

Standard Operating Procedures for Lasers or Laser Systems

SafetyNet #: 77

Principal Investigators who use or supervise the use of lasers or laser systems at UC Davis are responsible for ensuring that standard operating procedures (SOPs) are provided to all class 4 (output >500 mW (continuous wave) or >125 mJ in <0.25 Sec. (pulsed) laser users. Standard operating procedures should be provided to all class 3b (output 5-500 mW (continuous wave) or <125 mJ in <0.25 Sec. (pulsed) laser users And may be required by the campus Laser Safety Officer (LSO). These procedures may be provided in the manufacturer's operating manual, but they usually don't provide the additional information required by the campus High Intensity Light and Laser Use Committee (HILLUC). To accomplish this, the HILLUC has mandated the use of the Laser SOP template available on the [EH&S website](#) [1]. The procedure should include all lasers in a laser system, including any alignment lasers. Following are some of the necessary components of your laser SOP.

Introduction

This section should contain basic information about the apparatus, including:

- Location of laser or laser system
- Diagram of area layout (preferred but not required)
- Description of each laser, including manufacturer, model and serial number, mode of operation, lasing medium, outputs, shielding lens, external mirrors and optical fibers as applicable
- Purpose and intended application of beam(s).

Hazards

- Identification of electrical, chemical and physical hazards
- Analysis of hazards (target area, absorbing media, beam path, severity of potential accidents, etc.).

Controls

- Access (door interlocks, signs, signals, emergency power shutdown, visitors)
- Beam (key-lock, enclosures, shutters, stops)
- Electrical (light on power supply, HV signs, maximum HV)

Contact

Research Safety

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More information

<https://safetyservices.ucdavis.edu/research-safety-staff-listing> [2]

Related content

1. Laser Safety and Use Authorization Forms/SOP

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Links

[1] <https://safetyservices.ucdavis.edu/article/laser-safety-and-use-authorization-formssop>

[2] <https://safetyservices.ucdavis.edu/research-safety-staff-listing>