



Bloodborne Pathogens Plan

Florida Institute of Technology (Florida Tech)

Environmental Health & Safety (EHS)

150 W University Blvd, Melbourne, FL 32901

Email: ehs@fit.edu

Website: <https://www.fit.edu/office-of-environmental-health-and-safety/>

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REVISION HISTORY

Revision Number	Revision Date	Revised By	Description of Change
00	2019-09-17	Charles Cherrito	Initial plan creation and implementation.
01	2020-07-01	Charles Cherrito	Updated responsibilities.
02	2021-01-21	Charles Cherrito	Ongoing review.
03	2022-07-12	Charles Cherrito	Annual Review. Updated needle section. Updated definitions.
04	2023-09-28	Charles Cherrito	Periodic Update

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INTRODUCTION

This Bloodborne Pathogens (BBP) Plan has been developed by Environmental Health & Safety (EHS) as part of the Florida Tech's Biosafety Program. This plan has been developed to ensure that all employees are protected from the risk of exposure to bloodborne pathogens, such as the Human Immunodeficiency Virus (HIV) and the Hepatitis B Virus (HBV). This Plan has been developed in accordance with the regulations set forth in the [Occupational Safety and Health Administration's \(OSHA\), 29 CFR 1910.1030: Occupational Exposure to Bloodborne Pathogens Standard](#).

This plan will be applicable to all employees, students, and researchers who could be "reasonably anticipated", as the result of performing their job duties, to come in contact with blood and/or other potentially infectious materials (OPIM).

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FLORIDA TECH'S RESPONSIBILITIES

Office of Environmental, Health & Safety

- Develop and implement Florida Tech's Bloodborne Pathogens Program;
- Assist in identifying any personnel/students who may be potentially exposed to BBP's;
- Conduct investigations of exposure incidents;
- Recommend work-place procedural practices to protect against exposure, if necessary;
- Assist in providing and or recommending personal protective equipment (PPE).

Supervisors, Advisors, PI's

- Identify those employees who may be potentially exposed to BBP's;
- Ensure employees have received Bloodborne Pathogens Training;
- Ensure an adequate supply of PPE, soap, bleach, etc. is available;
- Implement practices that help eliminate or reduce the risk of occupational exposure.

Employees

- Follow procedures set forth in this Bloodborne Pathogens Plan, related training, and all applicable regulatory standards;
- Notify your supervisor of any potential safety risks or incidents.

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DEFINITIONS

Biomedical Waste

Refers to the following categories of waste which require special handling:

- (1) liquid or semiliquid blood or OPIM;
- (2) items contaminated with blood or OPIM and which would release these substances in a liquid or semi-liquid state if compressed;
- (3) items that are caked with dried blood or OPIM and are capable of releasing these materials during handling;
- (4) contaminated sharps; and
- (5) pathological and microbiological wastes containing blood or OPIM.

Blood

Defined as human blood, human blood components, and products made from human blood. Non-human primate material will also fall into this definition. Additionally, projects involving animals *may* also be of concern.

Bloodborne Pathogens

Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, Hepatitis B Virus (HBV), Hepatitis C Virus (HCV), and the Human Immunodeficiency Virus (HIV).

Contamination

Contamination refers to the presence or reasonably anticipated presence of blood, tissue, or OPIM on an item or surface.

Contaminated Sharps

Any contaminated object that can penetrate the skin (e.g. scalpels, broken glass, broken capillary tubes, knives, kitchen utensils, and plastic ware).

Decontamination

The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item—therefore, rendering the item safe for handling, use, or disposal.

Engineering Controls

Mechanical devices that isolate or remove the bloodborne pathogens hazard from the workplace (e.g. sharps containers, shielding, or self-sheathing needles).

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Occupational Exposure

Defined as "reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or OPIM that happened during the course of an employee's duties".

Other Potentially Infectious Materials (OPIM)

Defined as the following human body fluids: body fluids visibly contaminated with blood; along with all body fluids in situations where it is difficult or impossible to differentiate between body fluids; unfixed human tissues or organs (other than intact skin); cell or tissue cultures, organ cultures, and culture media or other solutions; and blood, organs, or other tissues from experimental animals infected with BBP's (e.g., HIV or HBV).

Universal/Standard Precautions

An approach to infection control, implements a practice that assumes all human blood and certain human body fluids (Universal) or all fluids, except sweat (Standard) are treated as if known to be infectious for bloodborne pathogens.

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OCCUPATIONAL EXPOSURE INCIDENTS

Initial Exposure Incident

An exposure incident is defined as an incident where mucous membranes (i.e., eyes, mouth) or abraded skin contact, or a subcutaneous injection has occurred with blood or OPIM that has resulted when performing tasks while on the job.

In the event of an exposure incident, the affected employee must immediately seek medical attention. The employee should go to the Holzer Health Center at Florida Tech (see below contact) during normal business hours or the Holmes Regional Hospital (if it is after hours or during the weekend). The employee must notify their supervisor as soon as possible (within the shift, if possible). The employee or employee's supervisor (or designee) shall complete an Incident Report. The completed report is to be submitted to EHS and a copy should be taken to the Holzer Health Center. For after-hours, send the completed form and the employee to Holmes Regional Hospital.

Holzer Health Center (Florida Tech)

Phone: 321-674-8078
Email: healthcenter@fit.edu,
Website: <https://www.fit.edu/health/>

Holmes Regional Medical Center

Phone: 321-434-7000
Address: 1350 Hickory St, Melbourne, FL 32901

Post-Exposure Evaluation & Follow-up

Per [29 CFR 1910.1030\(f\)\(3\)](#), following an exposure incident, the exposed employee shall be made available a post-exposure, confidential medical evaluation at no cost to the employee. The employee will receive a copy of the evaluating healthcare professional's written opinion within 15 days of its completion.

The evaluation will include at least the following elements:

1. Documentation of the route(s) of exposure;
2. A description of the circumstances under which the exposure occurred;
3. The identification and documentation of the source individual. The identification is not required if the employer can establish that identification is not feasible;
4. The collection and testing of the exposed employee's blood for HBV and HIV;

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5. The collection and testing of the source individual's blood for HBV and HIV serological status (after consent is obtained). If consent is not obtained, Florida Tech shall establish, in writing, that legally required consent cannot be obtained
6. If treatment is recommended by the evaluating healthcare professional using the [U.S. Public Health Service Post-Exposure Guidelines](#), the employee will be referred to Holmes Regional Medical Center;
7. Counseling;
8. Evaluation of any reported illness.

The healthcare professional will be provided with the following information to the extent available:

1. A copy of this plan;
2. A copy of the <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030>;
3. Documentation of the route(s) of exposure;
4. A description of the circumstances under which the exposure occurred;
5. Results of the source individual's blood testing, if available;
6. All medical records applicable to treatment of the employee, including vaccination status;

The healthcare professional's written opinion for HBV vaccination is limited to the following:

- Whether the employee needs Hepatitis B vaccination;
- Whether the employee has received such a vaccination.

The healthcare professional's written opinion for post-exposure evaluation and follow-up is limited to the following information:

- That the employee was informed of the results of the evaluation;
- That the employee was informed about any medical conditions resulting from exposure to blood or other infectious materials that require further evaluation or treatment.

All other findings or diagnoses will remain confidential. All medical evaluations shall be made by a physician or licensed healthcare professional (PLHP). All laboratory tests must be conducted by an accredited laboratory at no cost to the employee.

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HEPATITIS B VIRUS (HBV) VACCINATION

All Florida Tech employees, who have the potential for occupational exposure to blood or OPIM, will be offered the Hepatitis B vaccination series within 10 working days of assignment, at no cost. Vaccinations will be administered by Holzer Health Center at Florida Tech.

HAZARD COMMUNICATION

All aspects of the Florida Tech's **Hazard Communication Plan** will be implemented when handling blood or OPIM. This will include the proper use of labels and employee awareness training. Employees will be trained to recognize potential exposure situations and how to protect themselves through the proper use of engineering controls, administrative controls, and personal protective equipment. Bio-hazard bags and bins will be used to store, or transport materials contaminated with blood and OPIM.

EMPLOYEE TRAINING

All employees, students, and affiliates who are at risk of exposure to bloodborne pathogens must participate in bloodborne pathogen training prior to initial assignment and annually thereafter. The contents will be in accordance with **29CFR1910.1030(g)(2)** and will be conducted by a Florida Tech approved training vendor (e.g., Online System), EHS, or the employee's supervisor.

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RECORDKEEPING

All records (with the exception of any confidential medical records from healthcare professionals) will be retained in accordance with [29CFR1910.1020](#) within in the EHS Office. Records will be retained for the duration of employment plus 30 years and shall be made available upon request to authorized individuals as permitted by law.

Any occupational exposure shall be recorded on the OSHA documents 300, 300A, and 301 if the following is satisfied:

- The incident is work-related and involves the loss of consciousness, a transfer to another job, or restriction of work or motion;
- The incident results in a recommendation of medical treatment.

Due to privacy concerns, “privacy case” must be entered in the space normally used for the employee’s name. A separate, confidential list of the case numbers and employee names for the privacy concern must be maintained in case the information is requested by regulatory agencies.

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EXPOSURE CONTROL PROCEDURE (ECP)

An Exposure Control Procedure (ECP) is a written program of protective measures designed to eliminate or minimize occupational exposure to bloodborne pathogens and to ensure compliance with OSHA. All employees and students must be familiar with the ECP and practice the procedures as outlined. The below describes the Florida Tech's ECP.

Emergency Contacts

Life Threatening: 911

Non-Life Threatening (Campus Security): x8111 (On Campus) 321-674-8111 (Off Campus)

Non-Life Threatening (Campus Facilities): x8038 (On Campus) 321-674-8038 (Off Campus)

Non-Life Threatening (Environmental Health & Safety Office): ehs@fit.edu

General Work Practices

- All body fluids and OPIM shall be treated as infectious material.
- Employees must wash their hands with soap and warm water immediately after removal of gloves or other PPE, and after potential contact with blood or OPIM.
- No eating, drinking, applying cosmetics or lip balm, or handling contact lenses is allowed in a work area where there is a reasonable likelihood of occupational exposure to BBP's.
- Employees must perform all procedures involving blood or OPIM in such a manner as to minimize splashing, spraying, splattering, and generation of droplets of these substances.
- Equipment that may become contaminated with blood or other potentially infectious materials will be examined and decontaminated before servicing or use.

Engineering Controls and Administrative Controls

Engineering controls will be the first and preferred method utilized to eliminate or minimize occupational exposure (e.g., Biosafety Cabinets). When engineering controls cannot eliminate the hazard, administrative controls (workplace practices) will be implemented. The use of PPE will be the third method of protection.

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Housekeeping

Saturated linen shall not be laundered. They are to be placed in double bagged biohazard bags and EHS is notified for proper disposal by completing a [Biomedical Waste Pickup Form](#).

When emptying trash receptacles, the following procedures should be implemented:

- Tie the bag liners;
- Lift bag from the top only;
- Place full bag into appropriate receptacle;
- Never reach into a receptacle to remove contents;
- Never sort through bags of waste.

General disinfection will be accomplished by utilizing the following materials:

- 10% (minimum) solution of chlorine bleach/water with a minimum contact time of 30-min.
- Any other EPA-registered disinfectants (contact time per manufacture).

Biohazard/Biomedical Waste Disposal

EHS office will coordinate the disposal of all biomedical waste in accordance with the State of Florida's [Chapter 64e-16, Florida Administrative Code, Biomedical Waste Regulations](#).

Biohazard/Biomedical Waste Labels

As denoted in the Florida Tech's [Biomedical Waste Management Plan](#), warning labels that include the universal Bio-hazard/Biomedical waste symbol, followed by the term "Bio-hazard Waste/Biomedical Waste," (or similar) will be included on bags/containers used to store or transport contaminated items. In addition, contaminated equipment which is to be serviced or shipped will have a readily observable label attached which contains the same information along with a statement relating to which portions of the equipment remain contaminated.

All areas which contain biomedical wastes agents must be labeled with a biomedical waste warning label. The symbol will be red, orange, or black and the background color shall contrast with that of the symbol or comply with the regulations of 1910.1030 Bloodborne Pathogen Standard.



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Sharps Control

The term “sharps” (e.g. needles, broken glass) will represent all sharp items that pose a hazard. Contaminated sharps shall be disposed of in labeled sharps containers (*closable, puncture-resistant, leak-proof on sides and bottom, and marked with an appropriate biohazard label*) or another EHS approved container. All Florida Tech personnel must take precautions to prevent injuries by sharp items. The below are considered standard practices that are mandatory at Florida Tech:

- i) Never recap needles (*see SPECIAL NOTE #1 below*);
- ii) Breaking or shearing of needles are prohibited;
- iii) Sharps may be moved or picked up only by using a mechanical device or tool (e.g., forceps, pliers, broom and dustpan).

When containers of contaminated sharps are being moved, the containers shall be closed immediately before removal to prevent spillage or protrusion of contents during handling, storage, transport, or shipping. Containers shall not be reused unless specifically approved by EHS.

SPECIAL NOTE #1 (Re-capping Needles)

Although it is common practice to require that needles are never to be re-capped, both OSHA and the CDC recognize that there are times in which re-capping may be warranted for the task being performed. Some examples of re-capping methods that *may* be acceptable include:

- ❖ Utilizing self-sheathing needles
- ❖ Performing the one-hand scoop
- ❖ Utilizing forceps as a mechanical means

Only a properly executed risk assessment can determine if re-capping is warranted, and if so, what method is best suited. Any employee who feels re-capping is necessary to perform their task **MUST** contact EHS prior to re-capping so that a risk assessment can be performed. **Re-capping without a risk assessment being conducted is strictly prohibited!**

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Personal Protective Equipment (PPE)

PPE will be utilized as a barrier between the employee and blood or OPIM. The proper use of PPE is an important component of universal precautions procedures. PPE shall be provided to Florida Tech employees at no cost (each department is responsible for the purchase of PPE for their assigned personnel).

The below will be standard procedures regarding PPE:

- Florida Tech will ensure the employee's PPE is cleaned, repaired, or replaced.
- All employees will receive training on proper use, donning, and doffing of PPE.
- All contaminated PPE (reusable or not) will be discarded in a biohazard bag for disposal.
- Face Masks w/Shield will be used when blood or potentially infectious materials may be splashed or splattered or when eye, nose, or mouth contamination can be anticipated.
- PPE will be maintained by each Department as needed.
- Nitrile or hypo allergic gloves should be utilized instead of latex gloves.
- All gloves used shall be disposed immediately after use and never reused.
- Inspect disposable gloves frequently for holes, tears, or deterioration and change and after 60 minutes of continuous use and if compromised.
- Double gloving is highly recommended.
- Never wear PPE outside of the work area.
- Whenever blood or OPIM may be splashed or splattered or when eye, nose, or mouth contamination can be anticipated, the use of a certified Biological Safety Cabinet is strongly recommended.

Employees will not be permitted to take their reusable PPE home and launder it. It is the responsibility of the employer to provide, launder (if available), repair, replace, and dispose of PPE. All gloves should be examined prior to use for cuts, tears, or punctures. Although latex gloves have proved effective PPE, some workers are allergic to latex and may develop reactions that pose a health risk.

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Biological Spill Kits

Laboratories that work with potential BBP material must make or purchase and store a biological spill kit. A prepared spill kit will allow for a more effective and safer clean up and will ensure each area that contains biologic material is better prepared for a spill. A good kit should include the following:

- ✓ Gown
- ✓ Gloves
- ✓ Eyewear
- ✓ Mask
- ✓ Kitty Litter
- ✓ Whiskbroom
- ✓ Paper Towels
- ✓ Dustpan
- ✓ Household Bleach/Chemical Germicide
- ✓ Biomedical Waste Red Bags
- ✓ Sharps Container
- ✓ Forceps

Biological Spills

Notify EHS immediately upon a spill containing human blood or OPIM. Lab personnel may contain and clean up the spill providing the following is satisfied:

- The appropriate PPE is available;
- The proper spill cleanup materials are available;
- The personnel involved have received Bloodborne Pathogens Training.

The following procedure shall be implemented upon a spill:

1. Notification to personnel in the immediate area that a spill has occurred;
2. A sign indicating that a spill has occurred is placed on the entrance of the area;
3. Personnel responding to the spill will don appropriate PPE;
4. Sharps materials involved in the spill shall be removed by mechanic means;
5. The spill area is saturated with 10% bleach solution for a minimum contact time of 30-minutes;
6. All contaminated materials shall be disposed in bio-hazard bags;
7. Any equipment used to clean up spills (e.g. mops, etc.) must be either decontaminated with the appropriate disinfectant or disposed in biohazard bags;
8. All non-reusable PPE used shall be disposed in biohazard bags;
9. EHS is contacted for biomedical waste disposal;
10. An Incident Report is to be completed by the personnel involved (or representative);
11. EHS reviews the incident report, addressing any safety concerns.

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REPORTING CONCERNS

All personnel (employees, students, and trained contractors) are responsible for reporting concerns and/or safety violations (this includes potential concerns that may pose risk). Individuals may report any concern either directly or anonymously.

General Reporting

chs@fit.edu

Anonymous Reporting

OSHA Phone: 1-800-321-OSHA

Online: <https://www.osha.gov/pls/osha7/eComplaintForm.html>