Articulation Agreement
Course Competencies and Provisions

CSC 114 Networking Essentials **2.5 Credits**
(Prerequisite: Completion of any basic computer course) An introductory course for the student interested in an overview of computer networking technology including physical and logical structures of networks and networking hardware and software.

CSC 154 Local Area Networks **2.5 Credits**
An introduction to the installation and maintenance of a local area network both in the hardware and software sense.

PROVISIONS

1. Student must be enrolled in the required high school class.
2. Student must receive an A or B grade (minimum 2.9 or better) and complete all competencies.
3. All required Tech Prep forms must be sent to BBCC **within 30 days** of high school course completion.
4. Teachers must assign student grades and credits **within 30 days** of high school course completion.

COMPETENCIES

Part 1: CSC 114 Networking Essentials

1. Explain networking concepts and principals, and different network structures
2. Identify organizations that set standards for networking
3. Describe the purpose of the OSI Model, and each of it's layers
4. Explain specific functions belonging to each OSI model layer
5. Understand how two network nodes communicate through the OSI model
6. Discuss the structure and purpose of data packets and frames
7. Explain the type of wiring needed for the physical connection of the network
8. Identify the characteristics of TCP/IP, IPX/SPX, NetBIOS, and AppleTalk
9. Identify the functions of LAN connectivity hardware
10. Describe the basic and hybrid LAN physical topologies, and the uses, advantages, and disadvantages
11. Identify a variety of uses for WANs
12. Setup and configure a basic workstation connected to the network
13. Setup and configure network components such as network interface cards, printers, and CD-Rom devices

Part 2: CSC 154 Local Area Network (LAN)

1. Discuss the functions and features of a network operating system
2. Describe the features and capabilities of servers running LINUX
3. Understand methods of network design unique to TCP/IP networks, including subnetting, CIDR, NAT and ICS
4. Describe the steps involved in an effective troubleshooting methodology
5. Identify the characteristics of a network that keeps data safe from loss or damage, and perform a standard tape backup
6. Identify security risks in LANs and WANs and design security policies that minimize risks
7. Explain how physical security contributes to network security
8. Describe the elements and benefits of project management