

# Course Outcome Guide (COG)

Approved 13 September 2012

<b>Course:</b>	CIS 267 - Intermediate Networking I	<b>Credits:</b>	3	<b>Instructor:</b>	Ken Quamme
<b>Course Description:</b>	<p>This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises, including configuration, installation, and troubleshooting, reinforce student learning.</p> <p>Prerequisites: Working at a Small-to-Medium Business or ISP</p>				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institutional
<ul style="list-style-type: none"> <li>OSI Reference Model</li> <li>TCP/IP Reference Model</li> <li>Application Layer protocols</li> <li>Transport Layer</li> <li>Network Layer</li> <li>Link Layer and LANs</li> <li>Wireless LANs</li> <li>Multimedia Networking</li> </ul>	<ul style="list-style-type: none"> <li>Examine inputs, business drivers, and deliverables of the planning process.</li> <li>Understand practical issues such as information security, business requirements, IT architecture, cost justification, implementation, migration planning, and vendor selection.</li> <li>Manage data, voice, and video communications.</li> <li>Apply industry standard products to manage and control digital networks.</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Participation</li> <li>Case studies</li> <li>Network Simulations</li> <li>Individual and group projects</li> <li>Individual/group projects and presentations</li> <li>Completion of Chapter Assessments</li> <li>Final Assessment</li> <li>Skills-Based Assessment</li> <li>Course Feedback</li> </ul>	<ol style="list-style-type: none"> <li>Implement a LAN for an approved network design</li> <li>Configure a switch with VLANs and inter-switch communication</li> <li>Implement access lists to permit or deny specific traffic</li> <li>Implement WAN links</li> <li>Configure routing protocols on CISCO devices</li> <li>Perform LAN, WAN, and VLAN troubleshooting using a structured</li> </ol>	<ol style="list-style-type: none"> <li>Assemble the components of a PC and install one or more operating systems resulting in a functioning PC.</li> <li>Identify major telecommunications media types, including coaxial cable, UTP and fiber optic cable.</li> <li>Design a small or medium sized computer network including media types, end devices and interconnecting devices.</li> <li>Design basic wide area networks and work with a number of WAN</li> </ol>	<ol style="list-style-type: none"> <li>Students will demonstrate effective communication skills.</li> <li>Students will use reasoning skills to analyze and solve problems.</li> </ol>

			methodology and the OSI model	encapsulations. 5. Perform basic configuration on routers and Ethernet switches. 6. Perform basic tasks expected of a Network Administrator, including management of user accounts, shared resources and network security. 7. Work in a UNIX environment and successfully create and manage files. 8. Create a database, query a database, and output reports from a database in a database program. 9. Write a sample program in at least one programming language. 10. Effectively use the Internet for learning and tech support. 11. Have a basic understanding of TCP/IP.	
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