

B11 LMSS™

FORTRESS
SAFETY

B11 LMSS™



Following the successful completion of training
this license is issued by B11 Standards, Inc. to

Jherrod Thomas

as a

B11 LMSS™
Licensed Machinery Safety Specialist

License No.: AA311265171
Valid from: 14th November 2022
Valid to: 13th November 2025



David Felinski, President



B11 Standards, Inc.
Houston, Texas (USA)
www.b11standards.org



B11 Licensed Machinery Safety Specialist



Course Modules Outlined

Module 1 - Risk Assessment

Introduction to Standards and Regulations

- What is Safety?
- OSHA Regulations
- Lock Out Tag Out
- B11 Machinery Safety Standards
- Other Machinery Safety Standards

B11.0 Safety of Machinery

- Overview
- Responsibilities
- Life cycle Requirements
- The Risk Assessment Process
 - Identify Tasks & Hazards
 - Assess Risk
 - Reduce Risk
 - Assess Residual Risk
 - Achieve Acceptable Risk
 - Validate & Verify
 - Document the Process
- General Requirements

Module 4 - Integrating Machines & Robotics

B11.20 Safety Requirements for the Integration of Machinery into a System

- Overview
- Responsibilities
- Risk Assessment Process
- Design, Construction, Re-Construction & Modification
- Risk Reduction Measures
- Set-up, Operation & Maintenance
- Decommissioning Process

ANSI / RIA R15.06.2012 Industrial Robots and Robot Systems - Safety Requirements

- Overview
- Safety Requirements & Protective Measures
- Limiting Robot Motion
- Operational Mode Application
- Pendants
- Safeguarding
- Verification & Validation of Protective Equipment

Module 2 - Risk Reduction

B11.19 Performance Requirements for Risk Reduction Measures: Safeguarding and other Means of Reducing Risk

- Overview
- Responsibilities
- Risk Reduction Measures
- Inherently Safe by Design
- Engineering Controls
 - Guards
 - Control Functions
 - Control Reliability
 - Devices
- Administrative Controls

Module 5 - LOTO & Electrical Safety

ANSI / ASSP Z244.1.2016 The Control of Hazardous Energy Lockout, Tagout and Alternative Methods

- Overview
- Responsibilities
- Risk Assessment Process
- Design of Machinery for the Control of Hazardous Energy
- Hazardous Energy Control Program
- Control of Hazardous Energy
- Alternative Methods of Hazardous Energy Control

NFPA 79: Electrical Standard for Industrial Machinery

- Overview
- General Requirements
- Disconnecting Means
- Protection from Electrical Hazard
- Control Circuits
- Control Equipment
- Electrical Motors
- Testing & Verification

Module 3 - Functional Safety

B11.26 Functional Safety for Equipment (Electrical / Fluid Power Control Systems) - Application of ISO 13849 - General Principles for Design

- Overview
- Identify Risk Reduction Measures that involve the SRP/CS
- Define the Safety Function
- Performance Level Methodology
- Category Methodology
- Control Reliability Methodology
- General Design Requirements
 - Integration of SRP/CS into the Machine Controls
 - Pneumatics & Hydraulics
- Fault Consideration
- Diagnostic Coverage
- Design Requirements
 - Input Devices
 - Logic Devices
 - Output Devices
- Validation

Examination

90 Minute Online Open Book Test

- 50 Multiple Choice Questions
- 10 Questions per Module
- Pass Mark: 80%

*All modules are 5 hours sessions.