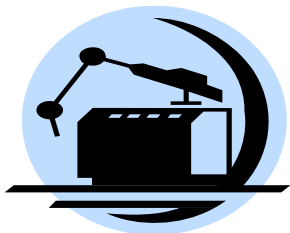


EH&S Fast Facts

STANDARD OPERATING PROCEDURES FOR LASERS OR LASER SYSTEMS



Principal Investigators who use or supervise the use of lasers or laser systems at UCR are responsible for ensuring that standard operating procedures are provided to all class laser users. Procedures may be provided in the manufacturer's operating manual and should be readily available in the lab. If written procedures are needed, the following outline is provided to assist in the preparation of class 3b and 4 lasers or laser systems. The procedure should include all lasers in a laser system, including any alignment lasers. Modifications of the outline are necessary for the lower class lasers. All procedures should be referenced in the lab's Injury and Illness Prevention Plan (IIPP).

Hazards

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

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)
- ✦ Eye Protection (type of eyewear, optical density required for beam)
- ✦ Ventilation (laser head exhaust, vacuum pump exhaust, filter system, flow rates)

Operating Procedures

- ✦ Initial preparation of laboratory environment for normal operation (key position, warning lights on, interlock activated, identification of personnel)
- ✦ Personnel protection requirements (eyewear, protective barriers)
- ✦ Target area
- ✦ Countdown procedures, protocol should be posted in an obvious location
- ✦ Shutdown procedures, protocol should be posted in an obvious location
- ✦ Special procedures (alignment, safety tests, interlock bypass, emergency...)

Training

- ✦ Laser Safety Orientation requirements
- ✦ Laser specific safety training requirements
- ✦ Training of maintenance and repair personnel

Responsibilities

- ✦ Supervisory (include emergency contact)

Miscellaneous

- ✦ Rules for visitors
- ✦ Procedures in case of an accident
- ✦ Other (maintenance, adjustment, special precautions...)

Visit www.ehs.ucr.edu for additional information or call EH&S at 827-5528 if you have any questions.