

Facilities Management
Shop Safety Standard Operating Procedures

SOP #:	EHS-031	Revision: 1
Dept:	Environmental Health and Safety	Date: 11/11/19
Approval:		Date: 11/11/19

1. PURPOSE

The purpose of these standard operating procedures is to provide guidelines and procedures for safe work practices for students using machine, carpenter, and fabrication shops located on the Colorado State University Pueblo campus. Safety guidelines and training requirements designed to minimize the risk of injury are provided in this standard operating procedure. This procedure only applies to academic shops and does not apply to shops and work areas associated with University physical plant and maintenance operations. CSU-Pueblo is actively concerned with the safety of all faculty, staff, students and guests on the CSU-Pueblo campus. Safety can only be effectively achieved with the cooperation of the entire campus community.

2. RESPONSIBILITIES

2.A. Environmental Health and Safety (EHS) will be responsible for:

2.A.1. Developing and updating of the Shop Safety Standard Operating Procedures (SOP).

2.A.2. Conducting annual safety inspections of academic shops.

2.B. Shop Supervisors will be responsible for:

2.B.1. Enforcing the provisions of this SOP including required training and personal protective equipment for students using shop equipment.

2.B.2. Halting any unsafe operations at any time and restrict shop access to any student violating these guidelines.

2.B.3. Maintaining required machine guards in place and removing any damaged equipment from service.

2.C. Students will be responsible for:

2.C.1. Following these safety requirements and guidelines.

2.C.2. Properly utilizing all required personal protective equipment while working in a shop.

2.C.3. Abiding by any individual shop restrictions (i.e. hours of operation) and must only work in a shop when the supervisor is present.

2.C.4. Reporting any injuries as well as unsafe conditions, actions, or near-miss incidents to the shop supervisor.

3. DEFINITIONS

3.A. MACHINE GUARDING – a safety feature on or around manufacturing or other engineering equipment consisting of a shield or device covering hazardous areas of a machine to prevent contact with body parts or to control hazards like sparks from exiting the machine.

4. PROCEDURES

4.A. Never work alone. At least two people must be present when power tools are in use.

4.B. No horseplay is allowed. The use of personal electronic equipment including ear buds or headphones is not allowed while working in a shop. The playing of loud music is not permitted.

4.C. Never work while impaired.

4.D. Never use any tools or machinery without first receiving training.

4.E. Never remove machine guards.

- 4.F. Always wear appropriate eye protection.
- 4.G. Always wear closed toe shoes.
- 4.H. Always wear hearing protection when working with or around power tools or other machinery.
- 4.I. Keep long, loose hair restrained and securely tied back to prevent machine and tool entanglement.
- 4.J. Secure or remove loose clothing that can potentially get caught in power tools or other machinery.
- 4.K. Food and beverages are allowed only in designated areas.
- 4.L. Maintain good housekeeping by regularly cleaning work areas. Floor areas must be kept free of debris and other hazards that may result in slips, trips, or falls.
- 4.M. Always use the dust collection system, if one is available.
- 4.N. Report all damaged tools and devices to the shop supervisor.
- 4.O. Machine Guarding and Electrical Safety
 - 4.O.1. Guards on stationary machines and portable power tools must never be disabled or removed.
 - 4.O.2. All newly purchased power equipment should have required guards installed by the manufacturer.
 - 4.O.3. Older equipment or equipment without factory installed guards should be retrofitted with the appropriate guards.
 - 4.O.4. Guards are required to remain in place during equipment operation unless having the guard in place creates an even greater hazard.
 - 4.O.5. Machines designed for a fixed location must be securely anchored to prevent walking or movement of the machine.
 - 4.O.6. Bench top machines (i.e. grinders, drill press) must be securely anchored to prevent movement while being used.

- 4.O.7. All machinery must be installed according to the manufacturer's requirements and according to the National Electric Code (NEC).
- 4.O.8. Machine controls must never be wedged to allow continuous operation.
- 4.O.9. Control switches must be located within easy reach of the operator at his/her operating position.
- 4.O.10 On/Off controls must be easily identifiable.
- 4.O.11. Electric power tools should always be disconnected from outlets by pulling the plug rather than the cord.
- 4.O.12. Equipment must be allowed to come to a complete stop before adjustments are made or service is performed.
- 4.O.13. The requirements of the University's Hazardous Energy Control (Lock Out/Tag Out) Standard Operating Procedure must be followed for anything more than minor/routine equipment service.
- 4.P. Training must be provided before a student is allowed to work in a shop.
- 4.P.1. General shop safety requirements and machine specific training is required to be provided by the shop supervisor to anyone using a student machine shop.
- 4.P.2. Required training must include the following elements:
- 4.P.2.a. Information on the hazards associated with a particular machine or piece of equipment.
 - 4.P.2.b. The necessary safety precautions that must be followed when working with a particular machine or piece of equipment including the purpose and function of any guards that are in place.
 - 4.P.2.c. The types and limitations of any personal protective equipment (PPE) that is required to be used in the shop.
 - 4.P.2.d. Limitations of the particular equipment.

4.P.2.e. Procedures to be followed in the event of a machine malfunction or damage to the equipment.

4.P.2.f. Procedures to be followed in the event of an emergency (i.e. injury).

4.P.2.g. Equipment and general shop maintenance and cleaning procedures.

4.P.3. All training must be documented in writing with the records maintained by the shop supervisor.