

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: ITN 101

Credits: 3

Course Title: Introduction to Network Concepts

Course Description: Provides instruction in networking media, physical and logical topologies, common networking standards and popular networking protocols. Emphasizes the TCP/IP protocol suite and related IP addressing schemes, including CIDR. Includes selected topics in network implementation, support, and LAN/WAN connectivity. Co-requisite: ITE 221 or school approval. Lecture 3 hours per week.

General Course Purpose: This course provides a comprehensive foundation in networking concepts and technologies. Students will learn how to use, install and configure basic networking technologies as would be expected from a network support technician or network administrator. The covered material of this course is related to the industry certification Network+.

Course Prerequisites and Co-requisites:

Co-requisite: ITE 221 or school approval

Course Objectives:

Upon completing the course, the student will be able to

- a. Describe the operation of data networks;
- b. Implement an IP addressing scheme;
- c. Describe the appropriate administrative tasks required of a small network;
- d. Explain proper operation of network protocols;
- e. Select the appropriate wired and wireless devices for a local area network;
- f. Identify security threats to a network and methods of mitigating damage;
- g. Specify the main features of different types of networking technologies; and
- h. Employ troubleshooting methods to solve typical network connectivity issues.

Major Topics to Be Included:

- a. Architecture and operation of both wired and wireless local area networks
- b. Addressing a TCP/IP network
- c. Selection and proper use of networking media and cabling
- d. Installation and operation of a protocol analyzer to study network protocols
- e. LAN/WAN technologies
- f. Network management
- g. Network troubleshooting
- h. Network security

Effective Date of Course Content Summary: August 8, 2018