

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: CTEC 257

Credit Hours: 4-4-0

Course Title: CCNA III

Course Prerequisites: CTEC 256

Textbook(s) and Materials: This course will utilize the learning modules and materials provided by the Cisco Networking Academy at <https://www.netacad.com>.

Optional Book: Cisco Press. Scaling Networks Companion Guide, v6. ISBN: 9781587134340

Course Description: This course describes the architecture, components, and operations of routers and switches in a large and complex network. You will learn how to configure routers and switches for advanced functionality. By the end of this course, you will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, STP, and VTP in both IPv4 and IPv6 networks. You will also develop the knowledge and skills needed to implement DHCP and DNS operations in a network. This course works to prep for ICND2 and CCNA, as well as VLAN trunking and link aggregation.

Learning Outcomes:

At the end of this course, the student will:

- A. recognize switch LAN design, basic switch concepts and configuration;
- B. discuss configuring and troubleshooting switch with VLAN, VTP, STP, PVST, and inter-switch communication;
- C. recognize administrative tasks required for a WLAN; and
- D. discuss link aggregation, ether channel, OSPF, and EIGRP.

To achieve the learning outcomes, the student will or will be able to:

(The letter designations at the end of each statement refer to the learning outcome(s).)

- 1. describe hierarchical networks for small business (A,C);
- 2. recognize VTP concepts, VTP operation and configuration (B);
- 3. identify STP, STP convergence and STP variants (B);
- 4. describe IEEE 802.1D STP, PVST+, Rapid PVST+ (B,D);
- 5. recognize Wireless LAN, Wireless LAN security, configuration and troubleshooting (C);
- 6. describe link aggregation and EtherChannel Technology (D);
- 7. describe, configure, and modify OSPF and EIGRP (D); and
- 8. design a network that is scalable (A, B, C, D).

Course Requirements:

1. A student must successfully complete the course with an average of 70% or above on the combined learning outcomes.
2. Each student is expected to attend classes regularly; excessive unexcused absences constitute grounds for suspension (refer to the student handbook for attendance policies).

Course Grading Scale:

A = 90 - 100
B = 80 - 89
C = 70 - 79
D = 60 - 69
F = 0 - 59

Attendance Policy: The college attendance policy is available at <http://www.bpcc.edu/catalog/current/academicpolicies.html>

Course Fees: This course is accompanied with an additional non-refundable fee for supplemental materials, laboratory supplies, software licenses, certification exams, and/or clinical fees.

Nondiscrimination Statement: Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

COORDINATOR FOR SECTION 504 AND ADA

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