**COLLIN COLLEGE**

**COURSE SYLLABUS**

## Course Information

**Course Number**: ITCC 1374

**Course Title:** CCNA 2 - Routing and Switching Essentials

**Course Description:** This course describes the architecture, components, and operation of routers, and explains the principles of routing and routing protocols. Students analyze, configure, verify, and troubleshoot the primary routing protocols and OSPF. Recognize and correct common routing issues and problems. Model and analyze routing processes. This course also describes the architecture, components, and operation of switches, and explains the principles of switching, VLANs and Inter-VLAN routing. The essentials of security, address translation and DHCP are also described.

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

**Prerequisite:** ITCC 1371

**Student Learning Outcomes:** Upon successful completion of this course, students will be able to:
Describe the purpose, nature, and operations of a router; describe the purpose and nature of routing tables; describe the purpose and procedure of configuring static routes; describe the basis features and concepts of switching and VLANs; and configure and verify basic security including ACLs; design and implement a classless IP addressing scheme for a given network; describe the basis features and concepts of link-state routing protocols; and configure and verify basic single area OSPF, basic NAT and DHCP operations in a small routed network.
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-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.