College of Business
Tennessee State University

Semester and Year: Fall 2012
Course Syllabus: BISI 4360

LOCATOR INFORMATION:

Course Name: PC NETWORKING

Credit Hours: 3

Contact Hours: 45.7

INSTRUCTOR: Name Dr. David King, PhD, CCIS, MCP, CNA, EEIC,
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Office Hours

Tues ⇨ 5:30pm – 9:00pm in Lab 274 – AWC
Wed ⇨ 8:00pm – 9:pm in Lab 274 – AWC

Preferred Contact: *For appointments - EMAIL, For emergencies – **TEXT***

REQUIRED MATERIAL FOR THE COURSE:

- **LABSIM ONLINE SIMULATION SOFTWARE (ALL-IN-ONE PACKAGE)**
- **WEBSITE: WWW.TESTOUT.COM/SUPPORT/DOWNLOAD/LABSIMONLINESETUP.EXE**
- **Recommended readings by course Coordinator & Instructor**
- **Hand-outs from Course Coordinator & Instructor**
- **http://www.CBTnuggets.com**
- **http://www.netg.com**

RECOMMENDED READINGS AND ACTIVITIES :

- ✓ MODULE VIDEOS
- ✓ FACTSHEETS IN ALL MODULES
- ✓ SHOW ME HANDS-ON
- ✓ PRACITCE MODULES
- ✓ MODULE REVIEW EXAMS

COURSE OBJECTIVE:

PC Networking is concerned with the application of information technology and organizational information systems to solve business problems involving the use of networking methodologies.

This course offers a detailed introduction to the networking management of business. It contains elements of networking architecture, but primarily the course aims to expose the student to the importance of PC Networking, including advantages and disadvantages. For those not intending to pursue further studies in the area, this will provide a useful context for understanding the contribution being made by LAN/WAN systems to organizational goals. For those pursuing further studies in information systems, the course provides a useful context for understanding the inter-action of the individual elements of Networking and Distributed Systems in general.

The second component is very practical in nature. Students are required to master the basic principles of client and server software installation, configuration and administration. These two software systems are fundamental tools of networking. By learning them, you will have a basis for better understanding the concepts covered in the theoretical component. In addition, you will be learning network cabling and the TCP/IP subnettting configuration highly regarded by businesses. In this technological age, knowledge in these environments is now expected of all business students and Information Systems professionals.

LEARNING OUTCOMES

To provide students with an appreciation of the role of distributed systems in organizations and also to understand and master the basic functions of networking.

On completion of this course, students should be able to:

1. Apply fundamental knowledge in networking to participate in decision making in organizations
2. Discuss and critically analyze issues in networking environment
3. Identify the basic components of local area networks
4. Describe the advantages of networking
5. Determine which type of network would be appropriate for a particular site
6. Appreciate the role of Information Systems in society
7. Appreciate the contribution of distributed systems to the functioning of a business entity
8. Explain the fundamental concepts of networking
9. Identify server functions and assign servers as needed
10. List the primary consideration for selecting a network adapter card
11. Describe the primary functions of each OSI layers and TCP/IP
12. Describe the network process that uses protocols and how it uses them
13. Describe a primary feature of each of the major access methods
14. Identify the standard Ethernet networks
15. Describe the elements of client and server software
16. Describe the differences between client/server and centralized computing
17. Determine if a client/server approach is appropriate for a given networking environment
18. Identify the major considerations in a network operating systems installation
19. Identify the steps for installing, managing and using a shared printer
20. Explain the concepts of WAN, LAN, MAN, CAN, PAN, etc.

ACADEMIC INTEGRITY:

Academic honesty and integrity lie at the heart of any educational enterprise. Students are expected to do their own work and neither to give nor to receive assistance during quizzes and examinations. Deliberate violations of academic integrity (plagiarism, cheating, misrepresentation, of information) and fabrication are not tolerated. Actions outlined in the Tennessee State University Student Handbook under Code of Student Conduct wilt be followed for incidents of academic misconduct.

REASONABLE ACCOMODATIONS:

Any students requiring accommodations should contact Patricia Scudder, Director of Students with Disabilities-Disabled Student Services Office, at 963-7400,preferably before the fourth class meeting. The College of Business and the Business Information Systems Department, in conjunction with the Office of Disabled Student Services, makes reasonable accommodations for qualified students with medically documented disabilities. I need to be aware of your status if it will affect your class activities and assignments---before assignments are due.

CODE OF STUDENT CONDUCT:

There will be no eating, drinking, sleeping or disruptive behavior in the classroom. Each student is encouraged participating in classroom activities, asking questions, and working along with the class as recommendations/problem solutions to illustrations, examples, and cases are examined. Additionally, cell phones must be turned off upon entering the classroom and should remain so until class has ended. Action will be taken against those students who do not adhere to appropriate classroom behavior.

TEACHING STRATEGIES

In the world of computer networking and cloud computing, it is important to teach students with the most effective way of learning. Therefore a grant was written to obtain simulations which provide students with 24/7 365 days access to learn. The Simulation acquired for this course is a hands-on real world and industry preparation for students. This is believed to be the best applied strategy for students' effective learning.

COURSE ASSESMENT AND GRADE SYSTEM

ASSESSMENT	PERCENTAGE (%)	MARKS	GRADE
ATTENDANCE	**15**		
PARTICIPATION	**15**	**90-100**	**A**
HANDS-ON	**15**		
FACTS	**15**		
MID-TERM TEST	**20**	**80-89**	**B**
FINAL TEST	**20**		
		70-79	**C**
		60-69	**D**
		>0-59	**F**

COURSE POLICIES:

Attendance:

1. Students are expected to be on time. All students should come to class well prepared. Arriving late to class or leaving early from class is extremely disruptive for the instructor and other students and **will not be tolerated.**

2. It is a courtesy not to eat, drink, smoke, or disturb (misbehave) during class hours. It is expected that cell phones are turned off until class is over. Note that it is against the school policy to have food, drink, cell phones, or beepers in the classrooms and Computer Labs.

3. Students are responsible for starting and completing withdrawals or drops from the course. A **grade of F** may result from failure to comply with this requirement.

Procedures & Assignments:

1. The course instructor reserves the right to amend the class schedule if necessary during the semester.

2. 10 points will be deducted each day from a late Assignment and the assignment will not be accepted after 1-week or when graded assignments are returned. It is strongly recommended that each member participates in group assignments (if required), as it is essential for mastering and learning the material.

Examination:

1. You are responsible to be in class for every exam. There are no make-up exams however a justified absence would be considered. Students are required to take the final exam to obtain a "deserved" grade.

2. Cheating on an exam (and on any assessment) will result in a **Zero** on that Exam and an **F** in the class and other possible disciplinary actions.

WEEK	DATE	LECTURE /TUTORIAL	LABWORK	PROJECT			
				Hands-On	*Facts/ Review*		
1	AUG 30	Course Overview & Intro to Networking	Using the CISCO Simulator CISCO Device Icons	-	-		WEEKLY DEMOS & EXAMS
2	SEPT 6	Networking Concepts & CISCO Devices	The OSI Model, TCP/IP, Device Communication, Data Encapsulation Process, Collision Detection and Recovery, Ethernet, Bridging and Switching, How a Bridge Works, How a Bridge Learns, How a Switch Works, Routing, Internetwork Message Routing, Connecting CISCO Devices, Making a Console Connection, Using Setup Mode, Using Express Setup, Understanding CLI Prompts, Using CLI Utilities, Manipulating Configuration Files, Booting from Alternative Locations, Backing up IOS Images, Using Show Hostname and Interface Descriptions, Setting Device Passwords, Recovering Switch Passwords, Recovering Commands, Setting Router Passwords, Setting Device Banners, Configuring CDP,	2.3.6 2.5.3 2.6.5 2.7.3 2.7.4 2.7.5 2.8.3 2.8.4 2.9.3 2.9.5 2.9.6 2.9.7	1.1.2 1.1.4 1.1.6 1.1.7 1.2.2 1.2.4 1.2.5 1.3.3 1.4.3 1.4.4 1.4.5 1.5.5 1.5.6 1.5.7 1.6.2 1.6.4 2.1.4	2.2.2 2.2.5 2.3.4 2.3.5 2.3.7 2.3.8 2.3.9 2.4.3 2.4.4 2.4.7 2.5.2 2.6.2 2.6.4 2.7.2 2.7.8 2.8.2 2.9.4	
3	SEPT 13	LAN Implementation & Wireless Networks	LAN Connections, Viewing Switch Status Lights, Configuring Switch Interfaces, Viewing Port Statuses, Configuring TCP/IP Settings, Setting the Switch IP Address, DHCP Functionality, Configuring DHCP, Configuring DNS Services, Configuring Static Routes, Configuring RIP, Traceroute and TTL, Verifying Connectivity, Wireless Standards, Wireless Infrastructure, Wireless Security, Configuring Wireless Network Settings,	3.2.6 3.2.9 3.3.4 3.3.7 3.3.8 3.6.5 3.6.8 3.6.9 3.6.11 3.7.8 4.4.4	3.1.2 3.2.2 3.2.4 3.2.5 3.2.8 3.3.2 3.3.6 3.4.2 3.4.5 3.5.2 3.6.4 3.6.7 3.6.10 3.7.2	3.7.3 3.7.5 3.7.6 3.7.7 3.8.2 3.8.3 4.1.2 4.1.3 4.2.2 4.2.3 4.3.2 4.3.4 4.4.3 4.4.5	
4	SEPT 20	Subnetting	Subnet Operations, Subnet Design, Route Summarization	5.2.3 5.2.4 5.3.3	5.1.1 5.1.4 5.1.13	5.2.2 5.3.2	
5	SEPT 27	WAN Implementation	Wide Area Networks, Configuring Serial Interfaces, Configuring Serial Interfaces, Establishing a PPP Session, Configuring PPP, Network Address Translation, Viewing Router Interface Statuses,	6.2.8 6.2.9 6.3.6 6.5.4 6.5.5 6.5.6 6.5.7 6.5.8	6.1.2 6.1.4 6.1.5 6.2.2 6.2.3 6.2.5	6.2.7 6.3.3 6.3.5 6.4.2 6.5.3	
6	OCT 4	Advanced Switching	Configuring VLANs, Configuring Trunking, Configuring VTP, Spanning Tree, Configuring Spanning Tree, Configuring Per-VLAN Spanning Tree Protocol (PVST), EtherChannel, Configuring Inter-VLAN Routing	7.1.5 7.2.5 7.3.5	7.1.2 7.1.4 7.2.2 7.2.4 7.3.2 7.3.4 7.4.2	7.4.3 7.4.5 7.4.7 7.5.3 7.6.2 7.7.2	

WEEK	DATE	LECTURE /TUTORIAL	LABWORK	PROJECT			
				Hands-On	*Facts*		
7	OCT 11	Access Lists	Access List Concepts, Configuring Standard IP Access Lists, Configuring Extended IP Access Lists	8.2.3 8.2.4 8.2.5 8.2.7 8.2.8 8.3.2 8.3.4	8.1.2 8.1.4 8.2.1	8.2.9 8.3.1 8.3.3	
	OCT 15-16	***Fall Break***					
8	OCT 18	***Revision for Mid-Term Test***					
9	OCT 25	***Complete Mid-Term Test***		Covered in Wk 2, 3, 4, 5 6 & 7			
10	NOV 1	IP Routing	Routing Protocols, Link State Route Discovery, Configuring RIP, Configuring OSPF, Configuring EIGRP, Routing Protocol Comparison	9.2.5 9.3.5 9.3.6 9.3.7 9.4.5	9.1.2 9.1.4 9.1.7 9.2.2 9.2.4 9.3.2	9.3.4 9.4.2 9.4.4 9.5.1 9.5.2	
11	NOV 8	Troubleshooting Routing	Troubleshooting Routing, Troubleshooting RIP, Troubleshooting OSPF, Troubleshooting EIGRP	10.2.4 10.2.5 10.2.6 10.3.3 10.3.4 10.4.3 10.4.4	10.1.1 10.1.2 10.1.3 10.2.2	10.2.3 10.3.2 10.4.2	
12	NOV 15	Frame Relay & Advanced TCP/IP Configuration	Frame Relay Concepts, Configuring Frame Relay, Configuring Static Mappings, Configuring Subinterfaces, Troubleshooting Frame Relay, IPv6 Concepts, Configuring IPv6, Configuring NAT	11.2.3 11.3.3 11.4.4 11.4.5 12.3.4 12.3.5 12.3.6	11.1.2 11.1.4 11.1.6 11.2.2 11.3.2 11.4.3 11.5.2	12.1.2 12.1.4 12.1.6 12.2.2 12.2.5 12.3.1 12.3.3	
13	**NOV 22**	***Thanksgiving Holiday***					
14	NOV 29	Network Security	Security Threats, Security Solutions, Network Hardening, Configuring SSH, Configuring Port Security, Virtual Private Networks		13.1.2 13.1.4 13.2.2 13.2.4 13.3.2 13.3.4	13.3.5 13.4.2 13.4.3 13.4.5 13.4.7 13.4.8	
15	DEC 6	***Certification Prep Exam***		Covered in Wk 7, 10,11, 12 & 14			
16	**DEC 14**	***Certification***					

WEEKLY DEMOS & EXAMS

NB !! The content of this outline is subject to amendment

BIS DEGREE AND THE STUDENTS:

Students successfully completing Business Information Systems:

1. *Understand the role of information systems in solving problems and making decisions in organizations.*
2. *Are able to describe the information technology infrastructure of today's organization and how this supports the operational needs of business.*
3. *Understands the networking and distributed systems within business information systems curriculum and how this supports operational, tactical and strategic activities of an organization.*
4. *Would have developed research, presentation and group participation skills at the highest expectation.*

GRADUATE QUALITIES AT TSU

	1	2	3	4	5	6	7
	Body of Knowledge	Lifelong Learning	Effective Problem Solving	Work autonomously and collaboratively	Ethical action and social responsibility	Communicates effectively	International Perspectives
Unit Weighting	1.00	0.5	0.5	0.2	0.3	0.2	0.3