

10/26/2022 DATE



REQUIRED COURSE



ELECTIVE COURSE

Business DIVISION



NEW COURSE



REVISION

# Lake Land College

## Course Information Form

<b>COURSE NUMBER:</b>	CIS-087	<b>TITLE: (30 Characters Max)</b>	TCP/IP and Routing					
<b>SEM CR HRS:</b>	2	<b>Lecture:</b>	2	<b>Lab:</b>	0	<b>ECH:</b>	2	
<b>Course Level:</b>	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input type="checkbox"/> Career/Technical <input type="checkbox"/> Dev Ed/ Not in Degree Audit		<b>Clinical Practicum:</b>	0	<b>Work-based Learning</b> 0	<b>WBL ECH:</b> 0
<b>COURSE PCS #</b>	12 - 52. 9998		<b>IAI Code</b>				<b>Contact Hours (Minutes Per Week)</b>	
<b>Repeatable (Y/N):</b>	Y	<b>Pass/Fail (Y/N):</b>	N	<b>Variable Credit (Y/N):</b>	N	<b>Min:</b>	<b>Max:</b>	16 Wks 100 8 Wks 200
<b>Prerequisites:</b>	CIS-081							
<b>Catalog Description: (40 Word Limit)</b>	An in-depth study of the TCP/IP protocol and router technology. Topics include installation, configuration, optimization, and administration of routers in an internet, intranet, or LAN environment. Troubleshooting, network integration, and other support issues will also be discussed.							

List the Major Course Segments (Units)		Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Work-based Learning
1	Introduction	2			
2	Communication Architectures	4			
3	TCP/IP Protocol Suite	4			
4	IP Addressing	3			
5	Bridging and Routing	3			
6	DNS, WINS, DHCP and Utilities	6			
7	Router Installation and Configuration	6			
8	Troubleshooting	2			
9	Lab Exercises				
10					
TOTAL		30	0	0	0

EVALUATION			
<b>QUIZZES</b>	<input checked="" type="checkbox"/>	<b>EXAMS</b>	<input checked="" type="checkbox"/>
<b>LAB WORK</b>	<input checked="" type="checkbox"/>	<b>PROJECTS</b>	<input checked="" type="checkbox"/>
		<b>ORAL PRES</b>	<input type="checkbox"/>
		<b>COMP FINAL</b>	<input checked="" type="checkbox"/>
		<b>PAPERS</b>	<input checked="" type="checkbox"/>
		<b>OTHER</b>	<input type="checkbox"/>

COURSE MATERIALS	
<b>TITLE:</b>	A Guide to TCP/IP
<b>AUTHOR:</b>	Chappell
<b>PUBLISHER:</b>	Course Technology
<b>VOLUME/EDITION/URL:</b>	3rd
<b>COPYRIGHT DATE:</b>	2007

<b>TITLE:</b>	Network Warrior
<b>AUTHOR:</b>	Donahue
<b>PUBLISHER:</b>	O'Reilly Media
<b>VOLUME/EDITION/URL:</b>	
<b>COPYRIGHT DATE:</b>	2011

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Introduction	2	Identify the difference between TCP/IP and other protocols.
Communication Architectures	4	Identify and explain the various components used in communication. A. OSI Reference Model B. LAN Communication C. WAN Communication
TCP/IP Protocol Suite	4	Describe the component pieces of the TCP/IP Suite. A. History B. Client/Server Model C. TCP/IP Protocol Stack

IP Addressing	3	Understand and describe the process of addressing in IP. A. Classes B. Formats C. ARP and RARP
Bridging and Routing	3	Explain the functionality of both bridges and routers. A. Bridges B. Routers
DNS, WINS, DHCP and Utilities	6	Describe and explain the Server processes that allow TCP/IP functionality. A. DNS and WINS B. DHCP C. IP Utilities
Router Installation and Configuration	6	Explain how to effectively implement routers in a LAN. A. Installation B. Configuration of Router C. Configuration of Protocols
Troubleshooting	2	Analyze normal functions, identify abnormal functions, and use appropriate tools to correct problems. A. Local Diagnostics B. Remote Diagnostics
Insert New Line Above this Line		
	30	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:
Subnet a network.	
Configure the basic router IOS	
Decipher packet breakdowns in hex.	

\* Course Outcomes will be used in the Assessment Software for Outcomes Assessment. Limit to 3 - 5.