

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

**Course Prefix and Number:** ITN 157

**Credits:** 4

**Course Title:** WAN Technologies -- Cisco

**Course Description (including lecture hours, lab hours, total contacts)**

Concentrates on an introduction to Wide Area Networking (WANs). Includes WAN design, LAPB, Frame Relay, ISDN, HDLC, and PPP.

Lecture 4 hours per week.

**General Course Purpose**

Prepares students to implement the appropriate WAN technology to provide integrated services in a networked environment. Can lead to industry certification.

**Course Prerequisites/Corequisites** (*Entry-level competencies **required** for enrollment*)

ITN 156 Basic Switching and Routing -- Cisco

**Course Objectives** (Each item should complete the following sentence.)

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

- Integrate WAN technology to provide integrated services
- Implement PPP serial communication
- Employ Frame Relay Technology
- Describe the common security threats to networks
- Implement, verify, and troubleshoot ACLs
- Describe how to use VPN technology
- Implement IP addressing services
- Troubleshoot common networking issues

**Major Topics to be Included**

- Services in a WAN
- PPP
- Frame Relay
- Network Security
- Access Control Lists (ACLs)
- VPN Technologies
- Implementing IP Addressing
- Troubleshooting Networks

**Effective Date of Course Content Summary (Month, Date Year):** May, 2010