

UT - Martin Procedure SA0500-M Laser Safety	
Version: 1	Effective Date: 09/09/2019

1. PURPOSE

This procedure supports the safety requirements outlined in policy SA0500, Laser Safety.

2. DEFINITIONS

LASER is an acronym which stands for Light Amplification by Stimulated Emission of Radiation. The energy generated by the laser is in or near the optical portion of the electromagnetic spectrum. Lasers produce an intense, highly directional beam of light. If directed, reflected, or focused on an object, the laser light can be absorbed which causes the temperature to increase on the surface or inside the object. This can cause alteration or deformation of the object.

Class 3B and Class 4 lasers can present hazards to the eyes and skin if the beam is viewed directly or from reflections. The severity of these hazards depends on the wavelength and power output of the laser. These systems can also produce non-beam hazards such as fire, electrocution, and hazardous gases.

3. PROCEDURES

Hazards from these lasers can be minimized by following standard operating procedures, using appropriate laser safety eye wear, and properly posting warning signs. Safety standards for laser systems are largely based on guidance available in [The American National Standards Institute Z136.1 – Safe Use of Lasers](#) document. This document should be maintained in the lab.

Class 3B and 4 lasers systems at UT Martin should be registered with the Environmental Health and Safety Department. Email [SA0500-M - Laser Registration Form](#) to radiationsafety@utm.edu to complete your registration form. Identified facilities will be inspected every two years by radiation safety officer to ensure that the facility is prepared to handle emergencies.