



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 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

Mid West Minneapolis, MN; Schaumburg & Rosemont, IL; Kansas City, MO

Please contact us for additional locations and on-site training opportunities in your area.

IPC-A-610 Certified IPC Trainer

Become certified to train your workforce to identify accept/reject criteria for all three classes of assembly production.

Jan 20 - 23 Schaumburg, IL
 Feb 18 - 21 Kansas City, MO
 Feb 24 - 27 Minneapolis, MN
 Apr 13 - 16 Schaumburg, IL
 May 18 - 21 Minneapolis, MN
 Jun 15 - 18 Kansas City, MO
 Jul 27 - 30 Schaumburg, IL
 Aug 17 - 20 Minneapolis, MN
 Nov 2 - 5 Minneapolis, MN
 Nov 16 - 19 Kansas City, MO
 Nov 30 - Dec 3 Schaumburg, IL

Recertifications (Req. 24 mos.)

Jan 6 - 7 Kansas City, MO
 Jan 21 - 22 Minneapolis, MN
 Jan 27 - 28 Schaumburg, IL
 Apr 6 - 7 Schaumburg, IL
 May 12 - 13 Minneapolis, MN
 Aug 10 - 11 Minneapolis, MN
 Aug 24 - 25 Schaumburg, IL
 Aug 24 - 25 Kansas City, MO
 Nov 3 - 4 Schaumburg, IL
 Nov 16 - 17 Minneapolis, MN

IPC-A-610 Certified IPC Specialist

Learn the accept/reject criteria for all three classes of assembly production as published in the most widely used inspection specification, IPC-A-610.

Jan 20 - 22 Schaumburg, IL
 Feb 18 - 20 Kansas City, MO
 Feb 24 - 26 Minneapolis, MN
 Apr 13 - 15 Schaumburg, IL
 May 18 - 20 Minneapolis, MN
 Jun 15 - 17 Kansas City, MO
 Jul 27 - 29 Schaumburg, IL
 Aug 17 - 19 Minneapolis, MN
 Nov 2 - 4 Minneapolis, MN
 Nov 16 - 18 Kansas City, MO
 Nov 30 - Dec 2 Schaumburg, IL

Recertifications (Req. 24 mos.)

Jan 20 - 22 Schaumburg, IL
 Feb 18 - 20 Kansas City, MO
 Feb 24 - 26 Minneapolis, MN
 Apr 13 - 15 Schaumburg, IL
 May 18 - 20 Minneapolis, MN
 Jun 15 - 17 Kansas City, MO
 Jul 27 - 29 Schaumburg, IL
 Aug 17 - 19 Minneapolis, MN
 Nov 2 - 4 Minneapolis, MN
 Nov 16 - 18 Kansas City, MO
 Nov 30 - Dec 2 Schaumburg, IL

IPC-A-610 Standard Expert

Become a subject matter expert in IPC-A-610.

Jan 20 - 23 Schaumburg, IL
 Feb 18 - 21 Kansas City, MO
 Feb 24 - 27 Minneapolis, MN
 Apr 13 - 16 Schaumburg, IL
 May 18 - 21 Minneapolis, MN
 Jun 15 - 18 Kansas City, MO
 Jul 27 - 30 Schaumburg, IL
 Aug 17 - 20 Minneapolis, MN
 Nov 2 - 5 Minneapolis, MN
 Nov 16 - 19 Kansas City, MO
 Nov 30 - Dec 3 Schaumburg, IL

Interactive PCB Inspection Lab

(optional) Hands-on inspection of real PCB assemblies and application of accept/reject criteria.

Jan 24 Schaumburg, IL
 Feb 28 Minneapolis, MN
 Apr 17 Schaumburg, IL
 Jun 19 Kansas City, MO
 Jul 31 Schaumburg, IL
 Nov 6 Minneapolis, MN
 Nov 20 Kansas City, MO
 Dec 4 Schaumburg, IL

Dates and locations are subject to change. Please call to check current dates and availability. Minimum enrollments are required for a class to be held.

J-STD-001 Certified IPC Trainer

Acquire the skills, instructional materials and industry certification to deliver IPC's J-STD-001 Operator Training program.

Jan 13 - 17 Kansas City, MO
 Feb 3 - 7 Schaumburg, IL
 Mar 16 - 20 Minneapolis, MN
 May 4 - 8 Kansas City, MO
 Jun 15 - 19 Schaumburg, IL
 Jun 22 - 26 Minneapolis, MN
 Sep 14 - 18 Minneapolis, MN
 Sep 14 - 18 Schaumburg, IL
 Oct 12 - 16 Kansas City, MO
 Nov 9 - 13 Schaumburg, IL

Recertifications (Req. 24 mos.)

Jan 8 - 9 Kansas City, MO
 Jan 23 - 24 Minneapolis, MN
 Jan 29 - 30 Schaumburg, IL
 Apr 8 - 9 Schaumburg, IL
 May 14 - 15 Minneapolis, MN
 Aug 12 - 13 Minneapolis, MN
 Aug 26 - 27 Schaumburg, IL
 Aug 26 - 27 Kansas City, MO
 Nov 5 - 6 Schaumburg, IL
 Nov 18 - 19 Minneapolis, MN

J-STD-001 Certified IPC Specialist

Interpret the J-STD-001 specification in 5 one-day modules: Theory, Wires & Terminals, Through-Hole, Surface Mount and Inspection

Jan 13 - 17 Kansas City, MO
 Feb 3 - 7 Schaumburg, IL
 Mar 16 - 20 Minneapolis, MN
 May 4 - 8 Kansas City, MO
 Jun 15 - 19 Schaumburg, IL
 Jun 22 - 26 Minneapolis, MN
 Sep 14 - 18 Minneapolis, MN
 Sep 14 - 18 Schaumburg, IL
 Oct 12 - 16 Kansas City, MO
 Nov 9 - 13 Schaumburg, IL

Recertifications (Req. 24 mos.)

Jan 13 - 17 Kansas City, MO
 Feb 3 - 7 Schaumburg, IL
 Mar 16 - 20 Minneapolis, MN
 May 4 - 8 Kansas City, MO
 Jun 15 - 19 Schaumburg, IL
 Jun 22 - 26 Minneapolis, MN
 Sep 14 - 18 Minneapolis, MN
 Sep 14 - 18 Schaumburg, IL
 Oct 12 - 16 Kansas City, MO
 Nov 9 - 13 Schaumburg, IL

J-STD-001 Standard Expert

Become a subject matter expert in J-STD-001.

Jan 13 - 17 Kansas City, MO
 Feb 3 - 7 Schaumburg, IL
 Mar 16 - 20 Minneapolis, MN
 May 4 - 8 Kansas City, MO
 Jun 15 - 19 Schaumburg, IL
 Jun 22 - 26 Minneapolis, MN
 Sep 14 - 18 Minneapolis, MN
 Sep 14 - 18 Schaumburg, IL
 Oct 12 - 16 Kansas City, MO
 Nov 9 - 13 Schaumburg, IL

IPC-A-620 Certified IPC Trainer

Become an expert in the quality standards of Wire, Cable and Harness, and be certified for inspection and instruction.

Jan 14 - 17 Schaumburg, IL
 Mar 9 - 12 Kansas City, MO
 Mar 23 - 26 Minneapolis, MN
 Apr 20 - 23 Schaumburg, IL
 Jun 8 - 11 Minneapolis, MN
 Jul 7 - 10 Kansas City, MO
 Jul 13 - 16 Schaumburg, IL
 Sep 21 - 24 Minneapolis, MN
 Oct 19 - 22 Schaumburg, IL
 Dec 7 - 10 Minneapolis, MN
 Dec 14 - 17 Kansas City, MO

Recertifications (Req. 24 mos.)

Feb 3 - 4 Minneapolis, MN
 Feb 25 - 26 Schaumburg, IL
 Jun 24 - 25 Schaumburg, IL
 Jul 13 - 14 Minneapolis, MN
 Aug 20 - 21 Kansas City, MO
 Aug 31 - Sep 1 Schaumburg, IL
 Oct 22 - 23 Minneapolis, MN



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 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

Mid West Minneapolis, MN; Schaumburg & Rosemont, IL; Kansas City, MO

Please contact us for additional locations and on-site training opportunities in your area.

IPC-A-620 Certified IPC Specialist

Learn assembly requirements and accept/reject criteria for all three classes of cable and wire harness assembly.

Jan 14 - 17 Schaumburg, IL
 Mar 9 - 12 Kansas City, MO
 Mar 23 - 26 Minneapolis, MN
 Apr 20 - 23 Schaumburg, IL
 Jun 8 - 11 Minneapolis, MN
 Jul 7 - 10 Kansas City, MO
 Jul 13 - 16 Schaumburg, IL
 Sep 21 - 24 Minneapolis, MN
 Oct 19 - 22 Schaumburg, IL
 Dec 1 - 4 Minneapolis, MN
 Dec 7 - 10 Schaumburg, IL
 Dec 14 - 17 Kansas City, MO

Recertifications (Req. 24 mos.)

Jan 14 - 17 Schaumburg, IL
 Mar 9 - 12 Kansas City, MO
 Mar 23 - 26 Minneapolis, MN
 Apr 20 - 23 Schaumburg, IL
 Jun 8 - 11 Minneapolis, MN
 Jul 7 - 10 Kansas City, MO
 Jul 13 - 16 Schaumburg, IL
 Sep 21 - 24 Minneapolis, MN
 Oct 19 - 22 Schaumburg, IL
 Dec 1 - 4 Minneapolis, MN
 Dec 7 - 10 Schaumburg, IL
 Dec 14 - 17 Kansas City, MO

IPC-A-620 Standard Expert

Become a subject matter expert in IPC-A-620.

Jan 14 - 17 Schaumburg, IL
 Mar 9 - 12 Kansas City, MO
 Mar 23 - 26 Minneapolis, MN
 Apr 20 - 23 Schaumburg, IL
 Jun 8 - 11 Minneapolis, MN
 Jul 7 - 10 Kansas City, MO
 Jul 13 - 16 Schaumburg, IL
 Sep 21 - 24 Minneapolis, MN
 Oct 19 - 22 Schaumburg, IL
 Dec 1 - 4 Minneapolis, MN
 Dec 7 - 10 Schaumburg, IL
 Dec 14 - 17 Kansas City, MO

IPC-A-620 Hands On Labs (optional)

Additional day of hands-on labs in which students perform necessary procedures for building an entire wire harness assembly

Mar 13 Kansas City, MO
 Mar 27 Minneapolis, MN
 Apr 24 Schaumburg, IL
 Jun 12 Minneapolis, MN
 Jul 17 Schaumburg, IL
 Oct 23 Schaumburg, IL
 Dec 11 Schaumburg, IL
 Dec 18 Kansas City, MO

IPC-7711/7721 Certified IPC Trainer

Become qualified to instruct operators in the required knowledge and skills for component rework and bare board repair.

Jan 27 - 31 Minneapolis, MN
 Mar 9 - 13 Schaumburg, IL
 May 4 - 8 Minneapolis, MN
 Jun 8 - 12 Schaumburg, IL
 Oct 26 - 30 Schaumburg, IL
 Dec 7 - 11 Minneapolis, MN

Recertifications (Req. 24 mos.)

Feb 27 - 28 Schaumburg, IL
 Mar 12 - 13 Minneapolis, MN
 Jun 22 - 23 Schaumburg, IL
 Jul 15 - 16 Minneapolis, MN
 Sep 2 - 3 Schaumburg, IL
 Dec 14 - 15 Schaumburg, IL

IPC-7711/7721 Certified IPC Specialist

Learn general requirements and practice damage-free removal and replacement techniques for wires and terminals, through-hole components and surface mount components.

Develop advanced skills for repairing PWBs, including conductor/land repair, lifted conductor/land/pad repair and base material.

Jan 27 - 31 Minneapolis, MN
 Mar 9 - 13 Schaumburg, IL
 May 4 - 8 Minneapolis, MN
 Jun 8 - 12 Schaumburg, IL
 Oct 26 - 30 Schaumburg, IL
 Dec 7 - 11 Minneapolis, MN

Recertifications (Req. 24 mos.)

Feb 27 - 28 Schaumburg, IL
 Mar 12 - 13 Minneapolis, MN
 Jun 22 - 23 Schaumburg, IL
 Jul 15 - 16 Minneapolis, MN
 Sep 2 - 3 Schaumburg, IL
 Dec 14 - 15 Schaumburg, IL

IPC-7711/7721 Standard Expert

Become a subject matter expert in IPC-7711 and IPC-7721.

Jan 27 - 31 Minneapolis, MN
 Mar 9 - 13 Schaumburg, IL
 May 4 - 8 Minneapolis, MN
 Jun 8 - 12 Schaumburg, IL
 Oct 26 - 30 Schaumburg, IL
 Dec 7 - 11 Minneapolis, MN

IPC-A-600 Certified IPC Trainer

Become an expert in the quality standards of printed circuit boards and be certified for inspection and instruction.

Jan 8 - 10 Schaumburg, IL
 Feb 18 - 20 Minneapolis, MN
 Jun 2 - 4 Minneapolis, MN
 Jul 20 - 22 Schaumburg, IL
 Oct 26 - 28 Minneapolis, MN

Recertifications (Req. 24 mos.)

Jan 8 - 10 Schaumburg, IL
 Feb 18 - 20 Minneapolis, MN
 Jun 2 - 4 Minneapolis, MN
 Jul 20 - 22 Schaumburg, IL
 Oct 26 - 28 Minneapolis, MN

IPC-A-600 Certified IPC Specialist

Learn quality standards of PCBs and be certified for inspection of bare boards.

Jan 8 - 10 Schaumburg, IL
 Feb 18 - 20 Minneapolis, MN
 Jun 2 - 4 Minneapolis, MN
 Jul 20 - 22 Schaumburg, IL
 Oct 26 - 28 Minneapolis, MN

Recertifications (Req. 24 mos.)

Jan 8 - 10 Schaumburg, IL
 Feb 18 - 20 Minneapolis, MN
 Jun 2 - 4 Minneapolis, MN
 Jul 20 - 22 Schaumburg, IL
 Oct 26 - 28 Minneapolis, MN

IPC-A-600 Standard Expert

Become a subject matter expert in IPC-A-600.

Jan 8 - 10 Schaumburg, IL
 Feb 18 - 20 Minneapolis, MN
 June 2 - 4 Minneapolis, MN
 Jul 20 - 22 Schaumburg, IL
 Oct 26 - 28 Minneapolis, MN

IPC-6012 Certified IPC Specialist

Learn about the design, specifications, fabrication and inspection of printed circuit boards.

Apr 27 - 30 Minneapolis, MN
 May 18 - 21 Schaumburg, IL
 Sep 28 - Oct 1 Minneapolis, MN
 Oct 13 - 16 Schaumburg, IL

Recertifications (Req. 24 mos.)

Apr 27 - 30 Minneapolis, MN
 May 18 - 21 Schaumburg, IL
 Sep 28 - Oct 1 Minneapolis, MN
 Oct 13 - 16 Schaumburg, IL

IPC Certified Interconnect Designer

This course goes beyond the fundamentals of component placement and track routing to encompass a complete understanding of all the elements that go into the development of a printed circuit board.

Apr 28 - May 1 Schaumburg, IL

IPC Advanced Certified Interconnect Designer

This course delves into design and fabrication issues that go beyond the fundamentals of layout, component placement and routing consideration to understanding fabrication materials, testing of not only electrical, but physical aspects of boards, electrical and signaling issues, complex component mounting strategies and requirements, and fabrication considerations for high end circuitry.

Sep 22 - 25 Schaumburg, IL

Dates and locations are subject to change. Please call to check current dates and availability. Minimum enrollments are required for a class to be held.



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 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

Mid West Minneapolis, MN; Schaumburg & Rosemont, IL; Kansas City, MO

Please contact us for additional locations and on-site training opportunities in your area.

Hand Soldering Certification

Introduces the basics of soldering, terms & definitions and equipment familiarization. Wires and Terminals, and Through-Hole Soldering and Rework is taught through hands-on construction and inspection of two Through-Hole boards. Students learn the accept/reject criteria for Surface Mount Assembly and Rework first hand through the construction, inspection and rework of a surface mount board.

Lead and Lead-free included.

- Jan 6 - 10 Minneapolis, MN
- Feb 10 - 14 Schaumburg, IL
- Mar 23 - 27 Schaumburg, IL
- Apr 6 - 10 Kansas City, MO
- Apr 13 - 17 Minneapolis, MN
- May 4 - 8 Schaumburg, IL
- Jul 20 - 24 Minneapolis, MN
- Aug 10 - 14 Schaumburg, IL
- Sep 14 - 18 Kansas City, MO
- Oct 12 - 16 Minneapolis, MN
- Nov 16 - 20 Schaumburg, IL

Recertifications

- Jan 10 Kansas City, MO
- Apr 10 Schaumburg, IL
- Nov 2 Schaumburg, IL

IDEA Counterfeit Component Workshop

A basic introduction to Counterfeit Mitigation and to IDEA-STD-1010, including methods for the visual detection of counterfeit and substandard characteristics through a hands-on workshop. A unique opportunity to examine real components with live, on-site microscopic magnification to obtain experience in the visual inspection techniques of IDEA-STD-1010 and learn how to detect counterfeit components firsthand.

- Mar 18 Schaumburg, IL

IDEA-STD-1010 Essentials

Develop an in-depth knowledge of the IDEA-STD-1010 "Acceptability of Electronic Components Distributed in the Open Market" standard and a thorough understanding of its contents, application and use in the component inspection counterfeit detection process.

- Mar 10 - 11 Minneapolis, MN
- Sep 28 - 29 Schaumburg, IL

Advanced Micro Hand Soldering Certification

- Feb 5 - 6 Minneapolis, MN
- Mar 16 - 17 Schaumburg, IL
- Jun 29 - 30 Schaumburg, IL
- Jul 9 - 10 Minneapolis, MN
- Sep 30 - Oct 1 Schaumburg, IL
- Oct 20 - 21 Minneapolis, MN
- Dec 16 - 17 Schaumburg, IL

Dates and locations are subject to change. Please call to check current dates and availability. Minimum enrollments are required for a class to be held.