**Standard Operating Procedure for Laser Cutter in [Department/Shop/Maker Space]**

***Instructions****: Update this template with details specific to laser cutter use in your department/shop/maker space.*

|  |  |
| --- | --- |
| **TOPIC** | **PROCEDURES** |
| **1. Process**  | Cuts materials using a laser. |
| **2. Equipment** | Laser cutter {add specifics}. |
| **3. Personal Protective Equipment (PPE)**  | Safety glasses, hearing protection, heat resistant gloves, plus any other PPE that may be required based on the [**Shop PPE Hazard Assessment**](https://www.ehs.washington.edu/resource/shop-personal-protective-equipment-ppe-hazard-assessment-guide-1334)**.** |
| **4. Environmental /****Ventilation controls** | Ensure equipment is secure so it doesn’t move when in use. A dust collection system should be attached near the cutting area.  |
| **5. Required training or approval**  | * All users are required to complete [**Fire Extinguisher Training**](https://www.ehs.washington.edu/training/fire-extinguisher-training-online) prior to using any laser cutter.
* Get approval from the Safety Coordinator before use.
* Review and observe [general safety practices](https://www.ehs.washington.edu/system/files/resources/staying-safe-shops-poster.pdf).
* Refer to the manufacturer’s operating manual for all operating procedures.
* Refer to the operating manual for appropriate engraving, cutting, power and speed settings for varied materials.
 |
| **6. Inspection requirements before use** | * Safety shields and guards are in place prior to turning the machine on.
* Ensure air compressor and air filter are on.
* Beware of FLAMMABLE materials while using the laser cutter. Certain materials are ***not*** allowed in the laser cutter, including: Foam core, any PVC material and reflective materials.
* Ensure there is a Class B fire extinguisher nearby.
* Ensure that all body parts, loose clothing, jewelry, hair and other objects are clear of the cutting area prior to turning the laser on.
 |
| **7. Safe operating procedures or precautions** | * The laser cutter will generally not cut anything greater than 0.25” (6mm), anything thicker will require several passes.
* To engrave glass, put a masking on top before engraving.
* Turn off the laser cutter after every 4 to 5 projects (for the laser to recharge.)
* **Always** make sure the lines are hairline for vector cutting.
* **Never leave the laser cutter** when it is on.
* Never reach into the cutting area prior to the laser coming to a complete stop.
* Disconnect the laser from power source and follow Lockout/Tagout (LOTO) procedures or manufacturer’s instructions if making repairs, adjustments, or servicing. More information on LOTO can be found at [www.ehs.washington.edu/workplace/hazardous-energy-control-lockouttagout](http://www.ehs.washington.edu/workplace/hazardous-energy-control-lockouttagout).
* When an operator has finished working on the laser cutter, and before leaving the laser for any reason, the power must be shut off and the machine must come to a complete stop.
 |
| **8. Waste cleanup** | Avoid waste material build up; clean as you go to prevent a potential dust explosion. Check the dust collection system and make sure it is properly maintained and material is removed frequently.  |
| **9. Emergency response and accident reporting** | In case of fire or emergency, dial 9-1-1.Report any accidents, injuries, or near miss events using [UW’s Online Accident Reporting System (OARS) at](https://oars.ehs.washington.edu/)oars.ehs.washington.edu. |

**Name**:       **Title**:

**Signature**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date**: