**COLLIN COLLEGE**

**COURSE SYLLABUS**

Course Information

**Course Number**: ITCC 2312

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

**Course Description:** CCNA R&S: Scaling Networks (ScaN) covers the architecture, components, and operations of routers and switches in larger and more complex networks. Students learn how to configure routers and switches using advanced protocols. Additionally, 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. Lab required.

**Course Credit Hours:** 3

 Lecture Hours: 2

 Lab Hours: 3

**Prerequisite:**  ITCC 1340

**Student Learning Outcomes:**

* **State-mandated Outcomes:** Upon successful completion of this course, students will:
1. Configure advanced routing and switching.
2. Resolve common issues with OSPF, EIGRP, and STP in IP networks.
3. Implement a WLAN in a small-to-medium network.
* **Additional Collin Outcomes:** Upon successful completion of this course, students will:
1. Identify and correct common network problems at layers 1, 2, 3, and 7 using a layered model approach.
2. Select the appropriate media, cables, ports, and connectors to connect switches to other devices and hosts.
3. Perform and verify initial switch configuration tasks including remote access management.
4. Configure, verify, and troubleshoot RSTP, DHCP, Link Aggregation, EIGRP, Multi-Area OSPF.
5. Verify network status and switch operation using basic utilities (ping, traceroute, telnet, SSH, ARP, ipconfig).
6. Identify and describe the purpose of the components in a small wireless network.

**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.

*Fall 2017 New*