**COLLIN COLLEGE**

**COURSE SYLLABUS**

## Course Information

**Course Number**: ITCC 2371

**Course Title:** CCNA 3 - Scaling Networks

**Course Description:** This course helps students develop an in-depth understanding of how switches operate and are implemented in the LAN environment for small and large networks, how routers operate and are implemented in the LAN environment for small and large networks. Detailed explanations of LAN switch operations, Rapid Spanning Tree Protocol (RSTP), router operations, DHCP, Link Aggregation, EIGRP, Multi-Area OSPF, and IOS File Management and wireless network operations. Analyze, configure, verify, and troubleshoot RSTP, DHCP, Link Aggregation, EIGRP, Multi-Area OSPF and wireless networks.

**Course Credit Hours:** 3
Lecture Hours: 2
Lab Hours: 3

**Prerequisite:** ITCC 1374

**Student Learning Outcomes:** Upon successful completion of this course, students will be able to:
Identify and correct common network problems at layers 1, 2, 3, and 7 using a layered model approach; select the appropriate media, cables, ports, and connectors to connect switches to other devices and hosts; perform and verify initial switch configuration tasks including remote access management; configure, verify, and troubleshoot RSTP, DHCP, Link Aggregation, EIGRP, Multi-Area OSPF; verify network status and switch operation using basic utilities (ping, traceroute, telnet, SSH, arp, ipconfig); identify and describe the purpose of the components in a small wireless network (SSID, BSS, ESS); and identify the basic parameters to configure on a wireless network to ensure that devices connect to the correct point.
SCANS: (F1,F3-5,F7-12,F14,F16) (C1,C10-16,C18-20)

**Secretary's Commission on the Acquisition of Necessary Skills (SCANS) -** SCANS skills are a group of foundational skills and workplace competencies that the Secretary's Commission on the Acquisition of Necessary Skills established as vitally important for workplace success in the 21st century. In Collin's workforce programs, the SCANS skills are developed and reinforced throughout the curriculum to provide students with an opportunity to hone these skills/competencies in the context of their education. Over the course of an entire degree program, the successful student is expected to demonstrate all of the SCANS skills and competencies as part of their education. The SCANS Foundation Skills and Workplace Competencies are described at:
http://www.collin.edu/academics/programs/Workforce_SCANS_Skills_Syllabi_Code_Key.pdf

**Withdrawal Policy:** See the current *Collin Registration Guide* for last day to withdraw.

**Collin College Academic Policies:** See the current *Collin Student Handbook.*

**Americans with Disabilities Act Statement:** Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to contact the ACCESS office, SCC-G200 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.