Traditional voice communications systems use separate copper wiring, analog telephones and switched circuits. As high-speed Local Area Networks (LANs), fast computers, very high-speed optical fiber infrastructure and pervasive Internet Protocol (IP) networks have arrived, however, many enterprises and individuals are using systems and applications that convert voice communications to data packets and carry them over IP networks, like other application traffic.

Convergence of traditionally separate voice, video & data networks is a main communications trend of the 21st century. Convergence allows individuals and enterprises to save money by:

- Reducing requirements for separate physical wiring
- Reducing the complexity of telecommunications systems
- Reducing overhead of multiple communications protocols
- Reducing needs & expenses for telephone lines and services
- Reducing specialized staff required to support separate systems
- Consolidating previously separate telecom, video & IT departments

VoIP is growing rapidly. City College of San Francisco, for example, has upgraded its telephone systems to VoIP, with voice traffic carried over local area networks and an optical fiber intercampus network. People with knowledge and skills in VoIP technology and implementation are in high and ever-increasing demand!

City College of San Francisco’s Voice Over IP Fundamentals (VoIP) course teaches students:

- VoIP technology, terminology, standards & protocols
- How to work with VoIP equipment & software
- How to set up & manage switches & routers for VoIP
- How to set up & manage VoIP Quality of Service (QOS)
- VoIP compression & signaling technologies
- VoIP system design & implementation
- An overview of multi-vendor VoIP systems in the marketplace

Students get real world experience with City College’s VoIP systems and networks.

This course counts towards AS degrees and 4 year degree transfers and will be part of future certifications developed in the new ICONS program.