

The detailed content for a 2-day training program on "**Safety and Best Practices in Fab Labs**":

Day 1:

A. Introduction to Safety in Fab Labs

- Overview of the importance of safety in fab labs, including the dangers and hazards associated with fabrication equipment, materials, and processes
- Explanation of the key principles of safety in fab labs, including risk assessment, personal protective equipment (PPE), and emergency procedures
- Discussion of the benefits of a strong safety culture in fab labs, including increased productivity, reduced downtime, and improved employee morale

B. Equipment Safety

- Overview of the key safety features and procedures for common fabrication equipment in fab labs, including 3D printers, CNC machines, laser cutters, and electronics equipment
- Explanation of the procedures for setting up, operating, and maintaining fabrication equipment, including power management, ventilation, and access control
- Hands-on exercises to reinforce the concepts and techniques covered, including conducting a risk assessment and performing a safety check on a piece of fabrication equipment

C. Material Safety

- Overview of the key safety considerations and procedures for common fabrication materials in fab labs, including plastics, metals, and electronics components
- Explanation of the procedures for handling, storing, and disposing of fabrication materials, including fire safety, chemical safety, and waste management

- Hands-on exercises to reinforce the concepts and techniques covered, including performing a hazard analysis and developing a material safety plan

Day 2:

#### A. Process Safety

- Overview of the key safety considerations and procedures for common fabrication processes in fab labs, including 3D printing, CNC machining, laser cutting, and electronics assembly
- Explanation of the procedures for planning, executing, and monitoring fabrication processes, including quality control, production scheduling, and process improvement
- Hands-on exercises to reinforce the concepts and techniques covered, including conducting a process hazard analysis and developing a process safety plan

#### B. Emergency Procedures

- Overview of the key emergency procedures and protocols in fab labs, including fire safety, first aid, and evacuation
- Explanation of the procedures for responding to common emergencies, including fires, spills, and power outages
- Hands-on exercises to reinforce the concepts and techniques covered, including conducting a fire drill and responding to an emergency scenario

#### C. Best Practices in Fab Labs

- Overview of the best practices and recommended standards for safety in fab labs, including OSHA standards, industry guidelines, and international standards
- Explanation of the benefits and challenges of implementing best practices in fab labs, including cost, resources, and community support
- Hands-on exercises to reinforce the concepts and techniques covered, including conducting a safety audit and developing a safety improvement plan