



INTELLIGENT TRAFFIC SYSTEMS

“From Basic Principles to Complex System Integration”

Intelligent Traffic Systems include technologies from decades ago to the most recent releases. This causes quite a bit of confusion among engineers and technicians regarding interface requirements. Working in unison with the Intelligent Traffic System Division of the Arizona Department of Transportation as well as numerous metropolitan traffic system representatives, FNT has compiled resources and developed this all-inclusive course, which addresses these very issues and more.

WHO SHOULD ATTEND

This two week long, comprehensive course is a must for Intelligent Traffic Systems (ITS) design and field engineers, quality control supervisors and field inspectors, Metro and Regional DOT technicians tasked with the installation, maintenance, repair and expansion of Smart Highway systems with legacy to new component problems to solve. The class features a host of add/drop components, video and analog/digital transceivers designed for the harsh environment of outdoors and plenty of hands on for lesson reinforcement.

Those who desire to enter the field of ITS should take fiber optic theory and design on-line to satisfy pre-requisite requirements.

PRE-REQUISITES:

Currently working within the Intelligent Traffic Systems Industry (or) FNT's On-line Fiber Optic Theory with Successful Completion of Final Exam for Fiber Optic On-line Theory Course.

CERTIFICATION: 3M Telecom Systems Division, Electronic Technician Association (ETA) FOI/FOT (examinations required)

TUITION: \$3,700.00 per attendee

COURSE LOCATION:

3908 E. Broadway, Building 100
Phoenix, Arizona 85040
Call Toll Free for Reservations: 866-818-8050

FNT HAS PRE-ARRANGED DISCOUNT HOTEL RATES FOR OUR OUT-OF-TOWN GUESTS SO PLEASE COORDINATE THIS WHEN YOU ENROLL.

ON-SITE PRESENTATIONS:

FNT offers the same quality of course presentation on-site as we do in our corporate training center, complete with operational training simulators and equipment for all labs and lectures.

Call 866-818-8050 for details, quotes and minimum enrollment requirements.

In this course the attendee will learn:

COPPER CABLE VARIABLES

Coaxial, Triaxial, Twin-axial, Biaxial, Semi-rigid and Coaxial Connector Styles
Structured Cabling Principles
Bonding and Grounding Principles
Grounding Philosophy
Shielded Cable Grounding Vs. Armored Cable Grounding
Binder Color Codes for Various Cable Types
ARMM Backbone Cable
Labeling Conventions and Pin Out Principles (RS-232C)
DCE and DTE Devices
ITS Modem and their Configurations
Synchronous Vs. Asynchronous
9 Pin Connector on a DTE Device
Telecommunications Wiring History
Wiring Schemes and Methods
Network Configurations
Telephone Polarity, Connecting Blocks, Insulation Displacement Connectors, 66 Block, Wire Distribution Spools, New Construction Wiring, Video Wiring, Power Line Carrier Wiring, 66 Block With RJ45 Interface, Modular Jacks and Plug Wire Configurations TIA 568A/TIA568B
Cable Handling Guidelines, Pathways and Spaces
Horizontal Cabling Structures
Cross-connects, Inter-connects, Consolidation Access Points, and Full Channel Configuration
Pathways and Space Requirements for Various Copper Cable Types and Diameters
Cable Administration and Identification Labeling
Four Pair Copper
Common UTP Specifications for Design and Installation Requirements

Unjacketed Pair Handling
110 Patch Panel Pair Handling Procedures During Installation

FIBER CABLE VARIABLES

The Typical Lightwave System
Sources, Detectors, Media Design and Applications
Singlemode Fiber Classifications and Characterizations
Specialty Fiber
OSP Cable Designs
Lasers by Classification
The Optical Signal, Precautions and Capabilities
Cable Management Design and Implementation Practices
Asbestos Safety
Installation Tensions, Tension Monitoring, Bend Radius Requirements and Rigging Principles
Continuity Testing of Fiber Optic Strands
Cable Preparation for Fusion Splicing or Connector Installation
ST, SC, LC Connectors – Polish Requirements for Specific Applications (PC/APC/UPC)
Back Reflection Principles and Distributed Feedback Components
Coated Fiber Types i.e. Loose Tube, Tight Buffered, Simple, Ribbon Cable
Anaerobic Connector Processes – Quick Problem Resolution With the Minimum of Tools
Optical Loss Design Budgets, Establishing Project Specifications and Contractor Requirements
Rayleigh Scattering, Design and Installation Practices for Maximum Distance and Bandwidth
Fusion Splicing of Various Optical Fiber Types
Splice Case Fiber Management and Identification
Emergency Splicing Operations and Procedures (mechanical)
Fan Out Kit Installation on OSP Cable
Troubleshooting ITS Networks
Optical Time Domain Reflectometer (OTDR) for Network Certification and Fault Locating
OTDR Set-up, Basics and Advanced Trace Interpretation

WIRELESS VARIABLES

Design, Use and Integration of New Wireless, RF and WiFiber Technologies in Today's Intelligent Traffic System Environment
Dos and Don'ts of Wireless Communications Systems
Distance Criteria for Wireless Components