



Providing Quality Training Services
for the Telecommunication
and Electric Utility Industries



Represented by CWA
Local 9509 San Diego, CA

APPLIED PROFESSIONAL TRAINING

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CAT102: Microsoft Office 2007 (Word, Excel, PowerPoint) [\$1585, 40H, 4Units]

Word: create/save a new document, change text, insert pictures, tables, diagrams, text boxes, watermarks to make a professional looking document. Excel: use a basic spreadsheet program as a database manager, creating macros and basic mathematical functions, charts and graphs and how to merge information from other sources document. PowerPoint: create professional looking slide presentations using backgrounds, animation, inserting video's and pictures and a host of other tricks and tips. ** Laptops will be provided for each attendee to use during class.

CAT103: ADVANCED MICROSOFT OFFICE 2007 Word and Excel [\$1585, 40H, 4Units]

Adv. Word includes managing documents, formatting, and using time saving tools; working with graphics, using tables, and using different styles; and finish with a look at other advanced topics. Adv. Excel includes advanced file tasks, functions and formulas, and managing tables. ** Laptops will be provided for each attendee during class.

TEL102: Basic Electronics The AC/DC Course for Telecommunications [\$1585, 40H, 4Units]

The focus of this course is to give students a fundamental understanding of basic AC /DC principles and circuit theory as it applies to the telecommunications industry. Basic electronics, digital circuits and components are also covered. The learning experience is reinforced with hands-on activities.

TEL103: Data Communications Series [\$1585, 56H, 4Units]

Part I gives students a basic understanding of modern data communications technologies used in the telecommunications industry. The student learns about Central Office Hierarchy, Central Office Services and connectivity, computer systems, modem and fax standards, and data representation. Students will engage in an extensive hands-on experience that will include using the latest industry standard equipment. Other topics include LAN and WAN topologies and architectures, protocol models including OSI and TCP/IP, ATM, Frame Relay and SONET interface equipment, such as routers, CSU/DSU, wiring, etc.

TEL104: Data Communications & Network [\$1585, 56H, 4Units]

This course covers DCN Fundamental, DCN Advanced Concepts and DCN Hands on Certification. Included are Communications Networks, Network Connectivity, Data Representation, Digital Communications Techniques and Basic Data Transport Concepts. Data networking concepts such as transport media and standards, LAN hardware functionality, TCP/IP protocols, and signal processing are taught in detail. Students learn the basics of xDSL, ATM, Frame Relay and other data transport services. Network convergence of voice and data and emerging technologies are introduced.

TEL105: Fiber Optics [\$1585, 40H, 4Units]

This course is designed to provide students with a working knowledge of how voice, data and video signals are composed, multiplexed and transmitted over fiber optic systems used in modern telecommunication networks. Extensive hands-on exercises will provide experience in fiber splicing, connector installation, OTDR training and testing techniques. Students will also learn about the latest emerging fiber technologies.

TEL115: CTP- Voice Over Internet Protocol [\$1585, 40H, 4Units]

Provides students with a working knowledge of TCP/IP telephony and voice communications using Internet Protocol. The course discusses traditional circuit switching technologies and the evolution of packet switching networking in Local Area Networks and broadband telecom environments. Students learn how calls are made between VoIP phones, computers and traditional analog phones over high speed data networks.

TEL120: Internet Protocol Television CONVERGENT TECHNOLOGIES [\$1585, 40H, 4Unit]

This course will provide an understanding of how IPTV, VoIP and High Speed Internet services are being combined over new high speed Fiber to the Neighborhood networks. It is intended for those interested in emerging IP Centric Services. This course includes student participation in actual hands-on demonstrations using TV set-top equipment, video streaming encoders, PC serial converter boxes while using two VoIP connected telephones.

TEL125: MULTI-MEDIA UNIVERSAL TECHNICIAN with RESI & Data Cabling Certifications [\$1585, 40H, 4Unit]

This course provides students with a working knowledge of all media services to residential and commercial installations; including fiber optics (FTTX, FTTP), wireline (DSL, twisted pair), coax cable (CATV), and Satellite. The extensive hands-on exercises cover the tools and test equipment associated with installation, troubleshooting and testing. Finish the course with optional ETA RESI and Data Cabling and ACES Data Cabling in-class certifications.

TEL135: Data Cabling [\$1585, 40H, 4Units]

This course provides an invaluable experience in basic telephone, video, cable TV and data network cabling installations. Students learn basic theory, job planning, installation requirements, industry standards, cost estimation and proper cabling documentation. Extensive hands-on exercises provide students with opportunity to practice proper cabling techniques and procedures using industry standard cable and tools.

TEL140: Wireless Communications Technologies [\$1585, 40H, 4Units]

This course provides students with an understanding of modern wireless communications technologies for both voice and data. Course objectives are: Telecommunications Fundamentals, Basic Radio Theory & Principles, Fixed & Mobile Wireless Technologies, Wireless LAN's, Security & Regulatory issues and Alternative & Emerging Technologies. It is intended for those interested in the growing wireless industry for emerging wireless applications and systems.

TEL205: Central Office Telecommunications [\$2280, 56H, 4Units]

This course covers COT fundamentals, COT Advanced Concepts, COT Hands-On Lab and COT Advanced Hands-On Lab. It provides a fundamental understanding of local and toll central office switching and transport network architecture. Students will learn the various switching and transport equipment used to provision both POTS and Special Service type circuits, as well as the infrastructure for both the local loop and the interoffice. The extensive hands-on activities provided will solidify the students training to demonstrate both knowledge and skill based competencies learned in Part I of this course. Students will provision, test and troubleshoot analog and digital circuits using industry standard documentation, components, hand tools, and test equipment.

TEL230: Cisco Certified Network Association [\$2380, 80H, 5Units]

A) Internetworking Operating System & Lab: Cisco Internetworking Operating System (Cisco IOS)
B) Managing Cisco Internetworks & Lab: Internal components of a router, backup and restoring configurations, IP routing, and network connectivity.
C) Adv. IP Routing, Connections & Lab: Routing protocols, security (firewalls), WAN-LAN connections & wireless networking
D) Security, Wireless LANs & Lab: Build active computer networks, testing configurations, and troubleshooting
This course provides the knowledge required to become a Cisco Certified Network Associate as described by the new Cisco 640-802 CCNA exam.

TEL235: Analyzing Cisco Internetworks [\$1585, 40H, 4Units]

This course develops student's analytical skills required of a Cisco Certified Network Associates through hands-on lab simulators. The course consists of three modules, ACI Subnet & Switching Analysis Lab, ACI Basic IP and Dynamic Routing Analysis Lab, and ACI Advanced Internetwork Troubleshooting Lab.

TEL240: FCC General Radiotelephone Operators License [\$1585, 40H, 4Units]

The GROL is required to operate and maintain aircraft, ship, and other radio communications equipment. This course covers the rules and regulations (Element 1), electrical theory and practical applications of traditional radio and radiotelephone wireless communications (Element 3) used by communications, maritime, and aircraft industries. Radar principles and applications (Element 8) is also available as an option. Students receive the GROL FCC License from FCC directly upon passing the exam.

TEL250: Solar Power For Telecommunications [\$1585, 40H, 4Units]

Provides students with a working knowledge of Solar Photo Voltaic (PV) systems used in the telecommunications industry. Gain fundamental knowledge of PV systems, design techniques, equipment functionality and installation requirements for practical grid-tie and off grid battery interconnections. Solar PV arrays, inverters, batteries, load calculations, installation techniques and power grid interconnections for small industrial and residential rooftop and pedestal installations. This course includes the necessary steps to design, install and test basic PV systems. NABCEP's entry level solar PV installer's certificate exam is proctored in class.