

2/13/2023 DATE

☒ REQUIRED COURSE
☐ ELECTIVE COURSE

Technology DIVISION
☐ NEW COURSE
☒ REVISION

Lake Land College

Course Information Form

COURSE NUMBER:		TEL-051		TITLE: (30 Characters Max)		Networking Basics					
SEM CR HRS:	3	Lecture:		2	Lab:	2	SOE/ Internship:		0	ECH:	4
Course Level:	<input type="checkbox"/> Gen Ed / IAI <input type="checkbox"/> Baccalaureate /Non-IAI		<input checked="" type="checkbox"/> Career/Technical <input type="checkbox"/> Dev Ed/ Not in Degree Audit		Clinical Practicum:	0	SOE/ Internship:		0	SOE ECH:	0
COURSE PCS #	12 11.0901		IAI Code				Contact Hours (Minutes Per Week)				
Repeatable (Y/N):	N	Pass/Fail (Y/N):	N	Variable Credit (Y/N):	N	Min:	Max:	16 Wks	200	8 wks	400
Prerequisites:	Concurrent enrollment in EET-060 or instructor consent										
Catalog Description: (40 Word Limit)	Provides the student with a basic understanding of networking, OSI model, industry standards, and IP addressing. Emphasis placed on hands on learning.										

List the Major Course Segments (Units)	Contact Lecture Hours	Contact Lab Hours	Clinical Practicum	Non-Clinical Internship/ SOE
Computing Basics	2	2		
The OSI Model Local Area Networks (LAN)	4	4		
Layer 1-Electronics and Signals	6	6		
Layer 2-Concepts and Technologies	4	4		
Design, Documentation and Cabling Project	4	4		
Layer 3 Routing, Addressing and Protocols	6	6		
Layer 4, Layer 5, Layer 6 and Layer 7	2	2		
Review	2	2		
TOTAL	30	30	0	0

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

COURSE MATERIALS		
TITLE:	CCNA 1 & 2 Companion Guide (Rent) CCNA 1 & 2 Engineer Journal (Purchase)	
AUTHOR:		
PUBLISHER:	Cisco Press	
VOLUME/EDITION/URL:		
COPYRIGHT DATE:		

MAJOR COURSE SEGMENT	HOURS	LEARNING OUTCOMES
		<i>The student will be able to:</i>
Computing Basics	4.00	Perform simple PC and NIC repair.
The OSI Model Local Area Networks (LAN)	8.00	Describe the OSI layers, TCP/IP graph and the devices required to form a LAN.
Layer 1 - Electronics and Signals	12.00	Describe networking signals on the physical layer (1). Use a multi-meter and terminate CAT5 UTP cable.
Layer 2 - Concepts and Technologies	8.00	Identify collision and broadcast domains and the basic elements of a frame.
Design, Documentation and Cabling Project	8.00	Install, terminate, test, CAT5 UTP cabling runs using test equipment and create IP addresses on different subnets.
Layer 3 Routing, Addressing and Protocols	12.00	Create subnets based on the number of users and subnets. Explain basic routing using flow charts (for ARP and RARP), packet diagram and tracing header transformations.

Layer 4, Layer 5, Layer 6 and Layer 7	4.00	Explain TCP, UDP, session layer, presentation layer, and the Application layer.
Review	4.00	Discuss layers 1-7 of computer networks and demonstrate cable installation.
Insert New Line Above this Line		
	60.00	

COURSE OUTCOMES*	At the successful completion of this course, students will be able to:

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