



## 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

- IPC Designer & IPC Advanced Designer Certification

## COUNTERFEIT COMPONENTS

### IDEA-STD-1010

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

## CABLE & WIRE

### HARNESST 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-600 CERTIFIED STANDARDS EXPERT (CSE)

## IPC-A-600

### COURSE DESCRIPTION

If you are looking at becoming a subject matter expert in IPC-A-600, "The Acceptability of Printed Boards" 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-A-600, 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 3-day, lectured course utilizes the images in the IPC-A-600 document to provide visual accept/reject criteria examples for all three classes of bare board fabrication and inspection. The IPC-A-600 describes the preferred, acceptable, and nonconforming conditions that are either externally or internally observable on printed boards.

Obtain a CSE Certification in one standard and, if you choose, add additional certifications in IPC-A-610, J-STD-001, IPC/WHMA-A-620, 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 is an advanced course 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:
  - General Knowledge Exam, on-line, closed book, in class
  - 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

##### Introduction

- General Overview
- Terms and Definitions
- Acceptance Criteria

##### Externally Observable Characteristics

- Board Edges
- Base Material Surface and Subsurface
- Solder Coatings and Fused Tin Lead
- Holes-Plated Through and Unsupported
- Printed Contacts
- Marking
- Solder Mask
- Pattern Definition
- Dimensional Flatness

#### DAY 2

##### Internally Observable Characteristics

- Dielectric Materials
- Conductive Patterns
- Plated Through-Holes (General, Drilled, Punched)

##### Flex Printed Circuit & Metal Core

- Flexible Printed Circuits
- Rigid - Flex Printed Boards
- Metal Core Printed Boards
- Flush Printed Boards
- Cleanliness Testing
- Solderability Testing
- Electrical Integrity

#### DAY 3

- Course Summary/Review
- Open & Closed Book 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