

West Virginia University Laser Safety Program

I. Statement, Purpose, and Scope

- A. Statement: The University is committed to providing a safe and healthful workplace; this includes evaluating and taking action to prevent laser related exposures.
- B. Purpose: To establish written procedures to evaluate laser exposures in compliance with [OSHA Technical Manual Section III, Chapter 6.](#)
- C. Scope: This program covers all University employees working in areas where lasers are present.

II. Responsible Parties

- A. Environmental Health Safety
 - 1. Conduct an annual evaluation of the laser safety program.
 - 2. Provide technical guidance to laser operators regarding hazard control.
 - 3. Assist the Principal Investigator in assuring regulatory compliance and in evaluating and controlling hazards.
 - 4. Recommend proper personal protective equipment (PPE) in consultation with the Principal Investigator (PI) and the Laser Safety Liaison.
- B. Department
 - 1. Dean/Director/Chairperson
 - a. Ensure that all employees under their direction follow the applicable requirements and safe practices of this laser safety program including those specified in applicable standard operating procedures developed by each department.
 - b. Appoint a Laser Safety Liaison.
 - c. Procure appropriate PPE and signage.
 - 2. Laser Safety Liaison
 - a. Maintain compliance with the OSHA Technical Manual, Section III, Chapter 6, entitled Laser Hazards.
 - b. Maintain an inventory list of all lasers, classify or verify classification of lasers and laser systems used at WVU facilities (see laser inventory inspection form, Appendix A).
 - c. Carry out periodic safety inspections, and evaluate hazards of laser work areas.

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- d. Assure the prescribed control measures are in effect, recommending or approving alternate control measures as necessary, periodically auditing the control measures in use.
 - e. Approve standard operating procedures, alignment procedures, and other procedures that may be part of the requirement for administrative and procedural control measures.
 - f. Recommend protective equipment, including eye wear, clothing and barriers.
 - g. Approve the wording on area signs and equipment labels.
 - h. Shall approve laser installation and modification of facilities and laser equipment prior to use.
 - i. Assure that adequate safety education and training is provided to laser area personnel as per the OSHA Technical Manual.
 - j. Investigate any accident resulting from laser use.
 - k. Provide copies to EHS of all inventories and inspections.
 - l. Notify EHS of any incidents.
 - m. Schedule eye examinations for employees utilizing lasers as needed.
3. Principal Investigator
- a. Knowledgeable of and utilize the OSHA Technical Manual for laser safety, hazard identification, training, etc.
 - b. Develop standard operating procedures for the safe operation, alignment and maintenance of class II, III, and IV lasers under his/her control as per the OSHA Technical Manual.
 - c. Validate that persons working in the area have received proper training in laser safety and other applicable safety classes.
 - d. Assure Laser Safety Liaison is aware of employees who need eye examinations.
 - e. Ensure the safe operation of lasers in the assigned area.
 - f. Ensure all individuals, including outside service contractors, understand the hazards associated with lasers and comply with all safety requirements.
 - g. Inform Liaison of installation or modification of laser prior to use.
 - h. Provide personal protective equipment and ensure that it is used properly.
 - i. Report any incident involving laser use to the Laser Safety Liaison.
 - j. Provide the Laser Safety Liaison an annual inventory of all lasers under their control.
 - k. Allow inspections of lasers and laser facilities upon request of the Laser Safety Liaison.
 - l. Notify the Laser Safety Liaison prior to any change in the laser

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or facility arrangement that affects the safety of personnel or property.

4. Users
 - a. Comply with safety rules and regulations.
 - b. Report any incident involving lasers to their supervisor.
 - c. Attend laser safety training.
 - d. Inform the Principle Investigator assigned to their area of any departure from established practices.
 - e. Report any laser exposures to the Principal Investigator and seek medical help as needed:
5. Occupational Medicine
 - a. Perform baseline eye examinations for individuals working with lasers.
 - b. Notify EHS of all baseline examinations and post-incident evaluations.

III. Laser Safety-Related Medical Surveillance

It is recommended that **ALL** individuals working with Class III and Class IV lasers have a baseline eye exam prior to the use or operation. Contact EHS at 304-293-3792 for information on how to accomplish this.

IV. Laser Safety Practices

Information on Laser Safety Practices can be found in the **OSHA Technical Manual** (http://www.osha.gov/dts/osta/otm/otm_iii/otm_iii_6.html)

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APPENDIX A LASER INVENTORY AND INSPECTION FORM (Complete one for each laser unit.)

DEPARTMENT/LASER UNIT			
Department:		Phone No.:	
Principle Investigator(s):			
TOTAL NUMBER OF LASERS			
How many laser units does your department have at present?			
Number of functional laser units?		Number of non-functional laser units?	
LASER UNIT DESCRIPTION			
WVU Identification Code:		Laser Type:	
Manufacturer:		Model:	
Serial No.:		Laser Class:	
Maximum Power (Watts):		Maximum Energy (Joule):	
Operational Wavelengths (nm):		Continuous Wave Beam:	
Size/Diameter at Aperture (mm):		Single Pulsed < 1Hz (secs):	
How often is the laser unit used?			
ENGINEERING/ADMINISTRATIVE CONTROL MEASURES			
Laser Unit Room Location:			
(Please check yes, no or N/A depending on the available information.)		YES	NO
Written standard operating procedure?			
Proper area signs?			
Eye protection provided?			
Evidence of stray beam burns in area?			
Door interlock?			
Exhaust system operable?			
Entry way control/barrier?			
Infra-red viewing system available?			

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