**Laboratory Specific Safety Plan**

**This plan is intended to be used in conjunction with the Laboraotry Registration Form and the UCCS Laboratory Safety Manual**

Your Laboratory Specific Safety Plan is a valuable tool for organizing and managing the various aspects of an effective health and safety program in your unit.

* It provides for a safe and healthful work environment by identifying and controlling hazards.
* It provides a mechanism for organizing thoughts and approaches and documenting activities. The process of “working it through” is as important as the Plan, itself.
* It provides a structure for action, especially in an emergency.
* It facilitates coordination with other University groups: Facilities Services maintenance and delivery staff; emergency personnel; construction or remodeling workers; and Environmental Health and Safety.
* It facilitates coordination with non-University organizations: Colorado Springs Fire Department; local community organizations; county governments; Colorado Department of Public Health and Environment.
* It helps compliance with Federal and State regulations, contributes to the UCCS being a good citizen in the community, and helps avoid the citations and penalties associated with non-compliance.

Because of its diverse work environments, UCCS can outline only general requirements for a health and safety plan. These are found in UCCS Laboratory Safety Manual. Since hazards vary with actual work-sites, Environmental Health & Safety (EHS) has written this guide to help you add the appropriate detail necessary to customize a Plan for your work site.

There are several guidance documents available on the UCCS EHS website ([www.uccs.edu/ehs/](http://www.uccs.edu/ehs/)):

* Hazardous Materials Management Plan
* Waste Management
* Lab Safety Manual

The following pages contain a fill-in the blank template that can be used to note laboratory-specific information that is required to complete your lab’s Laboratory Specific Safety Plan (LSSP)

Your lab’s LSSP should reference these other guidance documents plus your lab’s specific information. These materials must be accessible to your workers at all times, and your workers must know where these materials are.

If you have paper copies of your laboratory-specific information, you should maintain them in a location that everyone knows is the location of the laboratory-specific information for your LSSP. If you keep electronic copies of all or some of your laboratory-specific information, everyone in the lab must know which are the current files, and how to access them.

Instructions –Please complete the plan and save the plan for each room separately before beginning a new form for a new room. Please submit completed plan(s) via email to UCCS EHS Department through [cnorton@uccs.edu](mailto:cnorton@uccs.edu). If you need assistance in completing this form, please contact Cynthia Norton (x3212)

**Laboratory Specific Safety Plan -**

List laboratory spaces covered by this plan. Be sure to include building and room number:

Provide a brief description of the type of work/research performed in this space.

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| **General Information** | | | | | | | | | | | | |
| Person preparing this plan | | | | | | |  | | | | | |
| 1. **Experiment Planning, SOPs** | | | | | | | | | | | | |
| Any work performed in this laboratory needs to be thoroughly researched before being conducted. It is needs to be evaluated for any safety concerns and potential waste generation. Procedures should be planned on paper before being executed. The Principal Investigator or his /her designee should review these written plans. In this laboratory the process for development and approval of experimental procedures and the person(s) who can approve experimental processes/procedures is (are): | | | | | | | | | | | | |  | | | | | |
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| As SOPS are developed and approved, they are maintained in either digital and/or hard copy form. The location of those SOPS is: | | | | | | | | | | | | |  | | | | | |
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| 1. **Training** | | | | | | | | | | | | |  | | | | | |
| Everyone working in the laboratory must receive initial lab safety training and annual lab safety refresher training. They should also receive On-the-job training for the specific tasks they perform. In addition, some individuals may also require other campus wide safety training (biological safety, BBP, Shipping, etc.). It is each person’s responsibility to ensure that they have received training and that it is documented. We use the following procedure to train laboratory personnel and to document that training. | | | | | | | | | | | | |  | | | | | |
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| The person(s) who is/are responsible for identifying the required training and ensuring that it has occurred is: | | | | | | | | | | | | |  | | | | | |
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| 1. **Chemical Inventory, Storage, Labeling** | | | | | | | | | | | | |
| All hazardous materials in the laboratory need to be in the inventory in Quartzy. In order to keep this inventory up to date we utilize the following procedures when obtaining new materials for the laboratory and ensuring that they are properly documented in the Quartzy system. | | | | | | | | | | | | |
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| A part of hazard communication is having Safety Data Sheets readily available for all users. The procedures we have in place to ensure this is occurring are: | | | | | | | | | | | | |
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| Every container of hazardous materials, including stock solutions which remains after a person leaves the lab for the day must be labeled with either the original manufacturer’s label or the chemical name and a completed NFPA diamond (use of an NFPA list for stock solutions is acceptable but the containers still have to have a chemical name label). Our procedures for ensuring that this occurs are: | | | | | | | | | | | | |
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| 1. **Chemical and Biological Hazard Information** | | | | | | | | | | | | |  | | | | |
| Groups of chemicals are noted below: information including health hazards, safe handling and storage can be found in the Hazardous Materials Management Plan (HMMP) <https://ehs.uccs.edu/hazardous-materials-management/hmmp> in the section noted:  ***(please delete any groups not present in your lab***) | | | | | | | | | | | | |
| **Hazard** | |  | | **General Protocols in the HMMP** | | | | **Our materials or groups of materials which fall into this category are:** | | | | |
| Biological hazards / Pathogens | |  | | **Attachment E** | | | |  | | | | |
| Carcinogens (OSHA listed - see registration form for list) | |  | | **Attachment B**  **Section 5** | | | |  | | | | |
| Compressed Gases | |  | | **Attachment D**  **Section 3** | | | |  | | | | |
| Corrosive Liquids (Acids or Strong Bases) | |  | | **Attachment D**  **Section 4** | | | |  | | | | |
| Cryogenics | |  | | **Attachment D**  **Section 5** | | | |  | | | | |
| Flammables | |  | | **Attachment D**  **Section 6** | | | |  | | | | |
| Combustible liquids | |  | | **Attachment D**  **Section 6** | | | |  | | | | |
| Reactive | |  | | **Attachment D**  **Section 9** | | | |  | | | | |
| Organic Peroxides | |  | | **Attachment D**  **Section 9.1** | | | |  | | | | |
| Pyrophoric | |  | | **Attachment D**  **Section 9.2** | | | |  | | | | |
| Water reactive | |  | | **Attachment D**  **Section 9.3** | | | |  | | | | |
| Oxidizers | |  | | **Attachment D**  **Section 8** | | | |  | | | | |
| Toxics | |  | | **Attachment D**  **Section 10** | | | |  | | | | |
| Hydrofluoric Acid | |  | | **Attachment D**  **Section 4** | | | |  | | | | |
| Mercury | |  | | **Attachment D**  **Section 3** | | | |  | | | | |
| Nanomaterials | |  | | **Attachment D**  **Section 7** | | | |  | | | | |
| Perchloric Acid | |  | | **Attachment D**  **Section 9.5** | | | |  | | | | |
| Ethidium Bromide | |  | | **Attachment B**  **Section 16.4** | | | |  | | | | |
| Synthesized Chemicals | |  | | **Attachment D**  **Section 12** | | | |  | | | | |
| Oil/Petroleum based materials | |  | |  | | | |  | | | | |
| Radioactive materials | |  | | **Attachment D**  **Section 11** | | | |  | | | | |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |  | |  | | | |  | | | | |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |  | |  | | | |  | | | | |
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| 1. **Wastes – Hazardous, Universal, Designated, Special Handling** | | | | | | | | | | | | |
| A waste determination has to be made for all wastes generated in the laboratory. Generator knowledge is usually the basis of this waste determination. The general guidelines for waste collection are:   * All organic solvents must be collected in containers with separation of halogenated and non-halogenated to the extent possible * All heavy metals must be collected in containers * Any materials mixed with an organic solvent must be collected in a container * Acids must be collected in containers – if you desire to neutralize acids for sink disposal this has to be approved by EHS * No solvents (except water) can be drain disposed * Lightly contaminated debris (wipes, gloves, etc.) can be disposed of in the regular trash * Heavily contaminated debris (spill clean-up with liquid residue, heavily contaminated gloves, etc.) need to containerized for disposal with EHS * Any distillation or recovery procedures must be approved by EHS * Evaporation is not an approved disposal method * Empty containers can be managed in the recycle and/or regular trash * Biological wastes must be managed in the a manner which either renders them safe (autoclave, bleach, etc.) or containerized for off-site disposal * Sharps must be in a closed container * Broken glass must go in a designated container | | | | | | | | | | | | |
| **Hazardous Waste Streams our lab generates** | |  | **Chemicals which should go into this waste stream** | | | | | | | | **Disposal/Collection Method** | |
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| **Controlled Waste Streams our lab generates** | |  | **Collection Point** | | | | | | | | | **Disposal/Collection Method** |
| Biomedical/Infectious Waste | |  |  | | | | | | | | |  |
| Used Oils, Oil filters | |  |  | | | | | | | | |  |
| Batteries | |  |  | | | | | | | | |  |
| Paint (paint related) | |  |  | | | | | | | | |  |
| Sharps | |  |  | | | | | | | | |  |
| Glass Waste | |  |  | | | | | | | | |  |
| Rags contaminated with oils or solvents | |  |  | | | | | | | | |  |
| Electronic Waste (old computers, anything with a circuit board) | |  |  | | | | | | | | |  |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |  |  | | | | | | | | |  |
| Each laboratory that generates hazardous waste shall have a Satellite Accumulation Area (SAA). This area must have a documented inspection weekly. Each container in the SAA must be labeled. Segregation of incompatible wastes must be maintained. Our procedures for managing our hazardous waste including   * the person responsible for completing the inspections * proper labeling of the wastes * determining proper disposal procedures for newly generated waste streams * maintaining a list of waste streams generated and their proper disposal method * procedures for contacting EHS when waste is ready for pick-up   are as follows: | | | | | | | | | | | | |
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| 1. **Physical Hazards** | | | | | | | | | | | | |
| Physical hazards are noted below: information including health hazards and control techniques can be found in the Laboratory Safety Manual <https://ehs.uccs.edu/hazardous-materials-materials/lab-program/lab-safety-manual>  in the section noted: ***(please delete any hazards not present in your lab***) | | | | | | | | | | | | |
| Every laboratory has some aspect of physical hazards whether it is heat sources, cold sources, energy sources, etc. Listed below are the physical hazards present in the laboratory and the control measures we utilize to mitigate their potential for harm. | | | | | | | | | | | | |
| **Physical Hazards** | | | | |  | **General Protocols** | | | | **Our Safety Precautions Utilized** | | |
| High energy sources | | | | |  | **Section 10.12** | | | |  | | |
| Lasers | | | | |  | **Section 10.1** | | | |  | | |
| Noise | | | | |  | **Section 10.14** | | | |  | | |
| Radiation Sources (ionizing) | | | | |  | **Section 9** | | | |  | | |
| Magnetic Field Generator | | | | |  | **Section 10** | | | |  | | |
| Power Tools | | | | |  | **Section 10.18** | | | |  | | |
| X-rays | | | | |  | **Section 9** | | | |  | | |
| Welding/Soldering | | | | |  | **Section 10.15** | | | |  | | |
| Pressurized Systems | | | | |  | **Section 10.5** | | | |  | | |
| Vaccum Systems | | | | | 7. | **Section 10.16** | | | |  | | |
| Heating Systems | | | | |  | **Section 10.8** | | | |  | | |
| Centrifuges | | | | |  | **Section 10.6** | | | |  | | |
| Gas Systems | | | | |  | **Section 10**  **Section 11** | | | |  | | |
| High or Low Temperatures | | | | |  | **Section 10.4** | | | |  | | |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | |  |  | | | |  | | |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | |  |  | | | |  | | |
| Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | |  |  | | | |  | | |
| 1. **Ventilation (Biosafety Cabinets and Fume Hoods) – Lab Safety Manual Section 11.3** | | | | | | | | | | | | |
| Localized ventilation systems (i.e. fume hoods, biosafety cabinets) are provided for the protection of the staff while utilizing certain materials.   * Any odor generating processes should be conducted in a fume hood. * Hood work should occur at least 6 inches inside the hood. * Hood sashes should be kept at the lowest level possible to maintain the best capture velocities. * Hoods are generally equipped with localized alarms. If an alarm sounds, then something about the hood is not operating properly. Hood work should cease until the cause of the alarm is determined and corrected. * Hoods are also not storage space. Items should not be placed in the hood in such a manner that it blocks airflow. Materials should not be left in the hood unless they are part of an experiment – not being stored there. The exception to this is if you have designated a location in the hood for hazardous waste collection. * Biosafety Cabinets should not be used for chemical applications * Many laboratories are also equipped with a room scram vent. Individuals working in the lab should be familiar with the location and operation of the scram vent.   Additional requirements or descriptions of our hood operations are: | | | | | | | | | | | | |  | |
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| 1. **Personal Protective Equipment – Lab Safety Manual Section 11.5** | | | | | | | | | | | | | |  | |
| There are minimum dress code requirements for any laboratory. When working with hazardous materials and/or biological agents you should have minimal exposed skin. This means:   * Long pants or clothing which covers your legs * Lab coat * Closed toe/heel shoes * Gloves appropriate to the materials you are handling (i.e. latex, nitrile, cryogenic, etc.) * Protective eye wear (glasses are a minimum depending upon the processes you are engaged in) * Hair pulled back and secured   These are the minimum requirements for laboratory work. Specific requirements for our laboratory include: | | | | | | | | | | | | |
| The specific CHEMICAL USE HAZARDS from the [UCCS Task Specific PPE Requirements Chart](https://ehs.uccs.edu/sites/g/files/kjihxj1296/files/inline-files/UCCS%20Task%20Specific%20PPE%20Requirements.pdf) that our lab performs are (provide the numbers) | | | | | | | | | | | | |
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| The specific BIOLOGICAL HAZARDS from the [UCCS Task Specific PPE Requirements Chart](https://ehs.uccs.edu/sites/g/files/kjihxj1296/files/inline-files/UCCS%20Task%20Specific%20PPE%20Requirements.pdf) that our lab performs are (provide the numbers) | | | | | | | | | | | | |
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| The specific PHYSICAL HAZARDS from the [UCCS Task Specific PPE Requirements Chart](https://ehs.uccs.edu/sites/g/files/kjihxj1296/files/inline-files/UCCS%20Task%20Specific%20PPE%20Requirements.pdf) that our lab performs are (provide the numbers) | | | | | | | | | | | | |
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| The specific OTHER HAZARDS from the [UCCS Task Specific PPE Requirements Chart](https://ehs.uccs.edu/sites/g/files/kjihxj1296/files/inline-files/UCCS%20Task%20Specific%20PPE%20Requirements.pdf) that our lab performs are (provide the numbers) | | | | | | | | | | | | |
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| Accidental exposure to hazardous materials due to cross contamination is a big issue in laboratories. In order to minimize this you need to adhere to the following procedures:   * Be sure to remove gloves prior to leaving the laboratory – if you are caring something from one lab to another, you should remove one glove and carry the item with the other gloved hand. If the item is too heavy/large to carry with one hand, then you should use some form of container or cart to transport the item – minimizing the need for gloves * Never eat or drink in the laboratory – water bottles, cups, etc. should not enter the laboratory space * Be sure to always wash your hands when leaving the laboratory * Never touch your cell phone with a gloved hand * Never touch a door handle with gloved hands   In addition to these general precautions, we have established “gloved” and “ungloved” equipment/zones in our laboratory. These are described below: | | | | | | | | | | | | |
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| 1. **Emergency Preparedness – Section 8** | | | | | | | | | | | | |  | | | |
| Emergencies may occur at any time. We should each know what to do in the event of an emergency.  Chemicals in eyes or on skin:   * Remove any clothing to provide access to the skin that was affected * Rinse under running water for 15 minutes * Contact UCCS Police dispatch at 719-255-3111 * Inform your supervisor   Inhalation of chemicals:   * Remove the person to fresh air * Contact UCCS Police Dispatch at 719-255-3111 * Make sure no one else enters the area if the vapors are still present * Inform your supervisor   Puncture wound or small cut:   * Remove any clothing to provide access to the skin that was affected * Rinse under running water for 15 minutes * Apply pressure to stop bleeding if needed * Contact UCCS Police Dispatch at 719-255-3111 * Inform your supervisor   Other Medical emergency   * Contact x911 * Have someone else contact UCCS Police Dispatch at 719-255-3111 * Remain calm and provide assistance to the level you are trained * Inform your supervisor   Hazardous Material Spills  If the spill is less than 1 gallon and you feel comfortable cleaning it up, do so being sure to:   * Warn others that the spill is present * Wear protective equipment (gloves, eye protection, etc.) * Wipe the spill up using paper towels or material from the spill kit – use a broom and dust pan if dry * Wrap the spill debris up in some kind of bag or container. Be sure to label it and give it to your lab supervisor   If the spill is more than 1 gallon or poses a special threat   * Warn others that the spill is present * Contact UCCS Police Dispatch at 719-255-3212 for assistance. * Contact your supervisor   Identified below are the locations of response equipment such as:   * Spill kit * Nearest fire alarm pull station * Nearest extinquisher * Nearest land line phone * Nearest eye wash/shower | | | | | | | | | | | | |
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| Each laboratory is different in terms of the type of emergencies which might occur and the type of response required: Listed below are the types of emergencies with the highest probability of occurring in our laboratory and expected responses to those emergencies beyond those listed above. | | | | | | | | | | | | |
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I have reviewed the information contained in this Laboratory Safety Plan and found it to be accurate to the best of my knowledge.

Signature of Principal Investigator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(electronic signature is acceptable)

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Printed name of Principal Investigator: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Thank you for taking the time to complete the UCCS Laboratory Safety Plan. We know that operations and practices can change. Things which require an update to this form:

* New location (room change)
* Emergency contact change
* Significant change in hazards (e.g. started using a toxin, etc.)
* Significant change in waste streams

**This document needs to be reviewed at least annually**

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| --- | --- | --- |
| **Description** | **Date** | **Signature** |
| Initial Plan Prepared |  |  |
| Plan Approved by EHS |  |  |
| Annual Plan Review |  |  |
| Annual Plan Review |  |  |
| Annual Plan Review |  |  |
| Annual Plan Review |  |  |

If you have any questions, please contact Cynthia Norton (x3212 [cnorton@uccs.edu](mailto:cnorton@uccs.edu))

Lab Specific Safety Plan

For: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

By signing below you agree to the following statement:

I have read the procedures contained in this plan. I understand all procedures contained in this plan and agree to comply with them at all times. I have been given an opportunity to ask questions and all of my questions have been answered.

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| --- | --- | --- | --- |
| Printed Name | Signature | Date Reviewed | Review date on document |
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