

# Lead Free Manufacturing

*Continuing Professional Advancement in Electronics Manufacturing*



**ISO 9001:2008  
CERTIFIED**

## **Overview**

New lead free electronic manufacturing processes must be developed and implemented to eliminate lead from the electronics assembly process. Approved legislation, coupled with new commercial market pressure from Asia and Europe is forcing electronic manufacturers to consider new processes, materials and techniques to meet this challenge. ACI, a National Electronics Manufacturing Center of Excellence, has developed a comprehensive training program to provide lecture and hands-on factory experiences to support this endeavor. The course objective is to introduce participants to the technical challenges of developing and implementing lead free soldering into an electronic manufacturing production environment and provide application specific solutions to address each issue.

## **Who Should Attend**

Everyone responsible for the development and implementation of lead free solder into their manufacturing production and rework/repair processes.

## **Content**

*Legislative Status:* Europe, Asia, United States

*Materials Issues:* Solder Alloys, Board Finishes, Component Finishes, Tin Whiskers

*Reliability Topics:* Components, Boards, Solder Joints, Microsectioning, Failure Analysis

*State of the Market Concerns:* Commercial Market Issues, Military/Aerospace/Defense, Market Issues

*Manufacturing Processes:* Screen Printing, Component Placement, Hand Soldering, Wave Soldering, Reflow Soldering, Rework and Repair

*Additional Considerations:* Environmental Issues, Configuration Management, Legacy Hardware, Sustainment Hardware

## **Benefits**

Participants will gain an understanding of the technical issues surrounding the lead free soldering process. Through hands-on experience in ACI's demonstration factory and fully equipped classrooms, students will learn how to manufacture lead free hardware using production quality equipment. Attendees are encouraged to bring their own hardware samples to determine how it will respond when lead free solders are used.

## **Duration, Registration and Pricing**

Contact the training center via any of the methods provided below for pricing of this two-day course.



ACI Technologies, Inc. • phone: 610.362.1200 • web: [www.aciusa.org](http://www.aciusa.org)  
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