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## I. Applicable Regulations

North Carolina Central University Hazard Communication Program (HAZCOM) has been developed to comply with the Occupational Safety and Health Administration (OSHA), 29CFR 1910.1200 Hazard Communication Standard. NCCU’s program requires that all university personnel have the right-to-know information about the properties and the right-to-understand potential physical and health hazards of chemicals that they may be potentially exposed to in the course of their employment or study.

## II. Purpose

The principles behind the Hazard Communication Program are that all employees have the right-to-know the hazards of the chemicals they use or that are present in their work area and the right-to-understand how to protect themselves

NCCU University’s Hazard Communication Program is designed to:

- Reduce the likelihood of injury or illness to employees by implementing specific procedures to identify and evaluate the chemical hazards in the workplace and then inform and train employees on those hazards.
- Ensure that all individuals at risk are adequately informed about the chemicals used and stored in their workplaces.
- Outline procedures for all employees working with hazardous chemicals.

## III. Scope

NCCU’s program requires that all university personnel have the right-to-know information about the properties and the right-to-understand potential physical and health hazards of chemicals that they may be potentially exposed to in the course of their employment or study.

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Complying with the requirements of Hazard Communication and ensuring employees are informed about the hazards of the chemicals involves three basic steps:

- Identifying, inventorying, and labeling all hazardous chemicals used
- Obtaining and providing access to Safety Data Sheets (SDS)
- Training employees about the hazards of the chemicals they use or are exposed to

Individuals engaged in the use of hazardous chemicals in a laboratory setting should also refer to the NCCU Chemical Safety Plan and the Chemical Hygiene Plan for their laboratory.

## IV. Responsibilities

### A. Environmental Health & Safety (EHS)

EHS will serve as the HAZCOM program administrator

- Develop, maintain, periodically review, update and manage the written Hazard Communication Plan
- Provide guidance and technical assistance to departments regarding the program.
- Provide results of hazard analysis and monitoring reports upon request to affected employees.
- Provide regular inspections of sites where hazards are located to ensure compliance

### B. Deans, Directors, or Department Heads

- Ensure Hazard Communication Program compliance within their departments.
- Analyze job descriptions to identify potential hazardous chemical exposure.

### C. Supervisors and Faculty

Supervisors and Principal Investigators who oversee a work area that uses hazardous chemicals are responsible for:

- Assess the potential hazard(s) posed to their workers.
- Ensure all workers who use hazardous materials are properly trained.
- Supply the proper Personal Protective Equipment (PPE).
- Establish a system to make Safety Data Sheets (SDS) readily available including in the event of an emergency
- Ensure an inventory of all chemicals is maintained and updated periodically

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- Identify all hazardous chemical products used, acquired or maintained in work area or used by employees or students
- Maintain SDS files
- Ensure hazardous chemicals are properly labeled

#### D. Affected Employees

- Become familiar with the requirements of the Hazard Communication Program prior to performing activities covered by the program
- Abide by the requirements established by the program and apply safety and health precautions specified by the university.
- Report any issues of concern which could compromise health and safety to their immediate supervisor or EHS
- Utilize proper PPE
- Attend all required trainings including initial training and refreshers

#### E. Contractors

NCCU employees who oversee outside services personnel (i.e. contractors) are responsible for ensuring that the contractor is provided with the following information:

- NCCU Hazard Communication Program.
- SDS for any hazardous chemicals or materials they may encounter.

NCCU employees who oversee outside servicing personnel (i.e. contractors) are responsible for ensuring that the contractor provides the University with the following information:

- Specific location for SDS's of hazardous materials to be used on campus which is accessible to occupants and NCCU staff
- Verification that contractor employees have received training in the NCCU Hazard Communication Program (or comparable program) including all hazardous chemicals and materials that they may be exposed to while working at the University.

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## V. Hazardous Chemicals Inventory

The Principal Investigator or Area Supervisor is required to maintain a list of all hazardous chemicals including compressed gases stored or used in each work area. (i.e., maintenance shop, storage buildings, etc.). The inventory must be updated as necessary to ensure that it stays current.

The inventory must be kept in the work area in a suitable format, on a log sheet, or in electronic format.

Chemical inventories must be available to inspectors during annual laboratory or shop inspections.

## VI. Hazard Communication

### A. Signal Words

Signal words indicate the relative severity of a hazard. There are only two signal words allowed: “Danger” and “Warning”. Danger is used for more severe hazards. Warning is used for less severe hazards.

Only one signal word will appear on the chemical label. Not all labels will have a signal word; some chemicals are not hazardous enough to require that a signal word appear on the label.

### B. Hazard Statements

Hazard Statements are assigned to a hazard class and category that describes the nature of the hazard based on the chemical hazard classification. For example, a hazard statement may be “fatal if swallowed” or “toxic in contact with skin.”

### C. Precautionary Statements

Precautionary Statements describe the recommended measures to be taken to minimize or prevent adverse effects from exposure to a hazardous chemical or improper storage or handling of a hazardous chemical. Some examples of precautionary statements are “if swallowed call poison control” or “store away from other materials.”

### D. Pictograms

Pictograms are intended to convey specific information about the hazards of a chemical. Pictograms consist of a black picture atop a white background framed with a red square set on point. There are nine pictograms under the 2012 HCS, but only eight are enforced by OSHA. The environmental pictogram for aquatic toxicity is not mandatory because OSHA does not have jurisdictional authority.

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## VII. Labeling Requirements

All containers of hazardous chemicals must be properly labeled. The chemical manufacturer/distributor is required to provide labels on all hazardous chemicals shipped. These labels should include a product identifier, signal word, hazard statement(s), pictogram(s), precautionary statement(s), and the name, address, and telephone number of the manufacturer, importer, or other responsible party.

Labels must be legible and must be prominently displayed on the container. Labels on incoming containers must not be defaced or removed until the container is empty. Once the container is empty, the guidelines in the NCCU Chemical Safety Plan followed for disposal.

Whenever chemicals are transferred into another container, the container must be properly labeled:

- Product identifier/full chemical product name
- Hazard warnings-signal words, precautionary statement, hazard statement, pictograms, symbols or a combination of these
- Printed in English
- Durable, legible, and firmly affixed to the container(s).

No chemical should ever be used without completely reading the label. Contents of all vessels, pipelines, storage tanks, etc. must also be adequately labeled.

## VIII. Safety Data Sheets (SDS)

Safety Data Sheets (SDS) provide detailed information of the potential hazards associated with materials used or stored in their work area. An SDS also advises employees on the appropriate way to handle hazardous chemicals, what PPE is required for handling the chemical, how to properly store the chemical, information on handling spill cleanup, etc. Per the revised 2012 HCS, all SDS must have a standardized format organized into the following 16 sections:

Section 1: Identification

Section 2: Hazard(s) Identification

Section 3: Composition/Information on Ingredients

Section 4: First-aid Measures

Section 5: Fire-Fighting Measures

Section 6: Accidental Release Measures

Section 7: Handling and Storage

Section 8: Exposure Controls/Personal Protection

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- Section 9: Physical and Chemical Properties
- Section 10: Stability and Reactivity
- Section 11: Toxicological Information
- Section 12: Ecological Information
- Section 13: Disposal Considerations
- Section 14: Transport Information
- Section 15: Regulatory Information
- Section 16: Other Information, including date of preparation or last revision

A Safety Data Sheet must be available for every hazardous chemical in storage or use and must be readily available to employees at all times. The Principal Investigator or Area Supervisor is responsible for acquiring and updating SDS for all hazardous chemicals found in their work area. SDS are available from the manufacturer or distributor – often through the website. Each SDS shall be reviewed by all personnel who will be using the chemical before the chemical is used in the workplace.

SDS should be kept in a convenient location and filed alphabetically by either the chemical name, common name, number, etc. (use a uniform system for all SDS filed in an area). SDS should be reviewed at least every 3 years to ensure that they are current and the latest revisions are available. For chemicals where there have been revisions made to the SDS, the current SDS should be inserted and the old SDS archived for future reference.

## IX. Training

EHS provides basic HAZCOM training at hire to all non-laboratory employees as part of the [New Employee Safety Training](#) and to laboratorians as part of the [Orientation for the Laboratory Environment](#) which provide the following information:

- Requirements of the Hazard Communication Standard (29CFR 1910.1200).
- Location and availability of the written Hazard Communication Plan.
- Methods and observation techniques used to detect the presence or release of a hazardous chemical.
- How to lessen or prevent exposure to these hazardous chemicals through usage of controls, work practices, and personal protective equipment (PPE).
- How to use the information provided on an SDS.
- How to read and understand labels.

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- Contingency plans for medical and accident response.
- The proper use, maintenance, and storage of any PPE required.

All other training including information on specific chemicals in the workplace is provided by the Supervisor or Principal Investigator. Area-specific training topics include:

- Physical and health hazards of chemicals in the work area and their locations.
- Location of the hazardous chemicals inventory and the Safety Data Sheets for all hazardous chemicals in their work area.
- Procedures implemented to provide employee information about chemical hazards for non-routine or special tasks.

Non-laboratorian training is documented on the [Non-Laboratory Area Specific Hazard Communication Training](#) (Appendix A) which is retained by the department and provided to inspectors upon request. Laboratory training is included in lab specific training as described in each lab's Lab Specific Safety Plan.

## X. Hazard Determination

There are various types of chemical hazards for classification purposes. By completing an inventory listing these chemicals and reviewing SDS, these chemicals can be identified.

### A. Physical Hazard

A physical hazard is defined as a chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, solids); oxidizer (liquid, solid, or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. There are 16 physical hazard classes and their associated hazard categories, which can be located in [Appendix B to 29CFR 1910.1200 – Physical Criteria](#).

### B. Health Hazard

A health hazard is defined as a chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure);

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or aspiration hazard. There are 10 health hazard classes and their associated hazard categories defined in [Appendix A to 29CFR 1910.1200 - Health Hazard Criteria](#).

#### C. Simple Asphyxiant

A simple asphyxiant means a substance or mixture that displaces oxygen in the ambient atmosphere and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

#### D. Combustible Dust

A combustible dust may be defined as a combustible particulate solid that presents a fire or deflagration hazard when suspended in air or some other oxidizing medium over a range of concentrations, regardless of particle size or shape.

#### E. Pyrophoric Gas

A pyrophoric gas is defined as a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130°F (54.4°C) or below.

#### F. Hazard Not Otherwise Classified

A hazard not otherwise classified means an adverse physical or health effect not identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in the 29CFR1910.1200 standard.

## XI. Personal Protective Equipment

Personal protective equipment (PPE) includes gloves, safety glasses, goggles, face shields, aprons, respirators, etc. The PPE necessary for protection while being exposed to hazardous chemicals, flying particles, damaging light sources, etc. must be made available to employees for their use. Proper use of protective equipment is essential to prevent exposure. Supervisors and Principal Investigators must instruct employees as to what personal protective equipment must be worn.

PPE must be kept clean and stored in such a manner that it is protected from contaminants, dirt, dust or any atmosphere that might cause damage or deterioration of the equipment. Protective clothing should always be free from holes, rips, or tears.

- Gloves should be selected based on the chemicals being handled, or the task being

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performed.

- Eye protection, safety glasses or goggles, must meet ANSI (American National Standards Institute) Z87.1 standard.
- Safety goggles should always be worn whenever a potential chemical splash hazard or flying particle hazard exists (a face shield might also be required for certain activities).
- Goggles used for this purpose should have indirect vents (vents should be covered). Eye protection, safety glasses or goggles, must meet ANSI (American National Standards Institute) Z87.1 standard.
  - They must fit well, be reasonably comfortable, and not interfere with vision.
  - If an employee wears prescription lenses, safety glasses or goggles must be worn over prescription glasses whenever eye protection is required unless the prescription glasses are approved safety glasses (ANSI Z87.1).
- Safety glasses must always have side shields.
- If the use of respirators is required for specific tasks, employees must be enrolled in the University Respiratory Protection Program. This covers all type of respiratory protection equipment, including dust/mist type respirators. Contact EHS for information on the Respiratory Protection Program.
  - No employee is allowed to wear a respirator until employee is enrolled in the Respiratory Protection Program; contact ES for details.
- Chemically resistant coveralls or aprons should be used when needed and type/material selected according to materials being handled/contacted.

## XII. Non-Routine Tasks

Employees performing “non-routine” tasks can be exposed to chemicals from unusual and unsuspected sources. These “non-routine” tasks may include, for example, periodic tank or boiler cleaning or the replacement of seals and gaskets. Written procedures shall be developed for every “non-routine” task by the supervisor of the employees who will perform the task. The information will include chemical hazards associated with the performance of the tasks and appropriate protective measures required to perform the task safely. EHS will provide guidance upon request.

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**NC Central**  
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Environmental Health  
and Safety

## Hazard Communication Plan

Version #1.0

### XIII. Spills and Fires

The Durham Fire Department is the Hazardous Materials Response Team for the NCCU campus. In the event of a large spill, unknown spill, or fire contact DFD by dialing 911 and notify EHS and University Police immediately.

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**XIV. Appendix A Non-Laboratory Area Specific Hazard Communication Training**

Trainee Name (please print): \_\_\_\_\_

Trainer Name (please print): \_\_\_\_\_

Date of training: \_\_\_\_\_

Training Item	Yes	Supervisor's Initials	Employee's Initials
The location and availability of the chemical inventory for my area was made known to me.			
The location and availability for the Safety Data Sheets (SDS) for the chemicals that I will be working with was made known to me. An explanation of how to use the information on the SDS was provided to me.			
I was informed of the health and physical hazards and location of the chemicals in my work area. Any special precautions required for chemicals used in my area were also explained to me.			
Any Personal Protective Equipment required for chemicals used in my area was provided to me and its proper use and maintenance explained.			
Methods and observation techniques used to detect the presence or release of a hazardous chemical were explained.			
Contingency plans for medical, accident, and spill response were explained.			
Individual employee's responsibilities were reviewed and made known to me.			

I certify that I have received the training indicated above and that I understand the training and agree to abide by the policies and procedures in the NCCU Hazard Communication Plan training and this training.

Trainee Signature: \_\_\_\_\_

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