J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: <u>ITN 101</u>   **Credits:** <u>3</u>

Course Title: <u>Introduction to Network Concepts</u>

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. 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:

None

Course Objectives:
Upon completing the course, the student will be able to

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

Major Topics to Be Included:

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

Effective Date/Updated: Fall 2022