



ESD Control for Electronics Manufacturing SYLLABUS

This course introduces participants to the causes of ESD and the steps you can take to mitigate its effects when handling, storing, or transporting ESD sensitive components in a manufacturing facility. These preventive measures and their application are based on ANSI/ESD S20.20 and other relevant standards.

COURSE OBJECTIVE

After completing this course, you will be able to employ the key tools, materials, and processes designed to prevent and control the effects of ESD within a manufacturing facility.

LEARNING OBJECTIVES PER COURSE MODULE

MODULE 1: INTRODUCTION TO ESD

- Define Electrostatic discharge
- Explain what causes an electrostatic discharge
- Define triboelectric charging (triboelectric effect)
- Explain the difference between conductive and insulative materials
- Explain catastrophic vs. latent failure
- Describe typical static charge sources
- Explain the benefits of controlling ESD

MODULE 2: HOW OPERATORS PREVENT AND CONTROL ESD

- Explain the use of grounding for controlling ESD in the workplace
- Identify common types of personnel grounding devices
- Describe the proper use of ESD wrist straps, ESD shoes, shoe grounders, and constant monitoring devices
- Explain the testing procedure for personnel grounding devices
- Describe safe handling and transportation procedures for ESDS items

MODULE 3: HOW FACILITIES PREVENT AND CONTROL ESD

- Explain how facilities mitigate the effect of ESD with ESD Protected Areas (EPAs)
- Identify the tools and best practices for maintaining an ESD safe workstation
- Explain the purpose, function, and strategies for using ESD safe packaging

FINAL EXAM & CERTIFICATE OF COMPLETION

Once you have completed all 3 modules, you can take the final exam. You will have 25 minutes to complete 20 multiple-choice and true or false questions. The passing score for this exam is 80%. Students may attempt the exam up to three (3) times. Please note that a third and final attempt is permitted after 24 hours of the second attempt. Participants who attain the minimum score of 80% can access and download their IPC Certificate of Completion.

COURSE RESOURCES

Everything you need to successfully complete the ESD Control for Electronics Assembly course is included and available on the IPC EDGE Learning Management System.

IPC EDGE LEARNING MANAGEMENT SYSTEM

Upon accessing the course for the first time, take a moment to update your personal profile. IPC EDGE supports the most recent versions of Google Chrome, Firefox, Safari, Internet Explorer, and Microsoft Edge. Courses can be accessed on desktops, laptops, tablets, and mobile phones. Please refer to Browser Settings under the Start Here! Tab on your dashboard to make sure your browser is set to function seamlessly with the IPC Edge Learning Management System. If you need further technical assistance, please send an email to certification@ipc.org or call IPC Member Support at +1 847-597-2862.