**COLLIN COLLEGE**

**COURSE SYLLABUS**

Course Information

**Course Number**: ITCC 2313

**Course Title:** CCNA 4: Connecting Networks

**Course Description:** WAN technologies and network services required by converged applications in a complex network; enables students to understand the selection criteria of network devices and WAN technologies to meet network requirements. Additionally, it also describes the principles of traffic control, Borderless Networks, Virtualization, Collaboration, Tunneling, IPSec VPN, Syslog Operation, SNMP Operation and provides an overview of the services and protocols at the data link layer for wide-area access. Describes user access technologies and devices and how to implement and configure Point-to-Point Protocol (PPP), Point-to-Point Protocol over Ethernet (PPPoE), DSL, and Frame Relay. WAN security concepts, tunneling, and VPN basics are introduced. Discusses the special network services required by converged applications and an introduction to quality of service (QoS). Lab required.

**Course Credit Hours:** 3

 Lecture Hours: 2

 Lab Hours: 3

**Prerequisite:**  ITCC 2312

**Student Learning Outcomes:**

* **State-mandated Outcomes:** Upon successful completion of this course, students will:
1. Configure and troubleshoot network devices.
2. Resolve common issues with data link protocols.
3. Resolve common issues with OSPF, EIGRP, and STP in both IPv4 and IPv6 networks.
4. Implement virtual private network (VPN) operations in a complex network.
5. Implement security best practices.
* **Additional Collin Outcomes:** Upon successful completion of this course, students will:
1. Describe the impact of applications (Voice Over IP and Video Over IP) on a network.
2. Implement, configure, verify, and troubleshoot Collaboration Tunneling, IPSec VPN, Syslog Operation, and SNMP Operation.
3. Describe DSL, Borderless Networks and Virtualization.
4. Configure and verify a basic WAN serial connection.
5. Configure and verify Frame Relay and PPP on Cisco routers.
6. Describe VPN technology (importance, benefits, role, impact, components).

**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*