

## TELEPHONY COURSE DESCRIPTIONS

### C-L-SHC

#### **TEL 100 Telecom Basic Electricity** 3-0-3

This course covers DC and AC theory with specific emphasis on the specialized needs of telecommunications personnel. Emphasis is placed on electron theory, conductors, insulators, Ohm's Law, capacitance, and inductance as it relates to small gauge, twisted-pair copper wire. Upon completion, students should be able to understand trouble symptoms and correct faults on the telephone physical plant network. *This is a diploma or certificate-level course.*

#### **TEL 102 Pole Climbing** 0-2-1

This course covers basic skills in pole climbing and working aloft. Emphasis is placed on safety, climbing techniques, maintenance of climbing gear,

working aloft, and potential hazards. Upon

completion, students should be able to safely climb and work aloft. *This is a diploma or certificate-level course.*

#### **TEL 105 Fiber Optics: OSP** 0-2-1

This course covers splicing and maintaining aerial or buried, single mode, loose-tube buffered fiber optic cable. Emphasis is placed on hands-on cleaving, fusion splicing, and maintaining aerial or buried, single mode, loose-tube buffered fiber optic cable. Upon completion, students should be able to locate faults and splice, test, and return fibers to service. *This is a diploma or certificate-level course.*

#### **TEL 106 Fiber Optics: LAN** 0-2-1

This course covers installing, splicing, and maintaining fiber optic cables, connectors, and patch panels in local area networks. Emphasis is placed on installing ST type connectors and level meter and OTDR testing of fiber optic local area networks. Upon completion, students should be able to install and maintain fiber optic local area networks. *This is a diploma or certificate-level course.*

#### **TEL 108 Comdial Key Systems** 0-2-1

This course covers programming and maintaining Comdial 616X and 816X Key Systems. Emphasis is placed on programming new systems and moves and changes in working systems. Upon completion, students should be able to install new systems,

complete the initial programming, and perform routine moves and changes. *This is a diploma or certificate-level course.*

**TEL 109 T-1 Span Line Maintenance** 0-2-1

This course provides training in design, construction, turn-up testing, troubleshooting, and maintenance of T-1 span lines. Emphasis is placed on method of transmission, troubleshooting, testing, and repair of T-1 span lines. Upon completion, students should be able to install, test, and repair T-1 span lines. *This is a diploma or certificate-level course.*

**TEL 200 LAN: Copper** 0-2-1

This course covers local area network protocols, transmission methods, and installation and testing procedures. Emphasis is placed on EIA/TIA standards relative to the installer/technician. Upon completion, students should be able to install LAN copper cables, wiring, and connectors within industry standards. *This is a diploma or certificate-level course.*

**TEL 201 Station I & R** 1-2-2

This course covers the fundamentals of trouble-free telephone installation from aerial and buried cable in homes and businesses. Emphasis is placed on drop-wire attachments, station protection, and wire runs, as well as methods for testing and checking stations for customer satisfaction. Upon completion, students should be able to correctly install, test, and repair telephone stations and wiring up to entry into the cable plant. *This is a diploma or certificate-level course.*

**TEL 202 Cable Splicing** 1-2-2

This course covers the cable color-code, splicing methods, and closures used throughout the

telephone industry. Emphasis is placed on cable color-code, engineering drawings, proper splicing methods, and cable closures. Upon completion, students should be able to perform the basic functions of a cable splicer and meet telephone industry standards. *This is a diploma or certificate-level course.*

**TEL 203 Cable Fault Location** 0-2-1

This course covers identifying fault types and using test equipment to locate the faults in aerial and underground cable. Emphasis is placed on identifying fault types and correct uses of various types of test equipment to precisely locate the fault. Upon completion,

students should be able to identify fault type, properly use test equipment, and locate the fault within inches. *This is a diploma or certificate-level course.*

**TEL 204 Transmission Fundamentals** 2-0-2

This course covers the basic concepts of point-to-point voice and data transmission in both inside and outside telecommunications plant facilities. Topics include test equipment, impedance matching, line characteristics, loading, impedance compensation, bridge taps, tie trunks, echo, singing point, and via net loss. Upon completion, students should be able to maintain facilities to provide fault-free voice and data transmission within the telecommunications network. *This is a diploma or certificate-level course.*

**TEL 205 Digital CO Administration** 1-2-2

This course covers data modifications in DMS-10 digital central office switches from remote or on-site locations. Emphasis is placed on normal day-to-day data modification procedures to support customer-originated service orders, including any required hardware changes. Upon completion, students should be able to successfully perform any software or hardware modifications involved in normal daily operations of the DMS-10 digital switch. *This is a diploma or certificate-level course.*

**TEL 206 Installer Level 1 Cabling** 1-2-2

This course covers structured premises cabling at the apprentice level. Emphasis is placed on apprentice level knowledge of standards and codes for telecommunications industry and proper structured premises cabling techniques. Upon completion, students should be able to pass the BICSI apprentice level certification examination and install LAN systems.

**TEL 207 Installer Level 2 Cabling** 1-2-2

*Prerequisites: Apprentice Level Knowledge with 2 - 5 years experience*

This course covers structured premises cabling at the installer level. Emphasis is placed on installer level knowledge of standards and codes for the telecommunications industry and proper structured premises cabling techniques. Upon completion, students should be able to pass the BICSI installer level certification examination and install LAN systems.

**TEL 208 Technician Level Cabling** 1-2-2

*Prerequisites: Apprentice and Installer level knowledge with over 5 years experience*

This course covers structured premises cabling at the technician level. Emphasis is placed on technician level knowledge of standards and codes for the telecommunications industry and proper structured premises cabling techniques. Upon completion, students should be able to pass the BICSI technician level certification examination and install LAN systems.

**Tel 209 ADSL Installation 0-2-1**

*Prerequisites: None*

This course is designed for the technician responsible for installing and troubleshooting digital subscriber lines (DSL). Course work covers DSL technology, services, and operation, including network wiring, cable pair requirements, PC configuration for DSL and G.703 technology. Upon completion, students should be able to install, test, and repair DSL services for residential and commercial markets.