

APPENDIX 7:  
Laser SOP Template

*This outline is intended as guidance for preparing laser standard operating procedures (SOPs). The SOP should include all lasers in a given laser system, including alignment and pumping lasers. The SOP should be reviewed and revised as needed.*

**Enter Title Here**

**PI/Manager of space:**

**SOP written by:**

**Date:**

**Section 1: Overview**

*Describe the laser systems used in this application*

- A. Location of laser/laser systems (building, room)
- B. Description of each laser:
  - Classification
  - Output characteristics
- D. Purpose/application of laser system

**Section 2: Risk Assessment Summary**

*Identify all hazards present and describe the risks they pose under operating conditions:*

- A. Laser beam(s)
- B. Electrical
- C. Chemical
- D. Fire/explosion
- E. UV light

**Section 3: Controls**

*Describe controls used to mitigate the hazards*

- A. Engineering controls, e.g., interlocks, beam stops.
- B. Administrative controls, e.g., signs, LSOP, etc.
- C. Personnel Protective Equipment, e.g., laser eye protection (OD and wavelength range), gloves, flame-resistant lab coat.

**Section 4: Operating Procedures**

*Provide a step-by-step description of the procedure and include:*

- A. Equipment preparation (start-up)
- B. Operation
- C. Normal Shutdown procedures
- D. Special procedures:
  - Alignment-align with low power visible beam
  - Safety checks
  - Maintenance

## **Section 5: Emergency Response**

### A. Immediate actions

### B. Emergency shut down of laser

### C. Medical assistance

1. If the incident causes an injury or could potentially have caused an injury, the person or persons need to inform their PI/Lab supervisor.
2. Any individual with a suspected eye injury should be referred to the UofR's Flaum Eye Institute (call 273-3937).
3. Injuries/exposures from chemicals and electrical operations or laser beam interactions to the skin should be seen by a UHS (call x5-1155). After hours, go to the Emergency Department or urgent care.
4. Complete a University Employee Incident Report for any injuries. Access to the reporting system is available at <http://www.safety.rochester.edu/SMH115.html> . A near miss is reported using the same system but choosing the Near Miss/Hazard option.
5. The Laboratory Safety Unit will conduct or assist in an investigation to determine the root cause and assist the staff in establishing appropriate measures to prevent additional incidents.

### D. Contact information

Public Safety x13, or 275-3333

UHS (University Health Service): 585-275-2662 (students); 585-275-4955 (employees)

Flaum Eye Institute: 585-275-3937

## **Section 6: Additional Information**

*Provide any additional information and policies, e.g. regarding unattended operation, safety of building service workers or visitors, etc.*

## **Section 7: User Training and Authorization**

*List training requirements for authorized users*

1. *Complete EHS Laser Safety training on MyPath*
2. *Obtain laser specific training from PI or designee*

**Training Documentation**

Signing this document means that you have read and understand all aspects of this Standard Operating Procedure.

The supervisor is the person that acknowledges you took the training and understand the procedure. They can be a lab manager or researcher assigned by the PI to oversee this particular SOP.

Name (Printed)	Name (Signed)	Supervisor	Date