COURSE SYLLABUS
NET435: Scaling Networks

Course Description
This course presents fundamentals in LAN (Local Area Network) design, configuration and internetworking structure and theory, a review of OSI model layers and functions, LAN switching, VLANS (Virtual LANs), routing protocols, routing configuration, monitoring and troubleshooting. Students will learn through theory and hands on application to design, configure, install and implement a LAN.

General Course Information

Number of Units/Weeks	8/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	80/0/160
Prerequisite(s)	NET 232
Co-requisites (s)	None
Course Developer(s)	Scott Green, B.A.
Date Approved / Last Review	November 2010 / January 2014

Learning Outcomes
- Demonstrate through discussion an in-depth knowledge of the seven layers of the OSI model.
- Describe in both verbal and written contexts.
- Describe both verbally and in writing, how data travels up and down the OSI model and the hardware and software associated with each layer.
- Describe LAN switching modes and methods.
- Demonstrate a knowledge of VLAN's and VLAN implementation.
- Design a Local Area Network.
- Configure and setup network routing protocols.
- During hands-on labs, show an understanding of router user commands, components and startup configuration; a knowledge of Cisco IOS commands and configuration; and a knowledge of routing protocols and troubleshooting techniques.

Instructional Methods Employed in this Course
- Lecture and reading assignments
- Hands-on exercises and labs
- Instructor/student demonstrations
- Small group/whole class discussions
- Collaborative work in groups/teams
- Practical application of theory and skills in authentic networking projects

- Build on prior knowledge and experience of students to enhance richness of class activities

Information Resources for this Course

Textbook

Empson, Scott. CCNA Portable Command Guide Third Edition. Indianapolis, IN: Cisco Press, 2013. ISBN -13: 978-1-58720-430-2

Scaling Networks: Companion Guide. Indianapolis, IN: Cisco Press, 2014. ISBN-13: 978-1-58713-328-2. (Full featured textbook for the course.)

Scaling Networks: Companion Guide. Indianapolis, IN: Cisco Press, 2014. ISBN-13: 978-0-13347-638-5. (ebook for the course.)

Scaling Networks: Lab Manual. Indianapolis, IN: Cisco Press, 2014. ISBN-13: 978-1-58713-325-1. (Complete collection of all the course lab exercises.)

Scaling Networks: Course Booklet. Indianapolis, IN: Cisco Press, 2014. ISBN-13: 978-1-58713-324-4. (Offline reading resource; contains only the narrative from the online course, no pictures or diagrams.)

Web Site Readings

Subnetting

Classless Inter-Domain Routing
http://en.wikipedia.org/wiki/Classless_Inter-Domain_Routing
(Retrieved May 13, 2010)

CIDR Notation
http://en.wikipedia.org/wiki/CIDR_notation
(Retrieved May 13, 2010)

IP Variable Length Subnet Masking (VLSM)
http://www.tcpipguide.com/free/t_IPVariableLengthSubnetMaskingVLSM-3.htm
(Retrieved May 13, 2010)

IP Addressing and Subnetting for New Users
http://www.cisco.com/en/US/tech/tk365/technologies_tech_note09186a00800a67f5.shtml
(Retrieved May 13, 2010)

Subnetting Made Easy
http://www.faqshop.com/misc/default.htm?http://faqshop.com/misc/miscarts/sn%20made%20easy.htm
(Retrieved May 10, 2010)
Subnetting Made Easy and Other Cisco Tidbits

http://subnettingmadeeasy.blogspot.com/
(Retrieved May 10, 2010)

TechRepublic: IP Subnetting Made Easy
http://articles.techrepublic.com.com/5100-10878_11-6089187.html
(Retrieved May 10, 2010)

Unmasking the Subnet Mask for the CCNA Exam
http://www.dummies.com/how-to/content/unmasking-the-subnet-mask-for-the-ccna-exam.html
(Retrieved May 10, 2010)

YouTube: Superstar Insider IP Subnetting Made Easy
http://www.youtube.com/watch?v=AKl-fpnnqhQ
(Retrieved May 10, 2010)

OSI Model

The 7 Layers of the OSI Model
http://www.webopedia.com/quick_ref/osi_layers.asp
(Retrieved May 10, 2010)

About.com: OSI Model Reference Guide
http://compnetworking.about.com/cs/designosimodel/a/osimodel.htm
(Retrieved May 10, 2010)

Cisco: Internetworking Basics
http://www.cisco.com/en/US/docs/internetworking/technology/handbook/Intro-to-Internet.html
(Retrieved May 10, 2010)

OSI Model
http://en.wikipedia.org/wiki/OSI_model
(Retrieved May 10, 2010)

OSI Model
http://www.topbits.com/osi-model.html
(Retrieved May 10, 2010)

OSI Model Images
http://www.google.com/images?q=osi+model&rls=com.microsoft:en-us:IE-SearchBox&oe=UTF-8&rlz=1I7GGLG_en&um=1&ie=UTF-8&source=univ&ei=IYfoS8CCC4ycsgPEs9iBCA&sa=X&oi=image_result_group&ct=title&resnum=4&ved=0CD0QsAQwAw
(Retrieved May 10, 2010)

Network Topology

About.com: Network Topologies
http://compnetworking.about.com/od/networkdesign/a/topologies.htm
(Retrieved May 10, 2010)

Network Topology
http://en.wikipedia.org/wiki/Network_topology
(Retrieved May 10, 2010)

Network Topology Images
http://www.google.com/images?q=network+topology&rls=com.microsoft:en-us:IE-SearchBox&oe=UTF-8&rlz=1I7GGLG_en&um=1&ie=UTF-8&source=univ&ei=yojoS66eJpGisgPXg5DVBw&sa=X&oi=image_result_group&ct=title&resnum=4&ved=0CD0QsAQwAw
(Retrieved May 10, 2010)

Networking Tutorials: Network Topologies
http://www.networktutorials.info/topology.html
(Retrieved May 10, 2010)

Routing Protocols

Distant Vector vs. Link State Routing
http://www.inetdaemon.com/tutorials/internet/ip/routing/dv_vs_ls.shtml
(Retrieved May 13, 2010)

Distant-Vector Routing Protocol
http://en.wikipedia.org/wiki/Distance-vector_routing_protocol
(Retrieved May 13, 2010)

Distance Vector Routing Protocol
http://www.topbits.com/distance-vector-routing-protocol.html
(Retrieved May 13, 2010)

Enhanced Interior gateway Routing Protocol
http://en.wikipedia.org/wiki/Enhanced_Interior_Gateway_Routing_Protocol
(Retrieved May 13, 2010)

Enhanced Interior Gateway Routing Protocol (EIGRP) Introduction
http://www.cisco.com/en/US/products/ps6630/products_ios_protocol_option_home.html
Retrieved May 13, 2010)

Link-state Routing Protocol
http://en.wikipedia.org/wiki/Link-state_routing_protocol
(Retrieved May 13, 2010)

Networking 101: Understanding RIP Routing

http://www.enterprisenetworkingplanet.com/netsp/article.php/3609151/Networking-101-Understanding-RIP-Routing.htm
(Retrieved May 13, 2010)

Open Shortest Path First
http://en.wikipedia.org/wiki/Open_Shortest_Path_First
(Retrieved May 13, 2010)

OSPF
http://www.rhyshaden.com/ospf.htm
(Retrieved May 13, 2010)

Routing Information Protocol
http://en.wikipedia.org/wiki/Routing_Information_Protocol
(Retrieved May 13, 2010)

Routing Information Protocol (RIP)
http://www.cisco.com/en/US/docs/internetworking/technology/handbook/RIP.html
(Retrieved May 13, 2010)

What You Need to Know About EIGRP
http://www.setup32.com/network-administration/networking/know-eigrp.php
(Retrieved May 13, 2010)

IP Theory

Network History
http://www.nethistory.info/History%20of%20the%20Internet/origins.html
(Retrieved May 10, 2010)

Trainsignal: Free TCP/IP and Networking Fundamentals Training Video
http://www.trainsignaltraining.com/free-video-training/free-tcpip-networking-fundamentals-training-videos/
(Retrieved May 10, 2010)

Switch Configuration

Switch Configuration
http://www.snt.co.uk/courseware/Configuring_switches.pdf
(Retrieved November 16, 2010)

Cisco Switch Configuration
http://www.tech-faq.com/cisco-switch-configuration.html
(Retrieved November 16, 2010)

Basics of Cisco Switch Administration
http://www.petri.co.il/csc_basics_of_cisco_switch_administration_01.htm
(Retrieved November 16, 2010)

Basics Switch Configuration (Cisco Catalyst 2950T)
http://www.youtube.com/watch?v=pp8KqXgfvlQ
(Retrieved November 16, 2010)

Cisco Switch Configuration
http://video.google.com/videoplay?docid=8608134916159965970#
(Retrieved November 16, 2010)

VLAN's
The Basic Definition
HTTP://WWW.TECH-FAQ.COM/VLAN.HTML
(Retrieved November 16, 2010)

What is a VLAN? How to Setup a VLAN on a Cisco Switch
http://www.petri.co.il/csc_setup_a_vlan_on_a_cisco_switch.htm
(Retrieved November 16, 2010)

How LAN Switches Work
http://computer.howstuffworks.com/lan-switch16.htm
(Retrieved November 16, 2010)

VLAN and Trunking
http://www.ciscopress.com/articles/artilce.asp?p=29803
(Retrieved November 16, 2010)

VTP
VLAN Trunking Protocol
http://en.wikipedia.org/wiki/VLAN_Truncking_Protocol
(Retrieved November 16, 2010)

Understanding VLAN Trunking Protocol (VTP)
http://www.cisco.com/en/US/tech/tk389/tk689/technologies_tech_note09186a0080094c52.shtml
(Retrieved November 16, 2010)

Cisco VTP:VLAN Trunking Protocol
http://www.javvin.com/protocolVTP.html
(Retrieved November 16, 2010)

How to configure VTP Client and Server?
http:/ http://www.computeronlinetips.com/Switch-configuration-tips/configure-VTP-client.html

(Retrieved November 16, 2010)

STP

Understanding and Configuring Spanning Tree Protocol on Catalyst Switches
http://www.cisco.com/en/US/tech/tk389/tk621/technologies_configuration_example09186a008009467c.shtml
(Retrieved November 16, 2010)

Spanning Tree Protocol
http://en.wikipedia.org/wiki/Spanning_tree_protocol
(Retrieved November 16, 2010)

Understanding Spanning Tree Protocol Topology Changes
http://www.cisco.com/en/US/tech/tk389/tk621/technologies_tech_note09186a0080094797.shtml
(Retrieved November 16, 2010)

Chapter 7: Spanning Tree Protocol (STP)
https://learningnetwork.cisco.com/docs/DOC-6597
(Retrieved November 16, 2010)

INTER-VLAN ROUTING

What is VLAN Routing?
http://www.dell.com/downloads/global/products/pwcnt/en/app_note_38.pdf
(Retrieved November 16, 2010)

How to Configure Inter-VLAN Routing on a Cisco Router
http://www.routergeek.net/content/view/43/37/
(Retrieved November 16, 2010)

InterVLAN Routing
http://ftp.hp.com/pub/networking/software/ProCurve-SR-InterVLAN-Config-Guide.pdf
(Retrieved November 16, 2010)

Cisco CCNA Videos – Inter-VLAN Routing
http://www.youtube.com/watch?v=pd6YQvDSXUg
(Retrieved November 16, 2010)

How to create a VLAN on a Cisco Switch
http://www.youtube.com/watch?v=edCzr5L4Zec&feature=related
(Retrieved November 16, 2010)

Table/Topics & Assignments

Types of Assignments:

Lecture -

Considered Lecture Hours

Classroom Discussion -

Considered Lecture Hours

In Class Critique -

Considered Lecture Hours

Delivering Oral Presentations -

Considered Lecture Hours

In Class (IC) Exercise -

Considered Lecture Hours

Reading -

Considered Homework (HW), work done outside of class

WebClass lesson (non-online courses) -

Considered HW, work done outside of class

Lab Work -

Considered Lab Hours

Quiz, Midterm or Final -

Considered Lecture Hours

Week 1						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 1A	Introduction to Scaling Networks	5.5	--	--	--	
LEC 1B	Lab – Selecting Switching Hardware	1.5	--	--	--	
HW 1A	Course Pretest (40 Questions)	--	--	2	--	Week 2
HW 1B	Chapter 1 Read (40 Pages) Evaluated by HW 1J & Exam 1A	--	--	4	--	Week 2
HW 1C	Activity 1.1.1.6 – Identify Cisco Enterprise Architecture Modules	--	--	.5	--	Week 2
HW 1D	Activity 1.1.2.6 – Identify Scalability Terminology	--	--	.5	--	Week 2
HW 1E	Activity 1.2.1.6 – Selecting Switch Hardware	--	--	.5	--	Week 2
HW 1F	PT 1.2.1.7 Selecting Network Devices	--	--	1	--	Week 2

HW 1G	Activity 1.2.2.4 – Identify the Router Category	--	--	.5	--	Week 2
HW 1H	Activity 1.3.1.2 – Basic Switch Configurations	--	--	.5	--	Week 2
HW 1I	PT 1.3.1.3 – Skills Integration Challenge	--	--	1	2	Week 2
HW 1J	Chapter 1 Quiz (10 Questions)	--	--	1	--	Week 2
EXAM 1A	Chapter 1 Exam	1	--	5	5	Week 2
Total Week 1		8	0	16.5	7	

Week 2

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 2A	LAN Redundancy	4	--	--	--	
LEC 2B	Lab – Building a Switched Network with Redundant Links	1	--	--	--	
LEC 2C	Lab – Configuring Rapid PVST+, PortFast and BPDU Guard	1	--	--	--	
LEC 2D	Lab – Configuring HSRP and GLBP	1	--	--	--	
HW 2A	Chapter 2 Read (45 Pages) Evaluated by HW 2N & Exam 2A	--	--	4.5	--	Week 3
HW 2B	PT 2.1.1.5 – Examining a Redundant Design	--	--	1	--	Week 3
HW 2C	Activity 2.1.2.8 – Identify 802.1D Port Roles	--	--	.5	--	Week 3
HW 2D	Activity 2.2.1.3 – Identify Types of Spanning Tree Protocols	--	--	.5	--	Week 3
HW 2E	Activity 2.2.2.4 – Identifying PVST+ Operations	--	--	.5	--	Week 3
HW 2F	Activity 2.2.3.5 – Identify Port Roles in Rapid PVST+	--	--	.5	--	Week 3
HW 2G	Activity 2.2.3.6 – Compare PVST+ and Rapid PVST+	--	--	.5	--	Week 3
HW 2H	PT 2.3.1.5 – Configuring PVST+	--	--	1	--	Week 3

HW 2I	PT 2.3.2.2 – Configuring Rapid PVST+	--	--	1	--	Week 3
HW 2J	Activity 2.3.3.6 – Troubleshooting STP Configuration Issues	--	--	.5	--	Week 3
HW 2K	Activity 2.4.1.4 – Identify FHRP Terminology	--	--	.5	--	Week 3
HW 2L	Activity 2.4.2.2 – Identify the Type of FHRP	--	--	.5	--	Week 3
HW 2M	Activity 2.4.3.3 – Syntax Checker – HSRP and GLBP	--	--	.5	--	Week 3
HW 2N	Chapter 2 Quiz (14 Questions)	--	--	1	--	Week 3
EXAM 2A	Chapter 2 Exam	1	--	4	5	Week 3
Total Week 2		8	0	17	5	

Week 3

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 3A	Link Aggregation	5	--	--	--	
LEC 3B	Lab – Configuring EtherChannel	1	--	--	--	
LEC 3C	Lab – Troubleshooting EtherChannel	1	--	--	--	
HW 3A	Chapter 3 Read (25 Pages) Evaluated by HW 3G & Exam 3A	--	--	2.5	--	Week 4
HW 3B	Activity 3.1.2.4 – Identify the PAgP and LACP Modes	--	--	.5	--	Week 4
HW 3C	PT 3.2.1.3 – Configuring EtherChannel	--	--	1	--	Week 4
HW 3D	PT 3.2.2.3 – Troubleshooting EtherChannel	--	--	1	--	Week 4
HW 3E	PT 3.3.1.2 – Skills Integration Challenge	--	--	1	2	Week 4
HW 3F	Section 3.2 Quiz (6 Questions)	--	--	.5	--	Week 4
HW 3G	Chapter 3 Quiz (10 Questions)	--	--	1	--	Week 4
EXAM 3A	Chapter 3 Exam	1	--	4	5	Week 4
Total Week 3		8	0	11.5	7	

Week 4						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 4A	Wireless LANs	7	--	--	--	
HW 4A	Chapter 4 Read (55 Pages) Evaluated by HW 4P & Exam 4A	--	--	5.5	--	Week 5
HW 4B	Activity 4.1.1.8 – Identify the Wireless Technology	--	--	.5	--	Week 5
HW 4C	Activity 4.1.1.9 – Compare Wireless Standards	--	--	.5	--	Week 5
HW 4D	Activity 4.1.1.10 – Compare WLANs and LANs	--	--	.5	--	Week 5
HW 4E	Activity 4.1.2.9 – Identify WLAN Component Terminology	--	--	.5	--	Week 5
HW 4F	Lab – Investigating Wireless Implementations	--	--	1	--	Week 5
HW 4G	Activity 4.1.3.4 – Identify Topology Terminology	--	--	.5	--	Week 5
HW 4H	Activity 4.2.1.6 – Identify the 802.11 Frame Control Fields	--	--	.5	--	Week 5
HW 4I	Activity 4.2.2.6 – Order the Steps in the Client and AP Association Process	--	--	.5	--	Week 5
HW 4J	Activity 4.2.3.4 – Identify Channel Management Terminology	--	--	.5	--	Week 5
HW 4K	Activity 4.2.3.5 – Cisco Wireless Explorer Game	--	--	1	--	Week 5
HW 4L	Activity 4.3.2.6 – Identify the WLAN Authentication Characteristics	--	--	.5	--	Week 5
HW 4M	PT 4.4.2.2 – Configuring Wireless LAN Access	--	--	1	--	Week 5
HW 4N	Activity 4.4.3.5 – Identify the Troubleshooting Solution	--	--	.5	--	Week 5

HW 4O	PT 4.5.1.2 – Skills Integration Challenge	--	--	1	2	Week 5
HW 4P	Chapter 4 Quiz (13 Questions)	--	--	1	--	Week 5
EXAM 4A	Chapter 4 Exam	1	--	4	5	Week 5
Total Week 4		8	0	18.5	7	

Week 5

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 5A	Adjust and Troubleshoot Single Area OSPF	4	--	--	--	
LEC 5B	Lab – Configuring Basic Single-Area OSPFv2	1	--	--	--	
LEC 5C	Lab – Configuring OSPFv2 on a Multi-access Network	1	--	--	--	
LEC 5d	Lab – Configuring OSPFv2 Advanced Features	1	--	--	--	
LEC 5E	Lab – Troubleshooting Single-Area OSPFv2 and OSPFv3	1	--	--	--	
LEC 5F	Lab – Troubleshooting Advanced Single-Area OSFPv2	1	--	--	--	
HW 5A	Chapter 5 Read 40 Pages) Evaluated by HW 5K Exam 5A	--	--	4	--	Week 6
HW 5B	Activity 5.1.2.10 – Identify OSPF Network Type Terminology	--	--	.5	--	Week 6
HW 5C	Activity 5.1.2.11 – Select the Designated Router	--	--	.5	--	Week 6
HW 5D	PT 5.1.2.12 – Determining the DR and BDR	--	--	1	--	Week 6
HW 5E	PT 5.1.3.5 – Propagating a Default Route in OSPFv2	--	--	1	--	Week 6
HW 5F	PT 5.1.5.7 – Configuring OSPFv2 Advanced Features	--	--	1	--	Week 6
HW 5G	Activity 5.2.1.5 – Identify	--	--	.5	--	Week 6

	Troubleshooting Command					
HW 5H	PT 5.2.2.3 – Troubleshooting Single-Area OSFPv2	--	--	1	--	Week 6
HW 5I	PT 5.3.1.2 – Skills Integration Challenge	--	--	2	2	Week 6
HW 5J	Section 5.1 Quiz (6 Questions)	--	--	.5	--	Week 6
HW 5K	Chapter 5 Quiz (13 Questions)	--	--	1	--	Week 6
EXAM 5A	Chapter 5 Exam	1	--	4	5	Week 6
Total Week 5		8	0	17	7	

Week 6

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 6A	Multiarea OSPF	4	--	--	--	
LEC 6B	Lab – Configuring Multiarea OSPFv2	1	--	--	--	
LEC 6C	Lab – Configuring Multiarea OSPFv3	1	--	--	--	
LAB 6D	Lab – Troubleshooting Multiarea OSPFv2 and OSPFv3	1	--	--	--	
HW 6A	Chapter 6 Read (25 Pages) Evaluated by HW 6G & Exam 6A	--	--	2.5	--	Week 7
HW 6B	Activity 6.1.1.5 – Identify the Multiarea OSPF Terminology	--	--	.5	--	Week 7
HW 6C	Activity 6.1.2.7 – Identify the OSPF LSA Type	--	--	.5	--	Week 7
HW 6D	Activity 6.1.3.3 – Order the Steps for OSPF Best Path Calculations	--	--	.5	--	Week 7
HW 6E	PT 6.2.3.6 – Configuring Multiarea OSPFv2	--	--	1.5	--	Week 7
HW 6F	PT 6.2.3.7 – Configuring Multiarea OSPFv3	--	--	1.5	--	Week 7
HW 6G	Chapter 6 Quiz (14 Questions)	--	--	1	--	Week 7
EXAM 6A	Chapter 6 Exam	1	--	4	5	Week 7
Total Week 6		8	0	12	5	

Week 7						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 7A	Enhanced Interior Gateway Protocol (EIGRP)	4	--	--	--	
LEC 7B	Lab – 7.2.2.5 Configuring Basic EIGRP with IPv4	1.5	--	--	--	
LEC 7C	Lab – 7.4.3.5 Configuring Basic EIGRP for IPv6	1.5	--	--	--	
HW 7A	Chapter 7 Read (50Pages) Evaluated by HW 7I Exam 7A	--	--	5	--	Week 8
HW 7B	Activity 7.1.2.5 – Identify the EIGRP Packet Type	--	--	.5	--	Week 8
HW 7C	PT 7.2.2.4 – Configuring Basic EIGRP with IPv4	--	--	1.5	--	Week 8
HW 7D	Activity 7.3.1.4 – Identify the Steps in Establishing EIGRP Neighbor Adjacencies	--	--	.5	--	Week 8
HW 7E	Activity 7.3.2.7 – Calculate the EIGRP Metric	--	--	.5	--	Week 8
HW 7F	PT 7.3.4.4 – Investigating DUAL FSM	--	--	1	--	Week 8
HW 7G	Activity 7.4.1.4 – Compare EIGRPv4 and EIGRPv6	--	--	.5	--	Week 8
HW 7H	PT 7.4.3.4 – Configuring Basic EIGRP with IPv6	--	--	1	--	Week 8
HW 7I	Chapter 7 Quiz (15 Questions)	--	--	1	--	Week 8
EXAM 7A	Chapter 7 Exam	1	--	5	5	Week 8
Total Week 7		8	0	16.5	5	

Week 8						
Type	**Topic/Description**	**LEC Hours**	**LAB Hours**	**HW Hours**	**Point Value**	**Due**
LEC 8A	EIGRP Advanced Configurations and Troubleshooting	4	--	--	--	
LEC 8B	Lab – 8.1.5.5 Configuring	1.5	--	--	--	

	Advanced EIGRP for IPv4 Features					
LEC 8C	Lab – 8.2.3.6 Troubleshooting Basic EIGRP for IPv4 and IPv6	1.5	--	--	--	
HW 8A	Chapter 8 Read (35 Pages) Evaluated by HW 8L Exam 8A	--	--	3.5	--	Week 9
HW 8B	Activity 8.1.1.9 – Determine the Classful Summarization	--	--	.5	--	Week 9
HW 8C	Activity 8.1.1.10 – Determine the Exit Interface for a Given Packet	--	--	.5	--	Week 9
HW 8D	PT 8.1.2.5 – Configuring EIGRP Manual Summary Routes for IPv4 and IPv6	--	--	1.5	--	Week 9
HW 8E	PT 8.1.3.4 – Propagating a Default Route in EIGRP for IPv4 and IPv6	--	--	1.5	--	Week 9
HW 8F	Activity 8.1.4.5 – Determine the EIGRP Fine Tuning Commands	--	--	.5	--	Week 9
HW 8G	Activity 8.2.1.3 – Identify the Troubleshooting Command	--	--	.5	--	Week 9
HW 8H	Activity 8.2.2.4 – Troubleshoot EIGRP Neighbor Issues	--	--	.5	--	Week 9
HW 8I	Activity 8.2.3.4 – Troubleshoot EIGRP Routing Table Issues	--	--	.5	--	Week 9
HW 8J	PT 8.2.3.5 – Troubleshooting EIGRP for IPv4	--	--	1.5	--	Week 9
HW 8K	PT 8.3.1.2 – Skills Integration Challenge	--	--	1.5	2	Week 9
HW 8L	Chapter 8 Quiz (13 Questions)	--	--	1	--	Week 9
EXAM 8A	Chapter 8 Exam	1	--	5	5	Week 9
Total Week 8		8	0	18.5	7	
Week 9						

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
LEC 9A	IOS Images and Licensing	7	--	--	--	
HW 9A	Chapter 9 Read (25 Pages) Evaluated by HW 9H & Exam 9A	--	--	2.5	--	Week 10
HW 9B	PT 9.1.1.9 – Decode IOS Image Names	--	--	1	--	Week 10
HW 9C	PT 9.1.2.5 – Using a TFTP Server to Upgrade a Cisco IOS Image	--	--	1	--	Week 10
HW 9D	Class Project - Powerful Protocol	--	--	1	--	Week 10
HW 9E	PT 9.3.1.2 – EIGRP Capstone	--	--	3	--	Week 10
HW 9F	PT 9.3.1.3 – OSPF Capstone	--	--	3	--	Week 10
HW 9G	PT 9.3.1.4 – Skills Integration Challenge	--	--	3	2	Week 10
HW 9H	Chapter 9 Quiz (10 Questions)	--	--	1	--	Week 10
EXAM 9A	Chapter 9 Exam	1	--	4	5	Week 10
Total Week 9		8	0	19.5	7	

Week 10

Type	Topic/Description	LEC Hours	LAB Hours	HW Hours	Point Value	Due
EXAM 10A	Practice Final Exam	1	--	3	2	Week 10
EXAM 10B	Final Exam	2	--	4	10	Week 10
EXAM 10C	Packet Tracer Final Exam	2	--	6	15	Week 10
EXAM 10D	Practical Exam	3	--	6	15	Week 10
Total Week 10		8	0	19	47	

Course Hours Summary

Week	Topic	LEC Hours	LAB Hours	HW Hours
1	Introduction to Scaling Networks	8	0	16.5
2	LAN Redundancy	8	0	17
3	Link Aggregation	8	0	11.5
4	Wireless LANs	8	0	18.5
5	Adjust and Troubleshoot Single Area OSPF	8	0	17
6	Multiarea OSPF	8	0	12
7	Enhanced Interior Gateway Protocol (EIGRP)	8	0	16.5
8	EIGRP Advanced Configurations and Troubleshooting	8	0	18.5
9	IOS Images and Licensing	8	0	19.5
10	Practice Final Exam Final Exam Packet Tracer Final Exam Practical Exam	8	0	19
Total		80	0	166

Table/Point Breakdown

Week	Assignment	Possible Points	Percent of Grade
1	EXAM 1A, Chapter 1 Exam	5	5%
1	ELP 1I, Skills Integration Challenge	2	2%
2	EXAM 2A, Chapter 2 Exam	5	5%
3	EXAM 3A, Chapter 3 Exam	5	5%
3	ELP 3E, Skills Integration Challenge	2	2%
4	EXAM 4A, Chapter 4 Exam	5	5%
4	ELP 4O, Skills Integration Challenge	2	2%
5	EXAM 5A, Chapter 5 Exam	5	5%
5	ELP 5I, Skills Integration Challenge	2	2%
6	EXAM 6A, Chapter 6 Exam	5	5%
7	EXAM 7A, Chapter 7 Exam	5	5%
8	EXAM 8A, Chapter 8 Exam	5	5%
8	ELP 8K, Skills Integration Challenge	2	2%
9	EXAM 9A, Chapter 9 Exam	5	5%
9	ELP 9G, Skills Integration Challenge	2	2%
10	Survey	1	1%
10	EXAM 10A, Practice Final Exam	2	2%
10	EXAM 10B, Final Exam	10	10%
10	EXAM 10C, Packet Tracer Final Exam	15	15%
10	EXAM 10D, Practical Exam	15	15%
Total		100	100%

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0
59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit

WV = Waiver	

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.