Feb 20 – 26	5.0 Advanced DNS Midterm Review
7	Feb 27 – Mar 5	6.0 Hyper-V Midterm Review
8	Mar 6 - 12	Midterm Exam
March 13 – 19 SPRING BREAK		
9	Mar 20 - 27	7.0 High Availability
10	Mar 27 – Apr 2	8.0 AD CS
11	Apr 3 - 9	9.0 AD RMS
12	Apr 10 - 16	10.0 AD FS
13	Apr 17 - 23	Team Final Project Server Pro: Advanced Series Practice Exam Section
14	Apr 24 - 30	Team Final Project Server Pro: Advanced Series Practice Exam Section Final Exam Review
15	May 1 - 7	Team Final Project Server Pro: Advanced Series Practice Exam Section Server Pro: Advanced Services TestOut Certification if standards are met (90% or better on practice exam) Final Exam Review
16	May 8 - 11	Team Final Project Final Exam

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

Appendix A: Approximate Time for the Course

The total time for the LabSim Server Pro: Advanced Services course is approximately 40 hours and 10 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, of course many students may take longer depending upon their knowledge level and experience)
- Questions (1 minute per question)

The breakdown for this course is as follows:

Module	Sections	Time	Minute	HR:MM
1.0 Active Directory Infrastructure				
1.1 Multi-Domain Forests		50		
1.2 Cross-Forest Trusts		50		
1.3 External, Shortcut and Realm Trusts		20		
1.4 Sites Overview		30		
1.5 Managing Sites		40		
1.6 Managing Replication		60		
1.7 Read-Only Domain Controllers (RODCs)		35		
1.8 RODC Management		35	320	5:20
2.0 File and Storage Solutions				
2.1 Network File System (NFS)		25		
2.2 BranchCache		25		
2.3 Dynamic Access Control (DAC)		55		

2.4 DAC Management	20		
2.5 Advanced Storage	35		
2.6 Storage Optimization	45	205	3:25
3.0 Disaster Recovery			
3.1 Windows Server Backup	35		
3.2 Restore from Backup	15		
3.3 Volume Shadow Copies	35		
3.4 Boot Configuration Data (BCD) Store	20	105	1:45
4.0 Advanced DHCP			
4.1 DHCP Overview	10		
4.2 DHCP Scopes	45		
4.3 DHCP and IPv6	25		
4.4 DHCP High Availability	40		
4.5 IPAM Overview	35		
4.6 IPAM Configuration	30		
4.7 IPAM Management	5	190	3:10
5.0 Advanced DNS			
5.1 DNS Security	40		
5.2 Advanced DNS Settings	20		
5.3 GlobalNames Zones	15	75	1:15
6.0 Hyper-V			
6.1 Virtual Machine Management	30		
6.2 Hyper-V High Availability	30	60	1:00

7.0 High Availability			
7.1 Network Load Balancing	20		
7.2 Network Load Balancing Management	35		
7.3 Failover Clustering	100		
7.4 Failover Cluster Management	25		
7.5 Failover Clustered Role Management	25		
7.6 Failover Cluster with Hyper-V	35	240	4:00
8.0 Active Directory Certificate Services			
8.1 Active Directory Certificate Services Overview	40		
8.2 Certificate Management	25		
8.3 Certificate Revocation	30		
8.4 Certificate Templates	35		
8.5 Certificate Autoenrollment	30		
8.6 Key Archival and Recovery	25		
8.7 Certificate Authority (CA) Management	20		
8.8 CA Backup and Recovery	15	220	3:40
9.0 Active Directory Rights Management Services (AD RMS)			
9.1 AD RMS Overview	10		
9.2 AD RMS Installation	40		
9.3 AD RMS Client Deployments	20		
9.4 AD RMS Templates	25	95	1:35

10.0 Active Directory Federation Services (AD FS)			
10.1 AD FS Overview	10		
10.2 AD FS Certificates	15		
10.3 Resource Partner	65		
10.4 Accounts Partner	15		
10.5 AD FS Proxies	20		
10.6 AD FS and Cloud Services	10		
10.7 AD FS and AD RMS	30	165	2:45
Server Pro: Advanced Services Practice Exam			
Obj. 1. Advanced Active Directory Configuration (10 simulation questions)	50		
Obj. 2. Advanced Storage Management (4 simulation questions)	20		
Obj. 3. Server Data Protection (4 simulation questions)	20		
Obj. 4. Advanced DHCP and DNS Configuration (7 simulation questions)	35		
Obj. 5. High Availability Implementation (10 simulation questions)	50		
Obj. 6. Certificate Management (8 simulation questions)	40		
Obj. 7. Digital Rights Management (4 simulation questions)	20		
Certification Practice Exam (15 questions)	75	310	5:10
Microsoft 70-412 Practice Exams			
Obj. 100. Configure and Manage High Availability (59 questions)	59		

Obj. 200. Configure File and Storage Solutions (35 questions)	35		
Obj. 300. Implement Business Continuity and Disaster Recovery (39 questions)	39		
Obj. 400. Configure Network Services (63 questions)	63		
Obj. 500. Configure the Active Directory Infrastructure (60 questions)	60		
Obj. 600. Configure Identity and Access Solutions (109 questions)	109		
Certification Practice Exam (60 questions)	60	425	7:05
Total Time		**2410**	**40:10**