

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

**Course Prefix and Number:** ITN 150

**Credits:** 4

**Course Title:** Networking Fundamentals and Introductory Routing-Cisco

**Course Description**

Introduces the OSI reference model's functions of layer, data link and network addresses, data encapsulation, different classes of IP addresses and subnetting, and the functions of the TCP/IP network-layer protocols. Includes features of the Cisco IOS software, including login, context-sensitive help, command history and editing, loading software, configuring and verifying IP addresses, preparing the initial configuration of a router, and adding routing protocols to the router configuration. Prerequisite: ITE 221 or school approval. Lecture 4 hours per week.

**Course Prerequisites/Corequisites**

ITE 221 or school approval

**Course Objectives**

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

- a. identify networking devices and protocol layers.
- b. address device interfaces.
- c. understand protocol architecture.
- d. understand encapsulation and "un-encapsulation."
- e. understand LAN topology.
- f. understand WAN connectivity.

**Major Topics to be Included**

- a. Networks and layers
- b. Networking devices; Hardware Addresses
- c. IP addressing
- d. ARP and RARP
- e. Media and design
- f. Topology
- g. Structured cabling
- h. Electricity & electronics
- i. Network Management

**Effective Date of Course Content Summary:** 10/16/2008