

TITLE: Laboratory Training Procedure	Effective Date: February 1, 2016
	Page 1 of 9
TTU WRC Laboratory Procedure No. 100-140	Revision No. 1

## TTU Water Center Laboratory Training Protocols

Individuals requesting access to Water Center laboratory facilities must undergo appropriate laboratory safety training. This includes University and site-specific training. Following are some resources on where to find the training modules and how to access them.

### 1. RLS Training Online:

Numerous regulations require that certain activities receive annual training. Training conveys the knowledge to give employees the ability to adequately address common situations that could cause harm to individuals, property, or the environment. Tennessee Tech utilizes various training resources including an online program (Rogers Learning System) to equip employees with these skills. You can access the training site here: <https://www.tntech.edu/planning-and-finance/safety/training#tab-1437512391465>

You must utilize a TTU computer to access the suite of training available by:

WINDOWS 7:

1. Click the Windows Start button.
2. Type `\\eagle\OSHA\go.bat` in the search bar.

WINDOWS XP

1. Click the Windows Start button.
2. Click Run and type `\\eagle\OSHA\go.bat`

**Available online modules from Rogers Learning System include the following, and the ones that are highlighted in yellow are recommended for individuals requesting access to Water Center laboratory facilities:**

- **Access to records**
- Accident Investigation
- Asbestos Awareness
- **Back Safety**
- Bloodborne Pathogens (BBP)
- C. Difficile
- Confined Spaces
- Contractor Orientation
- Cranes and Slings
- Chromium VI

- Electrical Hazards
- Emergency Planning
- Ergonomics
- Excavations
- Fall Protection
- Flammable/Combust.
- Fire Extinguisher
- Hand Safety
- Hand Tools
- Hazard Communication (Hazard Comm 12)
- Hearing Conservation
- Heat Stress
- Homeland Security
- Hot Work
- Housekeeping
- Lab Safety
- Lead
- Lift Truck (Powered Industrial Truck/ Forklift Safety)
- Lockout/ Tagout (LOTO)
- Personal Protective Equipment (PPE)
- RCRA (Hazardous Waste Management)
- Respirator
- Right-to-know (HazCom 12)
- Safety Observation
- Safety Orientation
- Scaffolding
- Sexual Harassment
- Slips, Trips and Falls
- Storm Water Pollution Prevention
- Workplace Violence

In the Hazard Comm 12 Icon, there are several parts:

1. Under “March 2012”, you must FIRST complete:
  - a. Part II – Types of Chemical Hazards

2. Under “1983 – March 2012”, you must then complete the following sections:
  - a. Part I – What The Standard Requires
  - b. Part II – Types of Chemical Hazards
  - c. Part III – MSDS and Labels

## 2. TTU Training Online

If dealing with compressed gases and biohazard material, individuals must take appropriate training using “TTU Training” at <https://www.tntech.edu/planning-and-finance/safety/training>

In addition, individuals must review and abide with TTU Laboratory Chemical Hygiene Plan: [https://www.tntech.edu/assets/userfiles/resourcefiles/5078/1444662862\\_TTU%20CHP%202015.pdf](https://www.tntech.edu/assets/userfiles/resourcefiles/5078/1444662862_TTU%20CHP%202015.pdf)

## 3. Site Specific Training Checklist

Individuals must go through appropriate Water Center site-specific training. Basic requirements are listed below:

1. Under the “Site-Specific Training” tab on the EH&S Training webpage: <https://www.tntech.edu/planning-and-finance/safety/lab-safety> print the checklist and initial all appropriate boxes with each worker, student, and/or faculty. (Also included as Attachment 1)
2. Laboratory Tour of the lab based on the “Site-Specific Training Checklist” Site Map for the Water Center Main Lab is shown in Attachment 2.
3. SOP100-100 Laboratory Operational Procedure
4. SOP100-110 Accessing Material Safety Data Sheets
5. SOP100-120 Laboratory Safety Manual
6. SOP100-130 Request for Access to the Water Center EQL
7. Notification of Accident Form. See Attachment 3.

### **Attachment 1 – Lab Specific Training**

## Lab Specific Training and Checklist for New Lab Workers

On the first day of work, prior to commencement of work activities involving hazardous materials (chemical, biological, and/or radiological), all new lab workers (paid employees) are required to receive Lab Specific Safety training. This lab specific training does not need to be performed all at the same time. Emergency procedures and general lab safety procedures must be covered when the new worker starts. Other items can be covered when the employee begins that procedure.

This site specific training is to be conducted by the Principal Investigator (P.I.), Faculty member, or designee. A new lab worker is a new hire, new student or a transfer into a department from within the university. This includes administrative personnel who handle hazardous materials for such tasks as receiving, inventory, and stocking. According to state and federal laws, Principal Investigators and laboratory supervisors are responsible for ensuring that all lab workers receive adequate training to understand the hazards present in their work area. As part of normal interactions with laboratory workers, the supervisor should train them in the safe and proper practices for the procedures they use and any lab-specific safety measures they may take to protect themselves from exposure to hazardous materials, including the location and use of emergency equipment.

This site specific training checklist is provided to laboratories to use as guidance for **lab specific safety training**. Additional training items can be added as needed. It is to be kept in the lab and not returned to EHS. All training documentation must be readily available for regulatory review.

To complete the required site specific training have the employee initial the topics that are applicable to their work in the laboratory or shop. The employee and trainer must sign and date the document. Site specific training needs to occur only once, prior to work. The site specific safety training document should be updated whenever a new hazard is introduced.

Environmental Health and Safety (EHS) provides general training for all University personnel. Currently, EHS uses a combination of an online training program "Roger's Learning System" (RLS) and TTU developed training to meet this requirement. Information can be found at <https://www.tntech.edu/planning-and-finance/safety/>

**A [TRAINING MATRIX](#) is available to help laboratories and shops determine which general trainings are required for the work that will be performed. The TRAINING MATRIX is not all inclusive and is updated as new modules, guidance documents, and standard operating procedures are made available.**

Please contact EHS at 372-3524 if you have any Laboratory Safety questions.

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Revised: July 2015

Principal Investigator/Faculty name \_\_\_\_\_

Employee Name: \_\_\_\_\_ T# \_\_\_\_\_

Position/Title \_\_\_\_\_

Supervisor Name: \_\_\_\_\_ Date: \_\_\_\_\_

Initials	Topic
	<b>EMERGENCIES</b>
	Reporting procedures for medical, fire or safety emergencies
	Basic building alarms, worker response to alarms, and evacuation procedures
	Emergency Evacuation Plan including: exits, evacuation routes and designated meeting locations
	Location of emergency equipment such as eyewash stations, fire extinguishers, fire pull stations, safety showers, etc;
	Reporting requirements for laboratory incidents and accidents, especially relating to personal injury
	Location and use of spill kit, first aid kit
	Location of emergency contact information, including University Police (372-3234)
	<b>GENERAL LAB SAFETY</b>
	Contact information for lab personnel
	Operations requiring prior P.I./Faculty approval
	Food and beverages are not to be consumed in laboratories. Designated area for food and drink
	Facility requirements (i.e. door to laboratory closed, no gloved hands in hallways, use of secondary transport containers)
	Where personal protective equipment (PPE: gloves, glasses, lab coat) is stored in the lab
	When to use PPE, including proper eye protection, for specific tasks
	PPE work practices (i.e. closed toed shoes, lab coats buttoned, disposable gloves, wash hands after removal of gloves, removal of lab coats before leaving the lab, etc.)
	Non-chemical physical and health hazards specific for lab
	Lab Specific Protocols/Standard Operating Procedures (includes safety requirements)
	Hazards and proper use of compressed gases and cryogenic material
	How to use any equipment in the laboratory, particularly fume hoods, biological safety cabinets, centrifuges, etc.
	Proper handling of broken glass, razor blades, needles, syringes or other sharps

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Revised: July 2015

<b>CHEMICAL SAFETY</b>	
	Location and access instructions for a copy of the laboratory chemical inventory
	Chemical Hygiene Plan, and other safety information
	Safety Data Sheets (SDS) location and use
	Highly hazardous chemicals used and their corresponding Standard Operating Procedures (SOP's) or Protocols
	Methods to control exposure to highly hazardous chemicals
	Detection methods and observations that may be used to detect the presence or release of a hazardous chemical in the lab (e.g. odor, monitoring equipment, or visual appearance) and what action to take if detected
	Hazardous chemical labeling system used in the lab
	Specific use of laboratory hoods and other engineering controls
	Chemical storage procedures
	Review of the Hazardous Waste and Satellite Accumulation Area Guide. Training must be documented for all employees on the last page. <a href="https://www.tntech.edu/files/safety/HAZARDOUS_WASTE_MANAGEMENT_AND_SAA.pdf">https://www.tntech.edu/files/safety/HAZARDOUS_WASTE_MANAGEMENT_AND_SAA.pdf</a>
	Location of chemical waste containers, use, labeling and compatibility (Hazardous waste management and disposal procedures)
	Chemical spill procedures, including cleanup and reporting
<b>BIOLOGICAL SAFETY</b>	
	Identification of all biological hazards in laboratory
	Location and review of biosafety and bloodborne pathogen exposure control plan
	Laboratory Biosafety Level and standard microbiological procedures and guidelines in CDC/NIH Biosafety in Microbiological and Biomedical Laboratories (BMBL) <a href="http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm">http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm</a>
	The signs and symptoms associated with exposure to infectious agents or recombinant DNA, routes of exposure and procedures for reporting suspected laboratory acquired infections
	Location and proper use and preparation of laboratory disinfectants
	Regulated Medical Waste disposal procedures and equipment (Contact EHS)
	Autoclave procedures, particularly pertaining to decontamination of regulated medical waste
	Biological material spill procedures, including cleanup and reporting

**Attachment 1 cont. – Lab Specific Training**

<b>OTHER SITE SPECIFIC HAZARDS</b>	

**Your signature confirms that all items noted above have been communicated during a training session administered by the Principal Investigator, Faculty Supervisors, or Laboratory Trainer and that you had the opportunity to ask questions.**

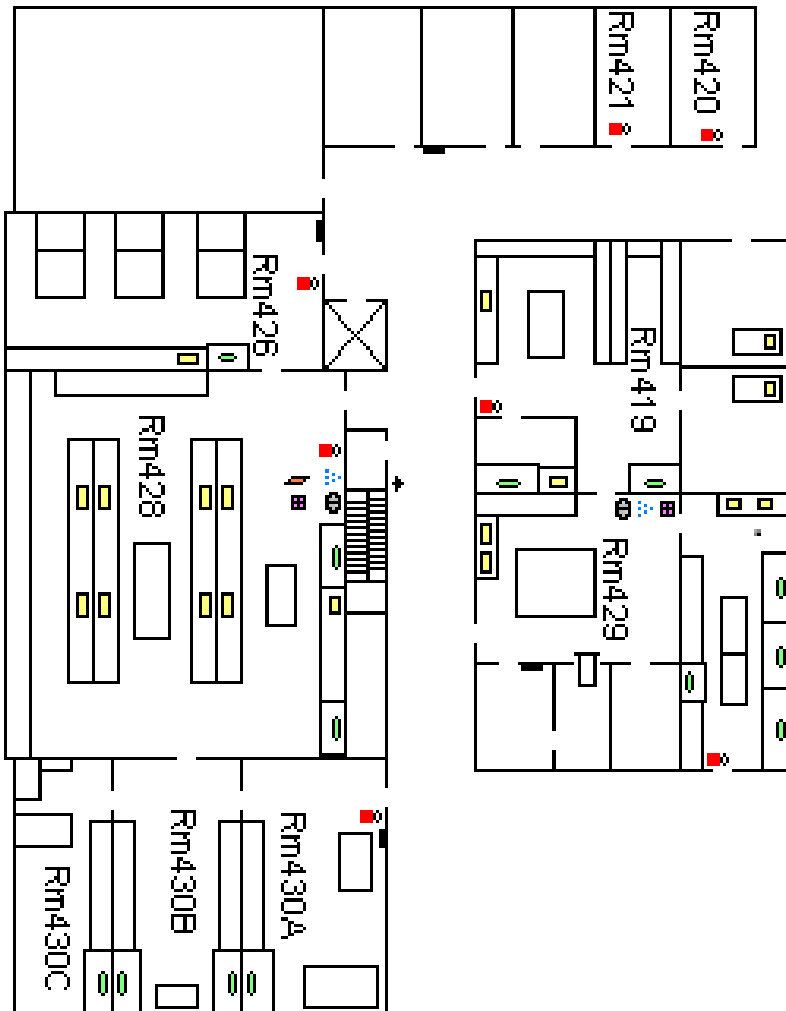
Employee Signature \_\_\_\_\_

Date \_\_\_\_\_

Training administered by: \_\_\_\_\_

**Attachment 2 –Laboratory Site Map**

**Water Center - Environmental Quality Laboratory  
Site Map**



- ☉ = Eye Wash
- ⬆ = Fire Alarm
- 🧯 = Fire Blanket
- 🔥 = Fire Ext.
- 🩹 = First Aid
- 🚒 = First Aid
- 🚒 = Fuse Box
- ☉ = Fume Hood
- 🚿 = Shower
- 🚿 = Sink



### Attachment 3 – Notification of Accident Form

To Be Completed by Immediate Supervisor

CDFP 10

TENNESSEE TECHNOLOGICAL UNIVERSITY  
DEPARTMENT OF CAMPUS DEVELOPMENT AND FACILITIES PLANNING  
SAFETY SECTION  
NOTIFICATION OF ACCIDENT OR OCCUPATIONAL ILLNESS

Name \_\_\_\_\_ Banner ID - T \_\_\_\_\_

Address \_\_\_\_\_

Age \_\_\_\_\_ Sex \_\_\_\_\_ Marital Status \_\_\_\_\_ Classification - Check one:

Full-time Employee ( ) - Part-time Employee ( ) - Temporary Employee ( ) - Student Worker ( )

Student ( ) - Campus Visitor ( ) - Other \_\_\_\_\_

If Employee, Department \_\_\_\_\_ Occupation \_\_\_\_\_

If Student, Indicate Classification FR ( ) - SO ( ) - JR ( ) - SR ( ) - GRAD ( )

Date of Accident \_\_\_\_\_ Time of Accident \_\_\_\_\_ Time Reported \_\_\_\_\_

To whom was accident/illness first reported? \_\_\_\_\_

Exact location of accident \_\_\_\_\_

Weather conditions at time of accident \_\_\_\_\_

Object or substance which directly caused the injury or illness \_\_\_\_\_

Description of what happened and the nature of injury or illness (Name Body Parts Affected). Use back or attach additional sheet if necessary.

Was injury or illness caused by or related to an existing condition? No \_\_\_\_\_. Yes \_\_\_\_\_. If yes, What? \_\_\_\_\_

In your opinion, was there a violation of approved safety practices and/or standards? Yes \_\_\_\_\_. No \_\_\_\_\_. If yes, what? \_\_\_\_\_

How was the ill/injured person instructed to prevent accident from re-occurring? \_\_\_\_\_

If employee, was the ill or injured person unable to work on the day of or days after the accident? No \_\_\_\_\_. Yes \_\_\_\_\_. If yes, last day worked \_\_\_\_\_

Other Remarks: \_\_\_\_\_

Date \_\_\_\_\_ Signature \_\_\_\_\_ Title \_\_\_\_\_

This report must be completed by the person's immediate supervisor or person in charge after every accident, including those requiring first aid treatment only. This report is to be sent to the Human Resource Services Office no later than the first regularly scheduled work day following the incident.

(Updated 10/07)