

Biological Safety Program

Website: <http://biosafety.utk.edu>

Office contact information: (865) 974-5547, utbiosafety@utk.edu

Scope:

Biosafety refers to the practices and procedures, containment equipment, and facility design that are necessary to safely work with biological hazards, including:

- Etiological agents (bacterial, viruses, fungi, parasites, and prions) that pose an infectious disease or other significant risk to humans, animals, or plants;
- Arthropod or other vectors of disease agents;
- Recombinant or synthetic nucleic acid technologies;
- Nanomaterials conjugated to biological effectors intended to alter gene expression, cell cycling, or other cellular functions;
- Biological toxins and venoms;
- Human and non-human primate blood, tissues and body fluids (other animal materials as per risk assessment); and
- Venomous animals and/or toxic plants.

The Biosafety Program ensures that research, teaching or diagnostic testing activities involving biological hazards are conducted safely and responsibly; U.S. Federal, state, and local regulatory mandates and guidelines applicable to biological research are followed; UT personnel and students are appropriately trained; and laboratories and associated facilities are regularly inspected.

Biological Hazard Approvals:

Biological hazards (as above) require review and approval by the Institutional Biosafety Committee (IBC) or Biosafety Office. Federal permits issued by regulatory agencies (e.g. USDA, CDC) are typically accepted in lieu of institutional approval. In these cases, permit provisions must be followed.

Training Requirements:

Biosafety training is to be completed before an individual works in any lab working with Biosafety-approved biohazards. The Biosafety Office offers applicable courses in classroom and electronic formats. Annual refresher training may be required (infectious agents affecting humans; bloodborne pathogens). Teaching laboratories may use department or course-specific safety training materials provided the Biosafety Office has reviewed the content.

Inspections:

All laboratories working with Biosafety-approved biological hazards are inspected in person at least once per calendar year. IBC-approved laboratories must also complete one self-audit per year. The self-audit typically coincides with annual updates of IBC registrations/protocols. Self-audit results and/or noted concerns are to be communicated to the Biosafety Office.

Hazard Communication:

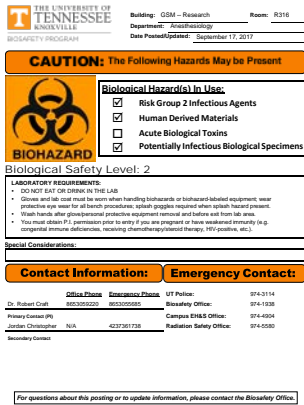
Universal biohazard symbol:



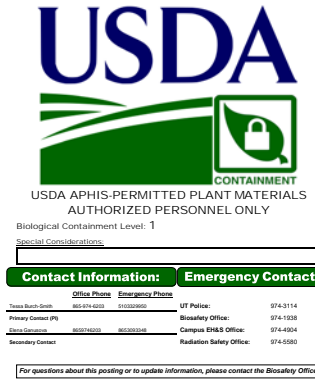
Three semicircles overlaying full circle; typically black symbol on orange background. The word 'Biohazard' may/not be present.

Symbol applied to door placards, storage units, processing equipment, or biowaste containers to denote possible infectious risk and/or special handling precautions.

Door Placards:



All laboratories handling biological hazards that pose a risk to human health (BSL-2 or higher) are placarded with a description of the biological hazards, general precautions, and emergency contact information.



Laboratories may also be placarded with permit-specific signage as required by the permitting agency (typically USDA). These may/not include human health hazards.

Security:

Infectious agents affecting human health, biological toxins, and permitted biological material are to be secured from unauthorized removal when unattended. This may include a locked laboratory and/or locked equipment. Storage equipment maintained in common/unsecured areas must be locked and labeled with appropriate signage and emergency contacts. Laboratory staff are responsible for biological wastes from generation through final disposal.

Visitors to the lab, including Facility Services, housekeeping, vendors, collaborators, should be apprised of the risks. Door placards, biohazard labels, lab orientation, or just-in-time training may be used to communicate hazards and protective measures. The Biosafety Office can provide hazard summaries and training with advanced notice.

Receipt and Disposal:

The Biosafety Office must be informed if labs will be procuring, receiving, or handling biological hazards. The Biosafety Office will assist the Principal Investigator in determining if Biosafety approvals are required, and if not, will communicate the applicable exemptions in writing.

All biological hazards are to be disposed in accordance with TDEC requirements for biological/medical wastes and/or permit provisions. Methods of disposal include onsite neutralization via disinfection or sterilization (e.g. autoclaving) and/or submission to an approved regulated medical waste contractor. **Biohazards should not be comingled with chemical or radiological wastes if at all possible.** Additional information on biowaste management is available at <http://biosafety.utk.edu/waste>.

Department Safety Officer Assistance:

- Notify the Biosafety Office when new departmental faculty are hired and/or when faculty will leave the university;
- Liaise communications from the Biosafety Office (forward emails, listserv announcements, etc.);
- Assist with information collection for Biosafety Office-related projects or focus areas (equipment inventories, departmental data/metrics, surveys, etc.);
- Notify the Biosafety Office if door placards are missing, outdated, or have inaccurate information;
- Monitor autoclave rooms and report outdated signage and biowaste mismanagement (unattended waste, waste bins overfilled, poor disposal practices);
- Notify the Biosafety Office if biosafety cabinets have not been certified within a calendar year;
- Identify and report improper storage or security of biological hazards; and
- Report unsafe laboratory practices or conditions.

Information may be communicated by phone, email, or through our website reporting portal at <http://biosafety.utk.edu/report-issue/> (anonymous reporting available).