

Laser Safety Checklist

This checklist is intended to assist departments in the following: 1) To identify laser-related hazards; 2) To determine appropriate hazard controls to prevent laser-related illness/injury; and 3) To assess compliance based on control requirements. Note: Though departments are encouraged to implement preventative measures to protect employees from laser injury, the following survey primarily applies to Class 3B and Class 4 lasers.

Part 1: Basic Information (This form should be filled out by Inspector)

Principal Investigator (PI):	Lab Manager (if not PI):
Laser Location (Bldg. & Room):	Department:

Part 2: Laser Class, Product & Technical Information

Laser Class

☐ Class 1 ☐ Class 1M ☐ Class 2 ☐ Class 2M ☐ Class 3R ☐ Class 3B ☐ Class 4

Laser Product Identification

Manufacturer:
Model/Part #:
Serial #:

Notes:

Technical Specifications

Output Power Range or Maximum Output Power (W): _____

Wavelength (nm): _____ Type of Radiation: _____

Is laser pulsed? ☐ Yes ☐ No; If yes, complete values below:

Energy Per Pulse (J): _____ Pulse Width (s): _____ Pulse Repetition (Hz): _____

Can laser be used in multiple modes (continuous wave [CW], pulsed)? ☐ Yes ☐ No

Is laser Q-switched? ☐ Yes ☐ No

Other: ☐ Picometer ☐ Femtometer ☐ N/A

Laser Use: ☐ Laboratory/Studio ☐ Medical ☐ Office/Classroom ☐ Other:

Lasing Material Used (Check one, then specify type [e.g. CO₂, Nd-YAG]):

☐ Gas ☐ Dye/Solvent (Liquid) ☐ Solid-State ☐ Semiconductor ☐ Fiber Optic

Specify:

Power Source & Process

Power Requirements

Power (kW): _____ Voltage & Phase (V, Ph): _____ Amperage (A): _____

Specify Source:

Energy Input/Pump (Photon Source): ☐ Chemical Reaction ☐ Electrical Discharge/Current
☐ Optical (Lamp, Other Laser) Specify:

Part 3: Hazard Controls

Engineering Controls (Barriers, Process Isolation, Cooling, Mechanization)

Laser Equipment

Laser Equipment Grounded? ☐ Yes ☐ No

Protective Housing? ☐ Yes ☐ No

Complete Beam Enclosure? ☐ Yes ☐ No

Safety Shutters Installed? ☐ Yes ☐ No

Other Barriers Used (Beam Stops, Curtains, Shields, Walls)? ☐ Yes ☐ No

Specify:

Isolation Process (Mechanical Equipment, Automation, Remote-Control Used to Reduce Beam Exposure) ☐ Yes ☐ No

Interlock(s) (*Check all that apply*)

☐ Mechanical ☐ Electrical ☐ Key Control

If multiple interlocks are used, specify:

Process Cooling (Check all that apply)

☐ Active ☐ Passive Specify Equipment Used:

Excluding lasing material, are there process fluids or gases involved (e.g. water, cryogenics such as liquid N₂)? ☐ Yes ☐ No Specify:

Ventilation (Check all that apply)

☐ General Ventilation ☐ Local Exhaust Ventilation

Administrative Controls (Work Practices, Scheduling, Communication, Procedures)

Access Control & Use Authorized

☐ Access Restricted ☐ Use Authorization Required

Setup and Alignment

☐ Alignment Done In-House?

☐ Beam Trajectory Controlled (not at standing or sitting heights)?

Hazard Communication and Laser Warnings

☐ Laser Warning Lights/Signals Installed

☐ Laser Hazard Signs Posted, with compliant information, at entrance, and curtains if applicable

☐ Laser Hazard Label(s) Affixed, with compliant information, to equipment and conspicuous

☐ Hazard Communication Compliant (Chemical Labels, Inventory, Safety Data Sheets)

Work & Rest Scheduling

Roster Created With Respective Duties/Rotation Assigned: ☐ Yes (Attach Copy) ☐ No

Work and Rest Schedule Created and Made Available: ☐ Yes (Attach Copy) ☐ No

Method for Promoting Rest (*Check all that apply*):

☐ Direct Supervision ☐ Buddy System ☐ Signage ☐ Mandatory Break Schedule

Standard Operating Procedures <input type="checkbox"/> Written Procedure, available in location <input type="checkbox"/> Includes Lockout/Tagout Procedure, for maintenance/service	
Emergency Procedures Emergency procedures are required for recognizing and responding to employees with symptoms/signs of heat-related illness. Emergency Plan Instructions Known, Made Available (e.g. posted at worksite): <input type="checkbox"/> Yes <input type="checkbox"/> No Briefly describe First Aid Equipment & Methods to Be Used: Medical Services: Call 911/ TUPD - (410) 704-4444 Emergency Communication Method: <input type="checkbox"/> Phone or Radio <input type="checkbox"/> Buddy System	
Information & Training The Supervisor is the designated, trained individual for setting up laser, assessing/monitoring conditions and workers for laser-related incidents; implementing the SOP. Proper training for the Supervisor includes knowing how to install/use the laser, knowing how to identify laser hazards, knowing how to correct laser issues, and activate emergency medical services quickly when needed. Are you trained in laser use and safety? <input type="checkbox"/> Yes <input type="checkbox"/> No Is laser safety training provided to each Employee? <input type="checkbox"/> Yes <input type="checkbox"/> No Have Employees been provided information on all hazards and controls (e.g. SOP) for the equipment they use? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Personal Protective Equipment (PPE)	
Laser Safety PPE Eye & Face Protection Use: <input type="checkbox"/> Laser Safety Glasses/Goggles <input type="checkbox"/> Laser Safety Face Shield; Optical Density: _____ <input type="checkbox"/> Body Protection Use, Specify: <input type="checkbox"/> Gloves Use, Specify: <input type="checkbox"/> Hearing Protection Use, Specify: <input type="checkbox"/> Respiratory Protection Use, Specify: PPE for Compressed Gas/Cryogen Use Eye & Face Protection Use: <input type="checkbox"/> Splash Goggles <input type="checkbox"/> Face Shield <input type="checkbox"/> Body Protection & Gloves (Cryogen-Compatible) <input type="checkbox"/> Foot Protection Use (closed-toe shoes)	
Part 4 – Certification	
I have read and completed this checklist and I will fully comply with all requirements. Relevant plan information is permitted to be attached to this form. I certify that all required precautions have been taken and necessary equipment, materials, information, and training have been distributed.	
Supervisor Name, Printed	
Signature	Date