



## 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:
  1. 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