**COLLIN COLLEGE**

**COURSE SYLLABUS**

Course Information

**Course Number**: ITCC 1314

**Course Title:** CCNA 1: Introduction to Networks

**Course Description:** This course covers networking architecture, structure, and functions; introduces the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations to provide a foundation for the curriculum. Additionally, describes the use of OSI and TCP layered models to examine the nature and roles of protocols and services at the applications, network, data link, and physical layers. Covers the principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations. Explains IPv6 network addresses, design considerations for IPv6, managing IOS configuration files, and Integrated Routing Services. Students build simple LAN topologies by applying basic principles of cabling; perform basic configurations of network devices, including routers and switches; and implementing IP addressing schemes. Use common show commands to establish baseline performance and troubleshooting. Lab required.

**Course Credit Hours:** 3

Lecture Hours: 2

Lab Hours: 3

**Prerequisite/Concurrent Enrollment:**  ITNW 1358

**Student Learning Outcomes:**

* **State-mandated Outcomes:** Upon successful completion of this course, students will:

1. Build simple LANs.
2. Perform basic configuration on routers and switches.
3. Implement IP addressing schemes.

* **Additional Collin Outcomes:** Upon successful completion of this course, students will:
  1. Identify and describe internet architecture, structure, functions, components, and models.
  2. Describe the use of OSI and TCP layered models.
  3. Identify and describe the nature and roles of protocols and services at the application, network, data link, and physical layers.
  4. Describe principles and structure of IP addressing and the fundamentals of Ethernet concepts, media, and operations.
  5. Implement IPv6 network addresses, design considerations for IPv6, managing IOS configuration files, and Integrated Routing Services, and build simple LAN topologies by applying basic principles of cabling, device configuration, and IP subnetting.
  6. Troubleshoot IPv4 addressing services, IPv6 routing issues, network performance issues on routers and switches.

**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.

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