Topic Areas & Learning Objectives

➢ **Standards and Regulations:**
  - History of Occupational Safety & Health Administration (OSHA)
  - National and state level OSHA
  - History of American National Standards Institute (ANSI)
  - Identify how the two are related

➢ **Risk Assessment:**
  - Job Hazard Analysis (OSHA)
  - Objectives of ANSI B11.0 & B11.TR3
  - Apply learned concepts to case studies & actual practice in the field

➢ **B11.3 Overview:**
  - Standard organization and effective dates
  - Scope and definitions
  - General requirements
  - Control reliability

➢ **Individual Responsibilities:**
  - Supplier responsibilities
    - Design and construction
    - Specific requirements for mechanical brakes (including Servo driven brakes)
    - Specific requirements for hydraulic brakes
    - Specific requirements for pneumatic brakes
  - Modifier Responsibilities
    - Reconstruction and modification
  - Personnel Responsibilities
  - User Responsibilities

➢ **Installation, Set-up and Maintenance:**
  - Layout, installation, testing and start-up
  - Set-up requirements
    - Written user plan
  - Maintenance
    - Maintenance Procedures
    - Lock-out Tag-out
  - Set-up and Operation Requirements
    - Die set-up and operation (written SOP)
    - Backgauge operations
    - Standard operating procedures
    - Supervision

➢ **Press Brake Operation, Application and Uses:**
  - Machine types & uses
  - Tooling variants

➢ **Training and Control Reliability:**
  - Control Reliability
  - Safeguarding of the rear of the machine
  - Safeguarding the backgauge
  - General elements and guidelines for training
  - Maintenance training
Definitions of Press Brake Safeguarding:
- Risk assessment
- Correct holding of material
- ¼” stroke safeguarding
- Safe distance safeguarding
- Safe speed safeguarding
- Engineered methods – safety devices

Applications of Press Brake Safeguarding:
- ¼” stroke safeguarding
- Safe distance safeguarding
- Safe speed safeguarding
- Pull-backs and restraints
- Two hand control devices
- Light curtains (presence sensing devices) for mechanical brakes
- Light curtains for hydraulic brakes
- Close proximity point of operation (AOPD) safeguarding (laser devices)

Appropriate usage:
- Machine considerations
- Operator considerations
- Compliance considerations
- Identify best practices in case studies