



### **TRAINING**

- Expert Training in the Latest Technologies
- Industry-Demanded Certifications

#### **PCB TECHNOLOGY**

#### **Quality & Inspection**

■ IPC-A-610 Instructor & Operator Certification

## **Soldering & Assembly**

IPC J-STD-001 Instructor
 & Operator Certification

#### **Bare Board Inspection**

- IPC-A-600 Instructor & Operator Certification
- IPC-6012 Instructor & Operator Certification

#### Rework & Repair

■ IPC-7711 & IPC-7721 Instructor & Operator Certification

#### **Hand Soldering Skills**

Soldering Basics,
Wires & Terminals,
Lap Solder Joints,
Through-Hole and
Surface Mount Training

### **PCB Fundamentals**

- Component Identification
- Electrostatic Discharge

#### **PCB** Design

- Essentials of PCB Design
- IPC Designer Certification

## COUNTERFEIT COMPONENTS

#### IDEA-STD-1010

- Seminars & Workshops
- IDEA-STD-1010 Essentials
- SAE AS5553
  Counterfeit Electronics

# CABLE & WIRE HARNESS TECHNOLOGY

## **Quality & Inspection**

■ IPC-A-620 Instructor & Operator Certification

#### **Hands-On Labs**

Crimping & Harness Assembly Training

#### **TECHNICAL SUPPORT**

- Manufacturing Start-Up
- Process Evaluation
- Subcontractor Qualification
- Equipment Evaluation
- Lead-Free, ESD, Process and Quality Audits

## **IPC-A-620 CERTIFIED STANDARDS EXPERT (CSE)**

## IPC/WHMA-A-620

## **COURSE DESCRIPTION**

If you are looking at becoming a subject matter expert in IPC/WHMA-A-620, "Requirements and Acceptance for Cable and Wire Harness Assemblies" without the need to provide any IPC Certification to others, then this is the program for you. As a CSE–Certified Standard's Expert, you have the opportunity to support your organization as a key subject expert on the IPC/WHMA-A-620, interfacing with a variety of functions within your firm and providing critical interpretation support of the standards, without the requirements carried under previous IPC Instructor Certifications.

This 4-day, lectured course is a comprehensive certification that teaches inspection and assembly criteria for all three classes of cable and wire harness assembly. This course is based on the IPC/WHMA-A-620, the most widely used inspection specification for the cable and wire harness assembly industry.

Obtain a CSE Certification in one standard and, if you choose, add additional certifications in IPC-A-610, J-STD-001, IPC-A-600, IPC-6012, or IPC-7711/7721. With three (3) CSE certifications, apply with the IPC to become a Senior Certified Standard's Expert.

## WHO SHOULD BECOME CERTIFIED

This course is designed for individuals who are required to act as a subject matter expert for this standard but DO NOT need to conduct training.

## **PREREQUISITES**

- Understanding of the English language, oral and written
- To qualify to take any CSE standard exam, each attendee must:
  - Complete and Pass IPC's on-line Enhanced Policies and Procedures Exam, on your own outside of class
- To obtain CSE Certification, candidates must successfully pass:
  - 1. General Knowledge Exam, on-line, closed book, in class
  - 2. Standard Endorsement Exam, on-line, open book, in class.

#### **CLASS SIZE**

Maximum number of students is limited to ten (10) to provide greater instructor interaction. Call early to reserve your space.

## **COURSE OUTLINE**

#### DAY 1

- Module 1: General and Applicable Documents
- Module 2: Wire Preparation
- Module 3: Soldered Terminations
- Module 4: Crimp Terminations

#### DAY 2

- Review and Review Exercise
- Module 4 (cont.): Crimp Terminations
- Module 5: Insulation Displacement (IDC)
- Module 6: Ultrasonic Welding
- Module 7: Splices
- Module 8: Connectorization

#### DAY 3

- Review and Review Exercise
- Module 8 (cont.): Connectorization
- Module 9: Molding / Potting
- Module 10: Cable Assemblies and Wires
- Module 11: Marking Labeling
- Module 12: Coaxial and Biaxial Assemblies
- Module 13: Wire Bundle Securing

#### DAY 4

- Review and Review Exercise
- Module 13 (cont.): Wire Bundle Securing
- Module 14: Shielding
- Module 15: Cable/Wire Harness Protective Coverings
- Module 16: Finished Assembly Installation
- Module 17: Testing
- Module 18: High Voltage
- · Review and Exams

**eTRAINING** On-line training is available for some courses. Please inquire.

**ON-SITE TRAINING** Please call a training consultant and ask about customized course content, on-site training and training around your production schedules.

**REGISTRATION** For up to date pricing and more information on any of the EPTAC programs, or to enroll, please call us toll free or visit eptac.com.

**Toll Free:** 1-800-64-EPTAC **email:** register@eptac.com

Web: eptac.com