

# CIST 2454 - Cisco Connecting Networks ( version 201512L )

## Course Title                      Course Development      Learning Support

Cisco Connecting Networks    Standard                                      No

### Course Description

This course discusses the WAN technologies and network services required by converged applications in a complex network. Topics include introduction to WANs, private WAN technologies and protocols, Network Address Translation (NAT), public WAN technologies and protocols, network monitoring, and network troubleshooting.

### Pre-requisites

Pre-requisites: All Required

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### Co-requisites

Co-requisites: None

### Course Length

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

### Competencies & Outcomes

Order	Description	Lecture	Lab 2	Lab 3	Total Min	Credit Hrs	Pract Intern	Clinical
1	<b>Introduction to WANs</b>	250	500	0	750	0	0	0
Order	Description						Learning Domain	Level of Learning
1	Explain Explain hierarchical network design						Cognitive	Comprehension
2	Describe Cisco Enterprise Architecture						Cognitive	Comprehension
3	Discuss evolving network architectures						Cognitive	Comprehension
4	Understand Wide Area Networks (WANs)						Cognitive	Comprehension
2	<b>Private WAN Technologies and Protocols</b>	400	800	0	1200	0	0	0
Order	Description						Learning Domain	Level of Learning
1	Understand point-to-point WAN technologies						Cognitive	Comprehension
2	Explain HDLC and PPP						Cognitive	Comprehension

	3	Perform configuring and troubleshooting PPP					Psychomotor	Guided Response
	4	Understand Frame Relay					Cognitive	Comprehension
	5	Perform Frame Relay configuration and troubleshooting					Psychomotor	Guided Response
3	<b>NAT</b>		125	250	0	375	0	0
	<b>Order</b>	<b>Description</b>					<b>Learning Domain</b>	<b>Level of Learning</b>
	1	Understand NAT operation					Cognitive	Comprehension
	2	Perform configuring NAT					Psychomotor	Guided Response
	3	Perform troubleshooting NAT					Psychomotor	Guided Response
4	<b>Public WAN Technologies and Protocols</b>		400	800	0	1200	0	0
	<b>Order</b>	<b>Description</b>					<b>Learning Domain</b>	<b>Level of Learning</b>
	1	Describe teleworking					Cognitive	Knowledge
	2	Understand broadband technologies					Cognitive	Comprehension
	3	Understand VPN methodologies					Cognitive	Comprehension
	4	Perform broadband access configuration					Psychomotor	Guided Response
	5	Perform configuring secure end-to-end private network					Psychomotor	Guided Response
5	<b>Network Monitoring</b>		200	400	0	600	0	0
	<b>Order</b>	<b>Description</b>					<b>Learning Domain</b>	<b>Level of Learning</b>
	1	Describe monitoring network with Syslog					Cognitive	Knowledge
	2	Explain obtaining network information with SNMP					Cognitive	Comprehension
	3	Discuss traffic analysis using Netflow					Cognitive	Comprehension
	4	Perform configuring Syslog, SNMP, and Netflow					Psychomotor	Guided Response
6	<b>Network Troubleshooting</b>		125	250	0	375	0	0
	<b>Order</b>	<b>Description</b>					<b>Learning Domain</b>	<b>Level of Learning</b>
	1	Explain network documentation					Cognitive	Comprehension
	2	Describe establishing a network baseline					Cognitive	Knowledge
	3	Explain troubleshooting methodologies and tools					Cognitive	Comprehension

4 Perform network troubleshooting

Psychomotor    Guided  
                                 Response

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