BRONX COMMUNITY COLLEGE LIBRARY
SUGGESTED FOR
ELC 94
LASER & FIBER OPTIC COMMUNICATIONS

CODE NO. **TITLE**

FIBER OPTICS TRAINING VIDEOTAPES – *c1992*

V1756.1 **FIBER FUNDAMENTALS** – *26min*

- BASIC PRINCIPLES OF LIGHT AND WAVELENGTH
- LIGHT TRANSMISSION, INDEX OF REFRACTION, LIGHT REFLECTION AND REFRACTION
- TOTAL INTERNAL REFLECTION- THE PRINCIPLE BEHIND FIBERS
- FIBER CORE, CLADDING, JACKET CARRYING INFORMATION USING LIGHT

V1756.2 **GUIDING PROPERTIES OF FIBER** – *24min*

- SINGLE MODE AND MULTIMODE FIBER
- CHROMATIC AND MODAL DISPERSION
- FIBER ATTENUATION, DEFINITION OF Dbs, FIBER BENDING LOSS
- FIBER OPERATING WAVELENGTHS

V1756.3 **OPTICAL FIBER LOSS TESTING** – *46min.*

- FIBER PARAMETERS WHICH CAN BE MEASURED; THE IMPORTANCE OF LOSS TESTING
- PROPER CONNECTION OF LIGHT
- SOURCES AND POWER METERS
- CHOOSING TRANSMISSION TEST EQUIPMENT
- CALCULATING EXPECTED TEST VALUE AND ANALYZING TEST RESULTS

V1756.4 **PLANNING AND INSTALLING A LOCAL FIBER LINK** – *31min*

- PLANNING CONSIDERATIONS FOR A LOCAL LINK
- ADVANTAGES AND DISADVANTAGES OF PATCH PANELS
- CONNECTION METHODS FOR DIFFERENT CABLE CONSTRUCTIONS
- HANDLING AND INSTALLATION CONSIDERATIONS
- SPLICE TRAYS, SPLICE INSTALLATION, & SPLICING OF PIGTAILS

V1756.5 **FIBER TROUBLESHOOTING** – *43min*

- DEVELOPING A TROUBLESHOOTING PLAN
- PRECAUTIONS & PROCEDURES FOR CONTINUITY TESTING
- QUICKLY LOCATING FIBER
- PROBLEMS AND RESTORING SERVICE
- TEST EQUIPMENT FOR TROUBLESHOOTING

V1756.6 **OTDR PRINCIPLES AND OPERATION** – *48min*

- REFLECTOMETERS PRINCIPLE AND OPERATION
- FIBER REFLECTIONS AND BACKSCATTER
- MEASUREMENTS USING OPTICAL TIME DOMAIN REFLECTOMETERS
- ADVANTAGES OF OTDR AND LIMITATIONS OF OTDR TESTING
- CHOOSING AN OTDR

FIBER OPTICS EXPLAINED *(SERIES)* – *c1995*

V2171.1 **THE COMMUNICATION PROCESS** – *14min*

- WHAT IS COMMUNICATION?
- LIST THE REQUIREMENTS OF SIGHT & SOUND FOR COMMUNICATION
- DESCRIBE THE ADVANTAGES OF RADIO COMMUNICATION
- EXPLAIN THE ADVANTAGES OF TELEPHONE COMMUNICATION
- NAME THE ADVANTAGES OF OPTICAL FIBERS AS A TRANSMITTING MEDIUM

V2171.2 **MAKING LIGHT TALK** – *14min*

- UNDERSTAND THE PHYSICAL CHARACTERISTICS OF LIGHT
- UNDERSTAND SINE WAVE TECHNOLOGY SUCH AS PERIOD, FREQUENCY
- DESCRIBE THE EFFECTS OF CHANGING THE AMPLITUDE AND FREQUENCY OF THE SOUND
- EXPLAIN RECEIVING AND DETECTING THE AMPLITUDE MODULATED LIGHT WAVE
- EXPLAIN RECEIVING AND DETECTING THE FREQUENCY MODULATED LIGHT WAVE

V2171.3 **PUTTING LIGHT TO WORK** – *14min*

- LIST THE KINDS OF INFORMATION LIGHT CAN CARRY
- LIST THE BANDWIDTH REQUIREMENTS OF VARIOUS KINDS OF SIGNALS
- EXPLAIN MULTIPLEXING WITH LIGHT
- UNDERSTAND TELEVISION & COMPUTER SIGNALS AND LIGHT
- DESCRIBE A COMPLEX FREQUENCY DIVISION MULTIPLEXING SYSTEM USING LIGHT

V2171.4 **USING FIBER OPTICS** – *14min*

- DIFFERENTIATE BETWEEN REFLECTION AND REFRACTION
- EXPLAIN WHY LIGHT BENDS
- DESCRIBE THE CONSTRUCTION OF OPTICAL FIBERS
- EXPLAIN THE CONSTRUCTION OF OPTICAL FIBERS
- LIST THE ADVANTAGES OF OPTICAL FIBERS OVER ELECTRICAL CONDUCTORS AS INFORMATION CARRIERS