

# Computer Networking/Cisco CCNA Certification

Fayetteville State University, Dept of Math & Computer Science

## Course Description

The CCNA certification (Cisco Certificate Network Associate) indicates a professional's knowledge in basic networking. CCNA certified professionals can install, configure, operate, and troubleshoot medium-sized Local Area Networks (LAN) and Wide Area Networks (WAN). The curriculum includes the use of these protocols: IP, RIP, RIPv2, EIGRP, OSPF, VLAN, VTP, STP, PPP, Frame Relay, and Access Lists.

The Cisco CCNA certification curriculum we offered includes three courses that prepare students for the most current CCNA exams:

- 640-802 CCNA **Or**
- 640-822 ICND1 & 640-816 ICND2:  
Interconnecting Cisco Networking Devices  
Part 1 & Part 2

In this program, students practice networking with hands-on activities by using modern Cisco Network equipment and e-labs. Students develop the skills necessary to administer a network in a working environment and prepare for the Cisco CCNA examination. All courses include online assessments that allow students to measure their progress throughout the learning practice.

## Network Basics (CSC 270)

*Network Basics* presents important networking fundamentals including the Open System Interconnect (OSI) seven-layer model concepts; subnetting and cabling networks; Cisco IOS basics. Terminology and technologies are explained and illustrated using text and graphics animation.

*Prerequisites:* Basic computer knowledge

## Routing & Switching (CSC 271)

*Routing & Switching* focuses on using Cisco Catalyst switches and Cisco routers connected in LANs and WANs typically found at small to medium network sites. Routing covers VLSM, CIDR, RIP, RIPv2, EIGRP, and OSPF. Switching covers VLAN, VTP, STP, inter-VLAN, and basic wireless concepts. Upon

completion of this course, students are able to select, connect, configure, and troubleshoot the various Cisco networking devices.

*Prerequisites:* Network Basics (CSC 270)

## Intro to WAN (CSC 372)

*Intro to WAN* covers various protocols and technologies used in a wide-area network. Students learn how to implement and configure common data link protocols and how to apply WAN security concepts, principals of traffic, access control, and addressing services to enterprise network. The course covers these protocols: PPP, Frame Relay, VPN, DHCP, NAT, and ACLs.

*Prerequisites:* Routing & Switching (CSC 271)

## Why Cisco Certifications?

- Cisco certified professionals are among the highest paid in the world.
- According to Certification Magazine Salary Survey 2008, the networking professional with a CCNA certification earned an average salary \$80,890 (certMag.com).
- Cisco certification gives you respect in the IT industry and in any organization you work for.
- Cisco certification validates your professional credibility and technical expertise
- Students enrolled in the curriculum are highly favored by our school's ITTS for paid on-campus student jobs

## Condensed Curriculum

We also plan to offer a condensed curriculum for non-traditional students:

- CCNA 1 and CCNA 2 (12 weeks)
- CCNA 3 and CCNA 4 (12 weeks)