Semiconductor Safety

Catalogue Number	TBD
Category	Semiconductors
Duration	16 Hours

Section 1: Introduction to Cleanroom Safety

The Importance of Cleanroom Safety Rules

Overview of Potential Hazards

Personal Protective Equipment (PPE) In Clean Rooms

Equipping and Doffing PPE

Lab Activity: Equipping PPE

Section 2: Electrical Safety

Basic Electrical Safety

Industrial Electrical Safety Standards

Safety During Electrical Maintenance

Electrical PPE

Roles, Boundaries, Limitations, and Zones

Arc Flash

Warning Labels

Section 3: Ergonomics and Office Safety

Introduction to Ergonomics in Fab and Office Environments

Common Ergonomic Risk Factors

Proper Posture and Body Mechanics

Safe Lifting, Carrying, and Handling of Equipment

Ergonomics For Cleanroom Operations

Office Ergonomics

Ergonomic Use of Tools, Instruments, and Office Accessories

Early Warning Signs of Ergonomic Injuries (Fab & Office)

Section 4: Chemical Safety

The Purpose of Chemicals in Semiconductor Manufacturing

Chemical Hazard Rules and Symbols

Chemical PPE

Chemical Transfer and Handling Chemical Waste

Chemical Separation and Segregation

Chemical Emergency Response and Case Studies

Section 5: Mechanical, Vacuum, and Pneumatic Safety

Safety In Vacuum Systems

Vacuum Hazards

Safety In Pneumatic Systems

Pneumatic Hazards

Safety In Mechanical Systems

Mechanical Hazards

Safety Guidelines During Maintenance

Risk Assessment and PTP (Pre-Task Planning) for Safety Hazards During Maintenance

Section 6: Emergency Response

Introduction To Emergency Response Teams (ERT) and Related Concepts

Why ERTs are Critical in Semiconductor Manufacturing

Job Roles in the ERT

How Regular Employees Interact With the ERT

Response to Fires

Response to Injury

Section 7: Interlock Systems in Semiconductor Tools

Interlock Systems: Structure, Function, and Purpose

How Interlock Systems Work

Common Interlock Systems

Interactions with Interlock Systems: Do's and Don'ts

Emergency Machine Off (EMO)

Section 8: COHE And LOTO

Control of Hazardous Energy (COHE)

Defining Lock Out / Tag Out (LOTO) Terms

COHE and LOTO Requirements

LOTO Points and Checks

Safe Practices and LOTO Violations

ⓘ ***Important Note:*** *This outline is subject to change*