

CIST 2453 - Cisco Scaling Networks (version 201512L)

Course Title Course Development Learning Support

Cisco Scaling Networks Standard No

Course Description

This course describes the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches for advanced functionality. Students will configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks. Students will also learn how to implement a WLAN in a small-to-medium network.

Pre-requisites

Pre-requisites: All Required

CIST 2452 - Cisco Routing and Switching Essentials (201512L)

Co-requisites

Co-requisites: None

Course Length

	Minutes	Contact Hour	Semester Credit	WLU
Lecture:	1500	30		
Lab 2:	3000	60		
Lab 3:	0	0		
Total:	4500	90	4	
Semester Credit Hours:			4	142.5
Breakout Detail of Lab 3				
Practicum/Internship	0	0		
Clinical	0	0		

Competencies & Outcomes

Order	Description	Lecture	Lab 2	Lab 3	Total Min	Credit Hrs	Pract Intern	Clinical
1	Designing Scalable Networks	120	240	0	360	0	0	0
Order	Description						Learning Domain	Level of Learning
1	Describe designing a scalable network						Cognitive	Knowledge
2	Explain network redundancy						Cognitive	Comprehension
3	Explain bandwidth requirements for networks						Cognitive	Comprehension
4	Discuss selecting appropriate network devices						Cognitive	Comprehension
2	LAN Redundancy	180	450	0	630	0	0	0
Order	Description						Learning Domain	Level of Learning
1	Discuss need for LAN redundancy						Cognitive	Comprehension

	2	Explain issues with LAN redundancy					Cognitive	Comprehension
	3	Explain managing LAN redundancy with Spanning Tree Protocol					Cognitive	Comprehension
	4	Perform STP configuration and troubleshooting					Psychomotor	Guided Response
3	Link Aggregation		160	360	0	520	0	0
	Order	Description					Learning Domain	Level of Learning
	1	Describe Link Aggregation Control Protocol					Cognitive	Knowledge
	2	Explain Link Aggregation Control Protocol					Cognitive	Comprehension
	3	Perform Ether Channel configuration					Psychomotor	Guided Response
4	Wireless LANs		180	360	0	540	0	0
	Order	Description					Learning Domain	Level of Learning
	1	Describe wireless LAN technology and standards					Cognitive	Comprehension
	2	Describe wireless LAN operation					Cognitive	Comprehension
	3	Describe wireless security issues					Cognitive	Comprehension
	4	Perform wireless LAN configuration					Psychomotor	Guided Response
5	Advanced OSPF		360	750	0	1110	0	0
	Order	Description					Learning Domain	Level of Learning
	1	Perform advanced single-area OSPF configurations for IPv4 and IPv6					Psychomotor	Guided Response
	2	Perform troubleshooting of single-area OSPF issues					Psychomotor	Guided Response
	3	Explain multi-area OSPF					Cognitive	Comprehension
	4	Perform multi-area OSPF configuration for IPv4 and IPv6					Psychomotor	Guided Response
6	EIGRP		340	600	0	940	0	0
	Order	Description					Learning Domain	Level of Learning
	1	Describe EIGRP					Cognitive	Knowledge
	2	Perform EIGRP configuration for IPv4 and IPv6					Psychomotor	Guided Response
	3	Perform EIGRP advanced configurations					Psychomotor	Guided Response
	4	Perform EIGRP troubleshooting					Psychomotor	Guided

7	IOS Images and Licensing	160	240	0	400	0	0	0
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Order	Description	Learning Domain	Level of Learning
1	Discuss Cisco IOS naming conventions	Cognitive	Comprehension
2	Perform managing IOS images	Psychomotor	Guided Response
3	Discuss obtaining Cisco IOS licenses	Cognitive	Comprehension
4	Perform installing and verifying Cisco IOS licenses	Psychomotor	Guided Response

Competency Totals:	Lecture 1500	Lab 2 3000	Lab 3 0	Total Min 4500	Cred Hrs 4	Pract Intern 0	Clinical 0
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