Department Safety Resources

Tuesday Nov 28th, 2023

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2023-2024 CSSC Representatives

Analytical
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Debasmita Dutta (Secretary)

Organic
Lupita Aguirre (Chair)
Poulami Mukherjee

Physical
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At Large
Jake Nicholson
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Sam Lee (Treasurer)

cssc@chem.tamu.edu
https://www.chem.tamu.edu/safety/

Required Training

Work Area Specific Training

TAMU HAZARD COMMUNICATION PROGRAM

WORK AREA SPECIFIC TRAINING
Department of Chemistry
Attendance Record

I hereby acknowledge receipt of the Texas A&M University (TAMU) Hazard Communication Program Work Area Specific Training. My supervisor/employer has provided information regarding:

1. information on hazardous chemicals known to be present in the employee's work area and to which the employee may be exposed, including:
   A. location within the work area,
   B. specific hazards, including acute and chronic effects,
   C. safe handling procedures.
2. work area location of MSDSs, or procedures for obtaining MSDSs;
3. how to obtain and use appropriate personal protective equipment;
4. first aid treatment to be used with respect to hazardous chemicals;
5. instructions on spill cleanup procedures, and proper disposal of hazardous chemicals specific to that work area.

I understand that my department/unit will provide access to chemical information and will provide additional/continuous training as appropriate, regarding hazardous chemicals to which I may be exposed during my employment activities.

Is this individual:
a TAMU Employee ☐
a TAMU Student
Grad ☐ Undergrad ☐
an Approved Visiting Scholar ☐

Is this training for teaching?
Yes: ☐ No: ☐
If yes,
Course #: _____

Is this training for research?
Yes: ☐ No: ☐

_____
Employee Name (please print)

_____
Instructor Name (please print)

_____ _____
*Employee Signature Date

_____ _____
Instructor Signature Date

_____
Employee UIN

*The employee is responsible for ensuring that this completed form is given to the Department of Chemistry Personnel Office (Room 122) which maintains the departmental personnel files.

DEPARTMENT OF CHEMISTRY

Quentin Michaudel
Assistant Professor

TEXAS A&M UNIVERSITY

MICHAUDEL LAB SAFETY TRAINING

Section 1: Required Training

Each new student, staff or faculty member must complete the mandatory facility orientation training. The orientation provides an overview of TAMU Department of Chemistry safety policies, reviews the location of emergency equipment within the facility, evacuation procedures, chemical storage and transport requirements, handling waste and reporting of injuries and illness. There are four parts

Section 2: TAMU Hazard Communication Program - Work Area Specific

Location of Emergency Equipment

☐ Safety Manual (dropbox) ☐ Fire Extinguishers ☐ Spill control kit and first aid kit
☐ Safety Data Sheets (online) ☐ Emergency Shower(s) and emergency eye wash ☐ Nearest fire pull station
☐ Safety glasses, lab coats, protective gloves, safety shields, other unique protective equipment

Exiting Lab/Building During Evacuation

☐ Location of the Emergency Exit(s) from lab
☐ Show Emergency Route from the floor (primary and secondary routes)
☐ Explain that after leaving the building, people should maintain a 50ft distance from the building
☐ Instruct new members to:
1. Close door
2. Leave lights on

Upon leaving building be sure to confirm with Emergency Coordinator that you are out of the building.

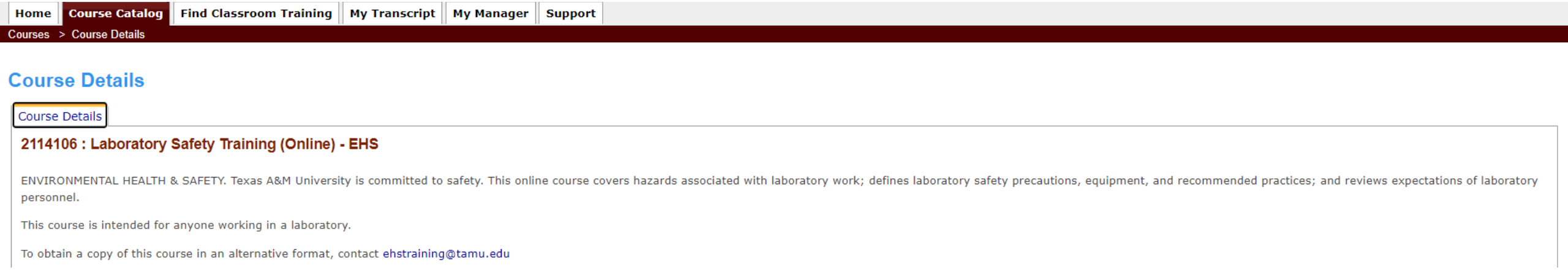
Chemical Storage & Transport

☐ If a new member will fill Dewars or use cryogenic liquids, take them to the nitrogen fill station and explain proper fill procedures (cryogen, gloves, setup, etc.)
☐ Location of glass cylinder receiving and storage areas
☐ Location of bottle carriers
☐ Location of chemical storage facilities for the group (solvent cabinets, acid/base, oxidizer storage)
☐ Advise new member that all chemicals must be labeled with the full chemical name
☐ Transport chemicals via bottle carriers, chemical shipping box, or sealed secondary container.

Chemical Inventory System

☐ Updating inventory for all transferred/purchased chemicals

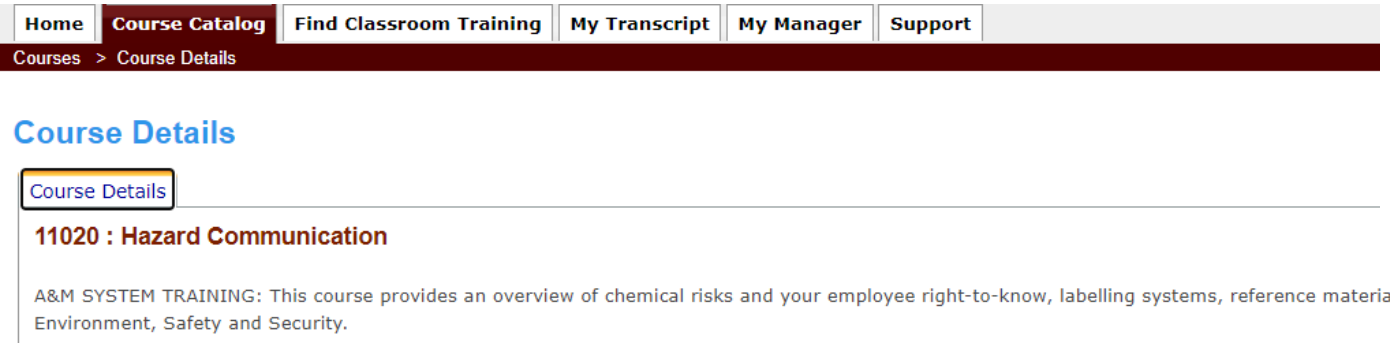
TrainTraq: Laboratory Safety Training (Online)

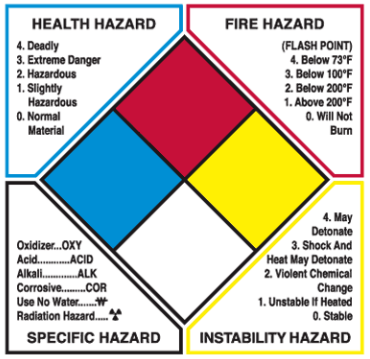


This is a **required** course (2114106) that covers general safety practices and resources:

- Safety equipment
- Physical hazards
- Incident reporting
- Storage and management of chemicals
- Cryogens (general)
- Gas cylinders
- Waste disposal
- Chemical waste
- Handling gas cylinders
- Chemical spill clean-up
- Hazard reduction
- Fume hoods

TrainTraq: Hazard Communication

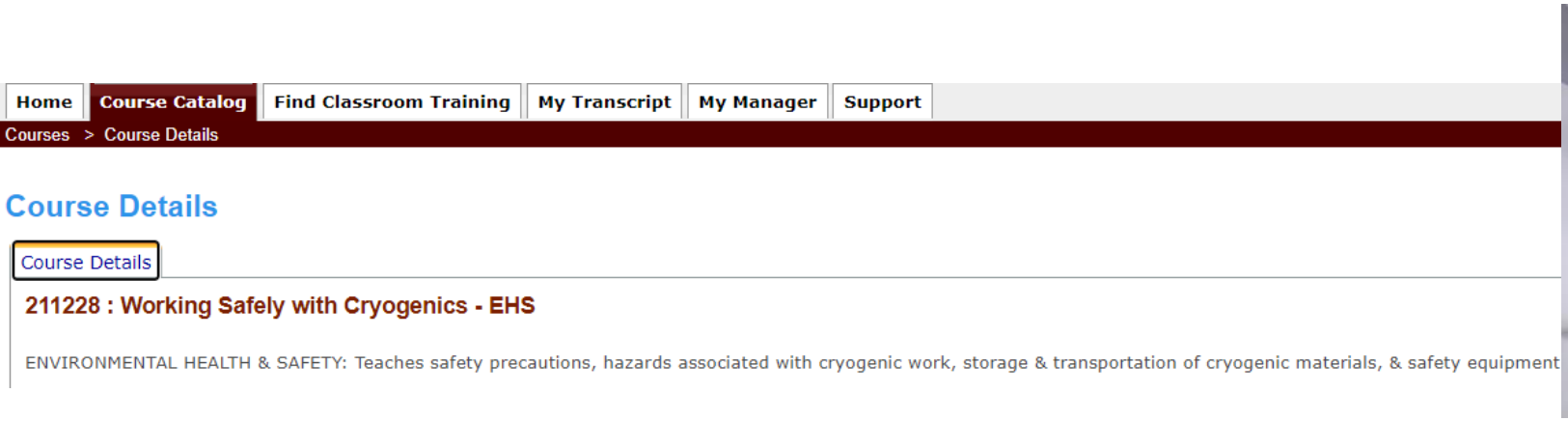




<u>This is a **required** course (11020) that covers work with hazardous chemicals and appropriate protection against them:</u>

- Risks of working with chemicals and employee rights
- Labelling systems for hazardous chemicals
- Reference materials and resources (i.e. SDS forms)
- Physical dangers of hazardous chemicals and how to avoid them
- Health hazards and basics of toxicology (long and short-term)
- Action levels and effective us of Personal Protective Equipment

TrainTraq: Working Safely with Cryogenics



Covers work involving cryogenics and appropriate safety precautions:

- Storage of cryogenics (Dewars and cylinders)
- Hazards: extreme cold, asphyxia, explosions, liquid oxygen, embrittlement
- Transportation precautions
- Built-in safety features on storage units and pressure control
- Wearing the right PPE and safe practices
- Transferring cryogens to other containers for use

Future Training Suggestion: Fire Extinguishers

Environmental Health and Safety is currently looking into having the department provide a required fire extinguisher training using a **real** fire extinguisher. Remember to **PASS** it.

Resources

Chemical Shipping

https://www.chem.tamu.edu/business-operations/shipping.php

cushioning and absorbing will be provided at no cost.

Note: If you have time sensitive materials, we recommend that in order to avoid delays due to inspections, do not send your materials near the end of the week.

Federal Guidelines for Shipping Hazardous Chemicals over 30mL or 30g

For quantities of **hazardous chemicals over 30 mL or 30 g**, please bring the following to the departmental stockroom (Chemistry 014) before 9:00 A.M. Mondays thru Fridays. We cannot store chemical samples overnight.:

- electronically completed **Chemical Shipment Form**
- sample(s) in sealed container(s)
- MSDS's for 2 primary compounds for each different sample
- for international shipments
  - electronically completed **Commercial Shipping Invoice**
  - electronically completed **Export Control Review Form**
  - **documented approval*** from the Export Control Office

Hazardous materials over 30 mL or 30 g must be shipped in federally approved packages. We have a limited variety of approved packing supplies for purchase.

Note: If you have time sensitive materials, we recommend that in order to avoid delays due to inspections, do not send your materials near the end of the week

Letters, Documents, and Non-Chemical Materials

For letters, documents, non-chemical materials, please bring the following to the departmental stockroom (Chemistry 014):

- electronically completed **Non-Chemical Shipment Form**
- electronically completed **Non-Hazardous Materials Form**
- for international shipments
  - electronically completed **Commercial Shipping Invoice**
  - electronically completed **Export Control Review Form**
  - **documented approval*** from the Export Control Office

Shipping Unknown Chemical Mixtures

If shipping an unknown chemical mixture, further requirements might be needed. Please contact the Chemistry Stockroom at (979) 845-3335.

Domestic Shipping Forms

- Chemical Shipment Form
- Non-Chemical Shipment Form
- Non-Hazardous Materials Form

International Shipping Forms

- Chemical Shipment Form
- Non-Chemical Shipment Form
- Non-Hazardous Materials Form
- Commercial Shipping Invoice

- Fill out requisite forms and pack your chemicals carefully.
- Try getting samples to stockroom as early as possible
- Training available (see information in https://ehs.tamu.edu/programs/hazardous-material-shipping.html)

Chemical Waste– Room 001G

Chemical Waste

The Chemical Waste Program collects and processes chemical waste from campus labs and shops in compliance with federal and state regulations. The waste is processed for disposal in the most environmentally sound and cost-effective method available.

Contact Information

Jason Ward

- 979-845-3498
- JSWard@tamu.edu

Jeff Truss

- 979-845-4029
- jctruss@tamu.edu

How Do I

- How do I register or close out/decommission my laboratory?
- Dispose of Chemical Waste?

Documents

- Chemical Waste Disposal Informational
- Dakota Chemical Waste Tracking User Guide
- Chemical Waste Guide (website)
- Pollution Prevention Program
- Hazardous Chemical Waste Management Program
- Pollution Prevention Poster (1)
- Pollution Prevention Poster (2)

Links

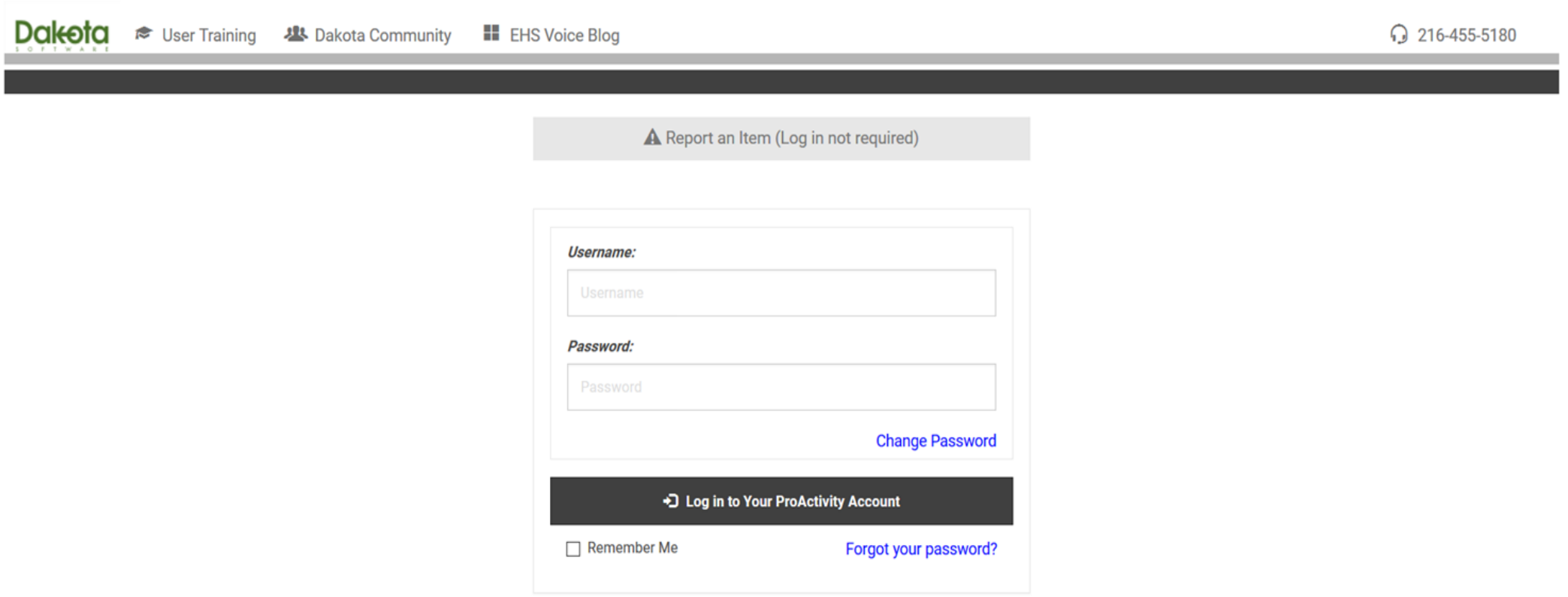
- DakotaSoft
- Texas Commission on Environmental Quality
- Environmental Protection Agency

- Make a Report
- EHS News
- Hot Topics
- Training Opportunities
- Facebook
- Twitter
- Emergency Procedures
- Campus Safety Letter

https://ehs.tamu.edu/programs/Chemical%20Waste.html

- Submit waste through *Dakota* software
- Facility typically open from 9:30 – 10:30 AM on Tuesdays and Thursdays

Logging a Waste Container: Dakota Website



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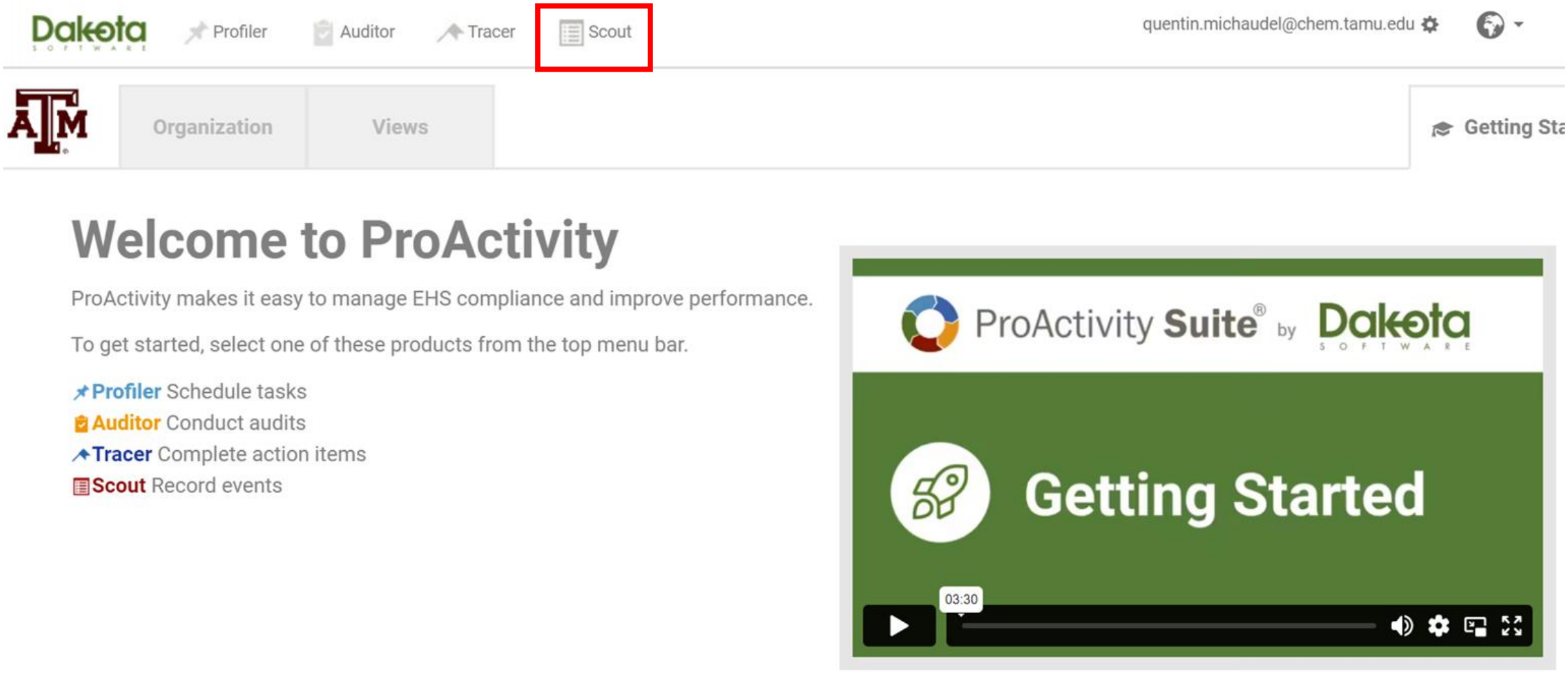

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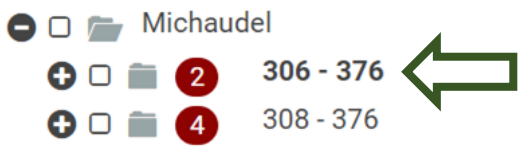

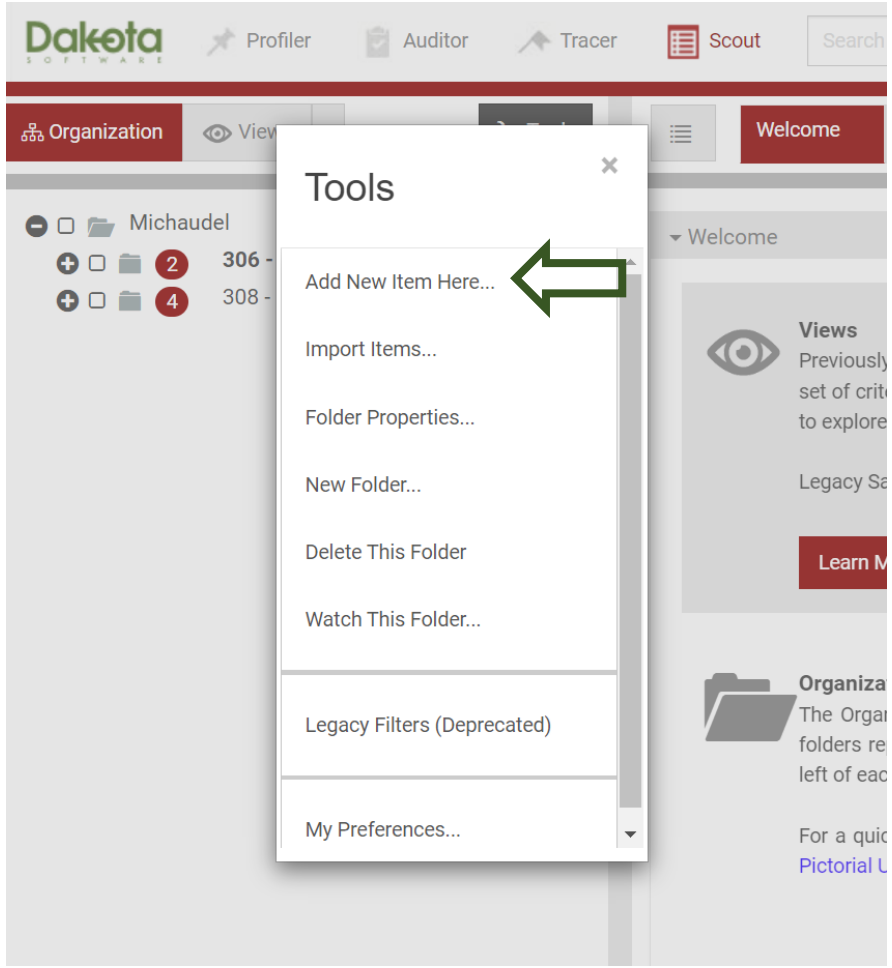

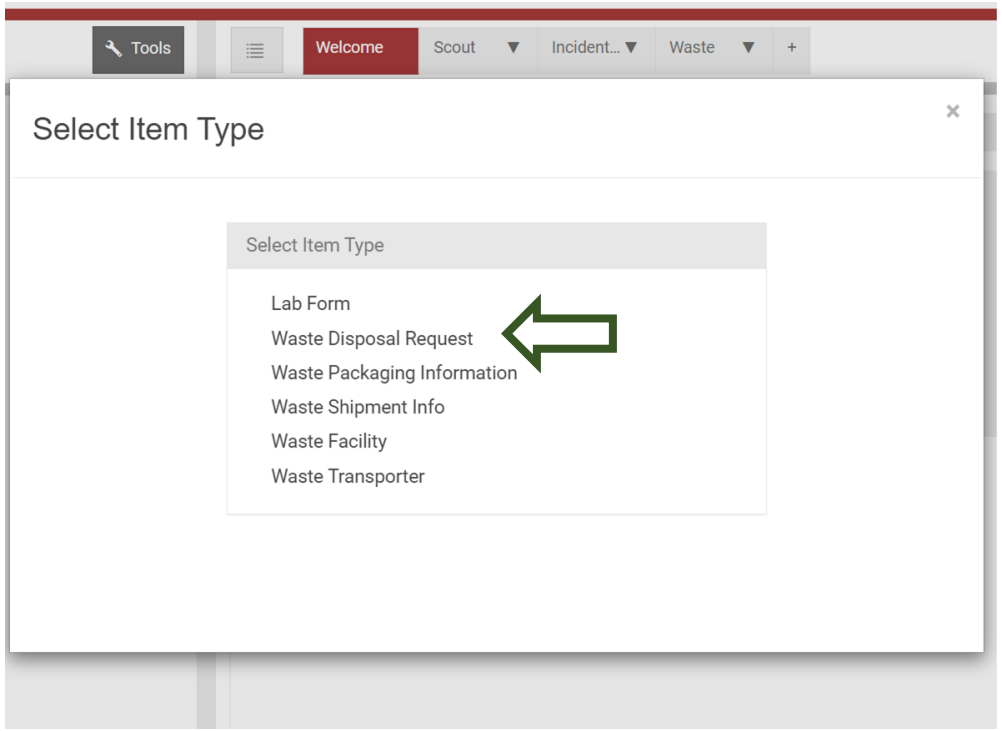

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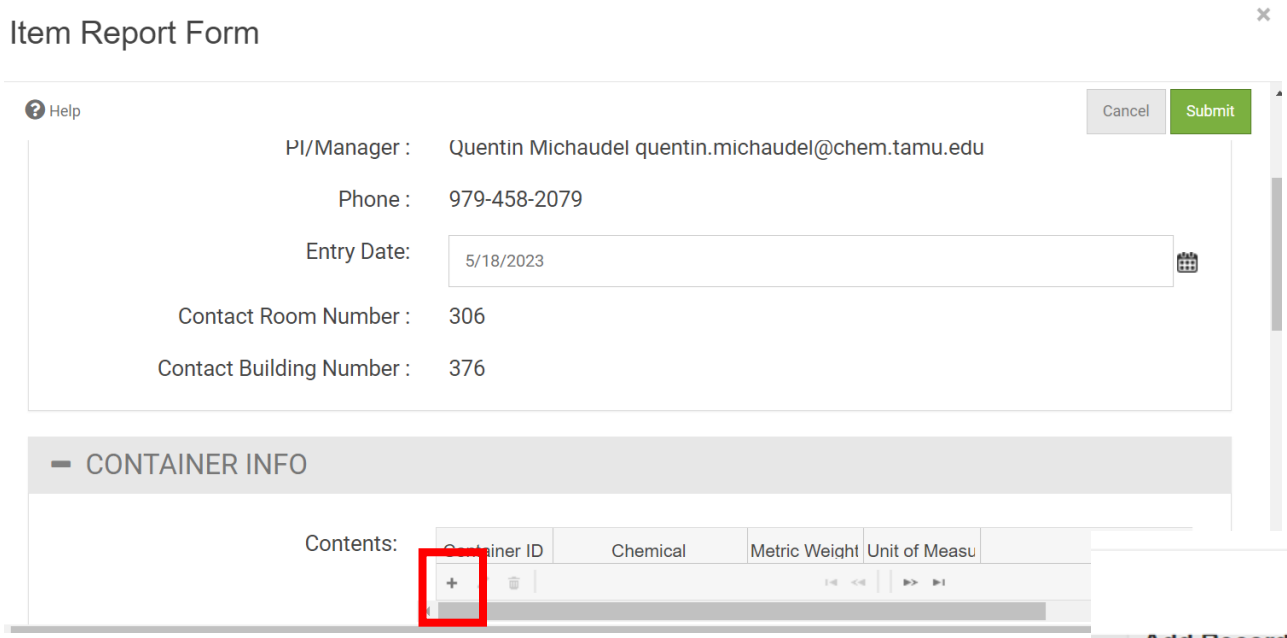
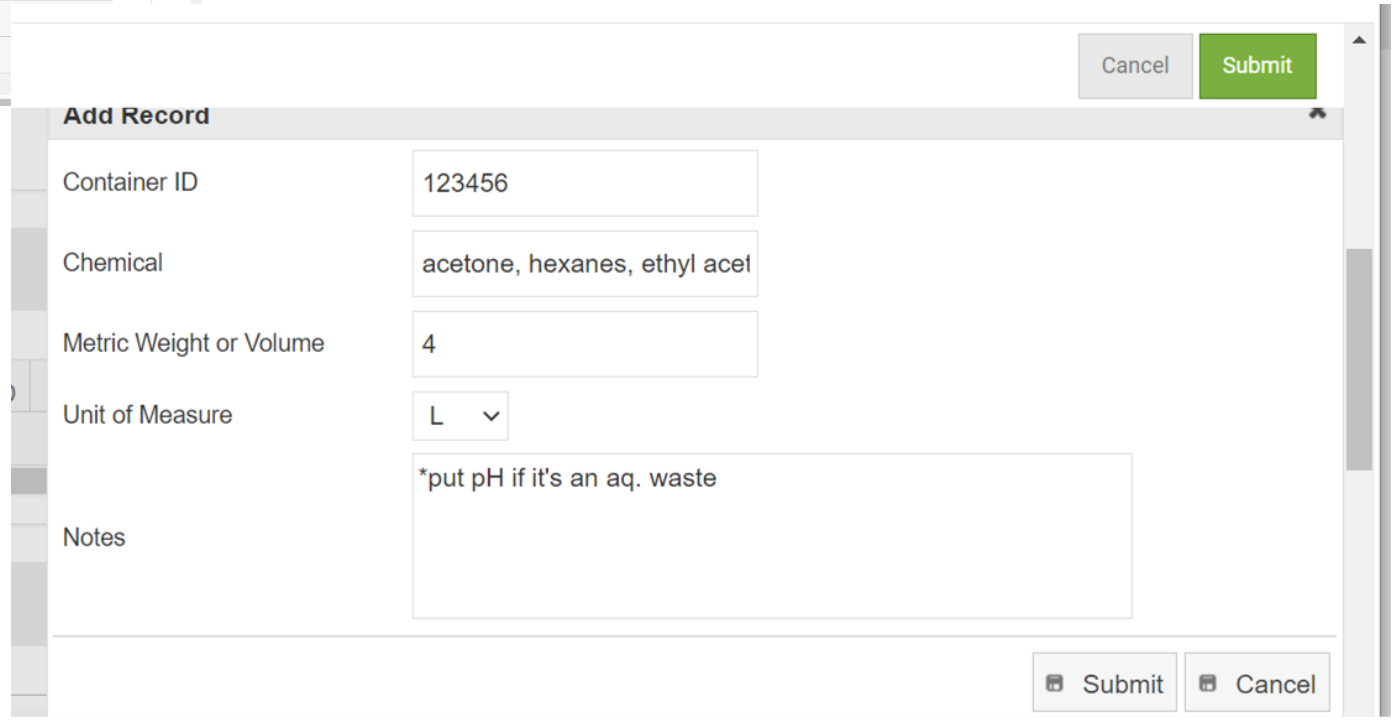




Lab Coat Laundry – Room 001F

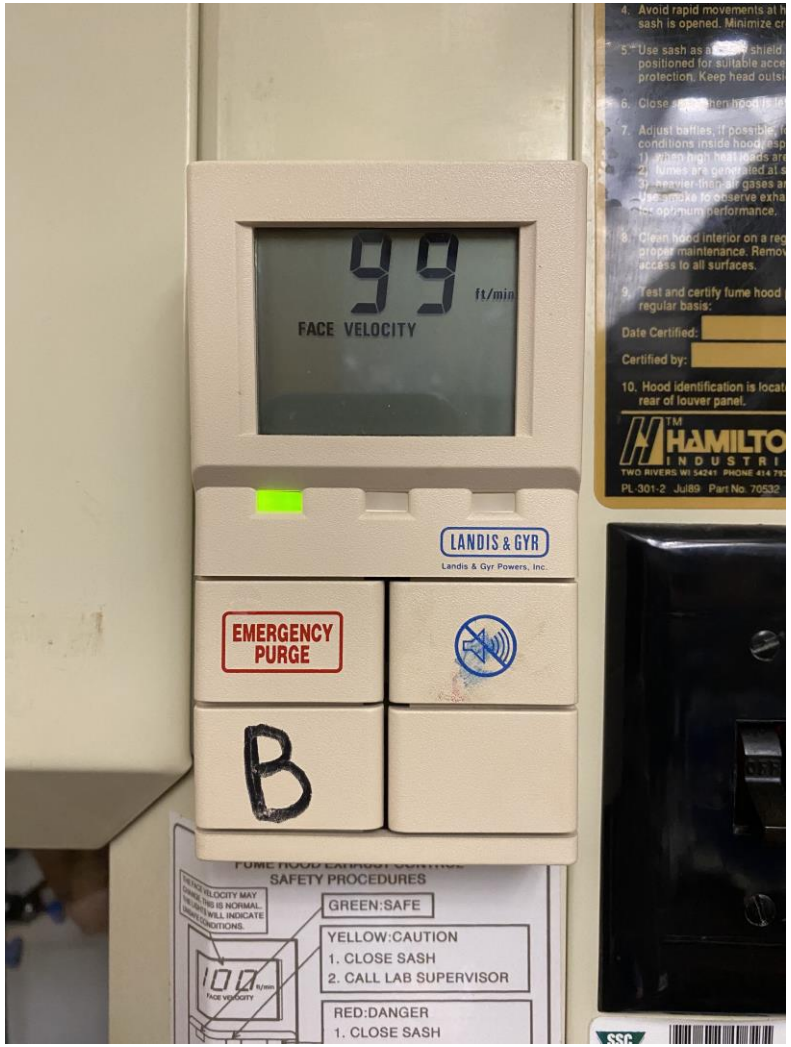
- Email Ron (carter@tamu.edu) for code
- Don’t wash coats coated in chemicals
- Don’t wash personal items

Mercury Spills

- Mercury vacuum available in Room 014
- Call or email Ron if you suspect mercury vapor in your lab
- Spill kits in cabinet near CHEM 306

Getting Things Fixed

- For leaks, non-functioning fume hoods, electrical problems, and other laboratory issues, email Ron Carter (carter@tamu.edu) and cc Mike Garcia (mikegarcia1980@tamu.edu)



Workplace Injury Resources

Personnel

Alternative Performance Evaluation
Approval of Visiting Scholars (form 5VS)
External Employment and Consulting Application
First Report of Injury or Illness for Employee
ISFS Forms
Non-Research Student Worker/Wage Employee

LINK: https://www.chem.tamu.edu/business-operations/#Forms

Send the specified copies to your Workers' Compensation Insurance Carrier And the injured employee.

***Employers – Do not send this form to the Texas Department of Insurance, Division of Workers' Compensation, unless the Division specifically requests a direct filing.**

CLAIM #

CARRIER'S CLAIM #

EMPLOYERS FIRST REPORT OF INJURY OR ILLNESS

1. Name (Last, First, M.I.) | 2. Sex F M | 15. Date of Injury (m-d-y) | 16. Time of Injury: : am pm | 17. Date Lost Time Began (m-d-y)
3. Social Security Number XXX-XX- | 4. Home Phone | 5. Date of Birth (m-d-yyyy) | 18. Nature of Injury* Select One | 19. Part of Body Injured or Exposed* Select One
6. Does the Employee Speak English? If No, Specify Language YES NO | 20. How and Why Injury/Illness Occurred*
7. Race White Black Asian | 8. Ethnicity Hispanic Native American Other | 21. Was employee doing his regular job? YES NO | 22. Worksite Location of Injury (stairs, dock. etc.)*
9. Mailing Address Street or P.O. Box | 23. Address Where Injury or Exposure Occurred Name of Business if incident occurred on a business site: Street or P.O. Box County
City State Zip Code County | City State Zip Code
10. Marital Status Married Widowed Separated Single Divorced
11. Number of Dependent Children | 12. Spouse's Name | 24. Cause of Injury (fall, tool, machine, etc.)*
13. Doctor's Name | 25. List Witnesses
14. Doctor's Mailing Address (Street or P.O. Box) | 26. Return to work date/or expected (m-d-y) | 27. Did employee die? YES NO | 28. Supervisor's Name | 29. Date Reported (m-d-yy)
City State Zip Code
30. Date of Hire (m-d-y) | 31. Was employee hired or recruited in Texas? YES NO | 32. Length of Service in Current Position Months Years | 33. Length of Service in Occupation Months Years
34. Employee Payroll Classification Code | 35. Occupation of Injured Worker
36. Rate of Pay at this Job $ Hourly $ Weekly | 37. Full Work Week is: Hours Days | 38. Last Paycheck was: $ For Hours or Days | 39. Is employee an Owner, Partner, or Corporate Officer? Yes No

- If the injury is severe, dial 911 immediately!

Biosafety Occupational Health Program

Biosafety Occupational Health Program | TEXAS A&M UNIVERSITY

All fields marked with * are required and must be filled.

Occupational Health Enrollment

What is this? Texas A&M University is required by TAMUS, state, and federal regulations to provide an occupational health program for individuals who may have occupational risk of exposure to infectious biohazards or who have contact with animals. The program includes medical review and surveillance.

The purpose of enrolling in the Biosafety Occupational Health Program annually is to evaluate your workplace hazards (e.g. infectious biohazards, animal allergens, etc.), and any new or existing health concerns that may be affected by these hazards. Annual enrollment also provides you an opportunity to request an appointment with the occupational health provider if you wish to discuss any of these concerns confidentially.

If you have questions or require assistance, you may contact the medical provider directly at (979) 393-0161 or info@uohpartners.com

LINK: https://vpr.tamu.edu/biohazards-in-research-teaching-or-testing/biosafety-occupational-health-program/

- Enrollment questionnaire required if your work puts you at risk for exposure to infectious agents.

Departmental Services

ELECTRONICS SHOP

The electronics shop coordinates the electronics design, construction, and repairs of major instrumentation. Fuses, wire, switches and small electronic parts are available. They also have experience with HP printer repairs.

Contact

Timothy Pehl
845-2632
2401 Chemistry

GLASS BLOWING SHOP

The glass blowing shop handles the fabrication and repair of instructional and research glassware. Stock sizes of glass tubing, rod, ground glass joints, stopcocks, glass-metal seals, etc., are available.

Contact

Bill Merka
845-2735
2004 Chemistry

MACHINE SHOP

The Chemistry Department Machine Shop is here to provide any and all types of machining, fabrication, and repairs primarily for the TAMU Chemistry Department, however we also do work for many other Departments in the System when time allows.

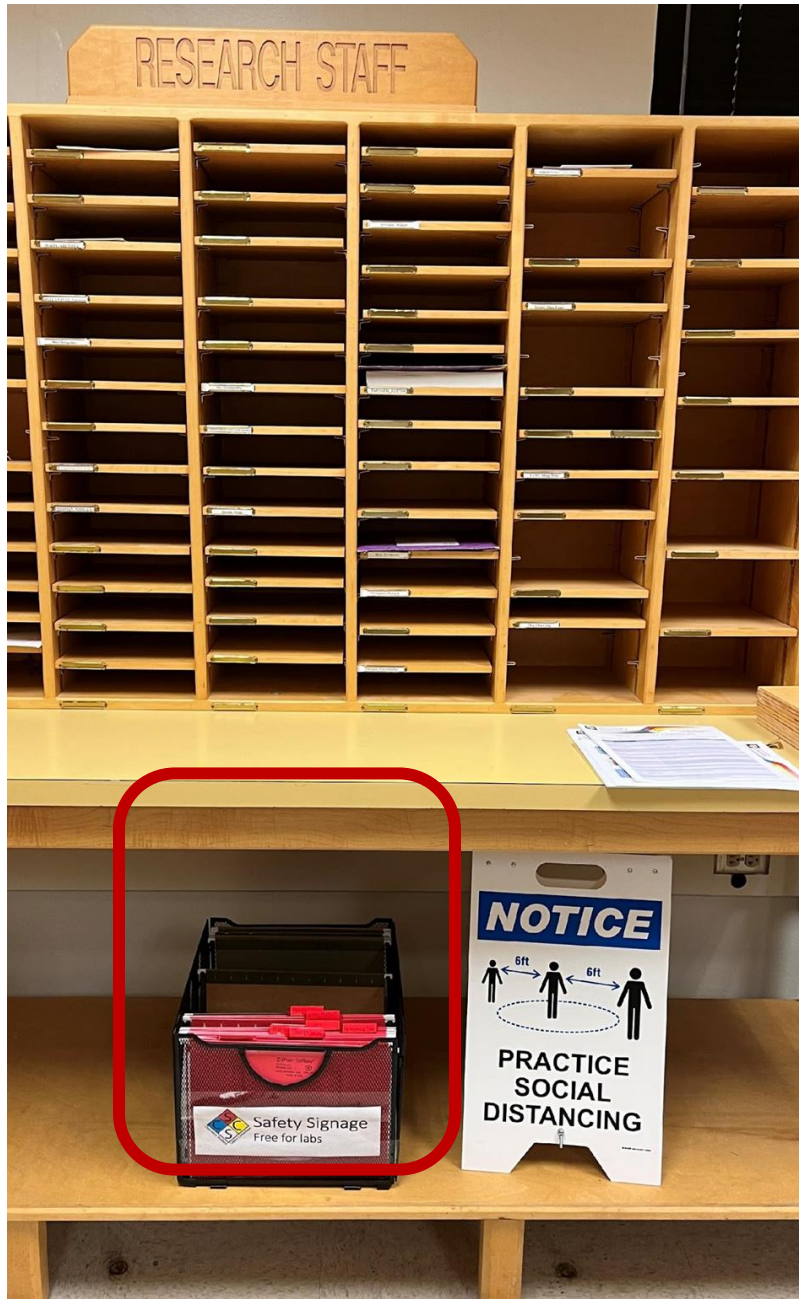
We provide CNC (Computer numerical control) machining with our HAAS Super Mini Mill 2 and our SL-10 Lathe. Our software for these machines consists of Matercam. We also use Solidworks for our drawings and design. We also have numerous Manual Mills and Manual Lathes, horizontal, vertical and table saws, Plasma cutter. We can machine Stainless, Steels, Aluminums and many types of Plastics. We can also do all types of welding, GTAW (tig), GMAW (mig) and GSAW (stick) on all types of material, Steel, Stainless, Titanium and Aluminum.

Our staff can work from sketches to CAD designs. We also provide our clients with estimates and consultations on work and design when requested.

Contact

Zahir Udovicic
845-3129
2006 Chemistry

Laboratory safety signage



TEXAS A&M UNIVERSITY Chemistry

Chemistry Student Safety Committee

Tell us your thoughts!
tx.ag/safety

Safe Handling of Pyrophoric Materials

Pyrophoric materials ignite upon exposure to air or moisture

General Protocol

- Work under an inert atmosphere, glovebox (preferred) or in a fume hood with oven-dried glassware
- Remove all clutter and flammables (such as KimWipes) from working area
- Use the "buddy system" to avoid handling pyrophorics alone

SCAN FOR MORE THOROUGH INFORMATION AND EXPERIMENTAL SETUPS

- Use a long needle and a syringe that is twice the volume of liquid being transferred
- Large volumes of liquid should be transferred via cannula
- If exposed, seek the nearest safety shower, fire blanket, or fire extinguisher (ABC type)

Storage and Disposal

- Store under inert atmosphere or under kerosene as recommended in the MSDS; NEVER in a flammables cabinet
- Reactive materials must be quenched before disposal
- Storage containers should be rinsed with dry solvent and allowed to sit in a fume hood overnight
- Contact EHS for more detailed instructions

ENVIRONMENTAL HEALTH & SAFETY

Proper PPE

- Chemical Splash Goggles/Safety Glasses
- Flame Resistant (FR) Lab Coat
- *Neoprene Gloves
- Appropriate pants and shoes

*Nitrile gloves can be adequate but are combustible

Common Pyrophoric Chemicals

- Organolithiums
- Grignard reagents
- Organozincs
- Alkyl aluminums
- Metal hydrides (NaH, KH, $LiAlH_4$)
- Finely divided metal powders (bismuth, calcium, magnesium, titanium, etc.)
- Some silanes and phosphines

Note: this is a general list. More exhaustive lists can be found online.

Be prepared for when things go sideways

Lab Injuries

- Call University Police (**9-911** or **5-2345**); identify yourself and give the location and nature of the injury
- Call departmental Business Office (**5-3335**) and report the injury.

Accidental Chemical Ingestion

- Immediately contact the Poison Control Center at **800-222-1222** for instructions.
- **Do not induce vomiting** unless directed to do so.

Accidental Chemical Injection

- Wash area with soap and water and seek medical attention.

CHEMISTRY
TEXAS A&M UNIVERSITY

Site Search

About | Academics | Faculty & Research | Directory | Department Resources | Alumni & Giving

Safety in Chemistry at Texas A&M

The Department of Chemistry strives continuously to provide a safe working environment in all of our instructional and research laboratories and support facilities. Despite the variety of potential hazards inherent in chemical laboratories, proper observance by all faculty, staff, and students of proper safety practices will minimize the possible risks and help to maintain an excellent safety record.

Safety Suggestions

The newly formed Chemistry Student Safety Committee (CSSC) is committed to a safe working envirmonemt. It's mission is to improve departmental safety culture through student-led initiatives. Please help us by giving your safety suggestions. We are looking for suggestions for future CSSC projects, lab experiences that may serve as safety learning moments, safety concerns you have observed and want to bring to our attention, feedback on how CSSC operates and ideas for improvements, and anyone who wants to learn more about safety culture. Suggestions are anonymous, unless you choose to identify yourself. Students, faculty, postdocs, staff, and visitors are all encouraged to provide feedback.

Upcoming Safety Events

Submit a Safety Suggestion

Safety Resources

- Department Safety Guide
- Texas A&M Environmental Health and Safety
- Dow Safety Academy
- ACS Safety Zone
- Department Emergency Response Plan

CSSC Safety Improvement Projects

- Laboratory Signage Standardization
- Safety Resource Posters
- Safety Speaker Series
- Laboratory Upgrades

cssc@chem.tamu.edu
https://www.chem.tamu.edu/safety/

General Setup Wizard

- **Welcome Page**
- Enter Lab's Contact Information
- Enter Lab's Category and Research Focus
- Complete Lab Hazard Assessment
- Enter Lab Members
- Configure Lab Member Activities
- Lab Setup Complete

This wizard will collect the following information:

1. Your laboratory's contact information
2. A general description of your laboratory's purpose and research focus
3. The hazards your laboratory members are exposed to
4. Names and designations of the members of your laboratory
5. Job activities of each member to drive their training requirements

Continue to Laboratory Setup

- Ozerov Lab
- Research Tools
- Training
- Equipment
- My Account

Welcome to BioRAFT

⚠ The "General Setup Wizard" is incomplete for the Ozerov Lab. Start Now

Announcements

11/03/2023: Chemical Inventory Reminder
This is a reminder that ChemTracker chemical inventory reconciliations are due by December 31, 2... [more]

10/17/2023: Fall Safety Dispatch
Environmental Health and Safety's Fall 2023 Safety Dispatch is now available. Check out this sem... [more]

View All Announcements

Messages

09/28/2023	Inspection Report 2199009 - Foll...
09/28/2023	Inspection Report 2275300 – 02/1...
08/25/2023	Building Closure - Water Leak
07/25/2023	Inspection Report 2249567 – 02/1...

View Entire Inbox

ObservNow

See a safety concern?
Click to report it.

Required Training

Status	Course Name	Renewal Date
✔	Laboratory Safety Training (Online) – EHS: TrainTraq Course 2114106	06/16/2025
✔	Hazard Communication: TrainTraq Course 11020	08/18/2025
✔	Working Safely with Cryogenics: TrainTraq Course 211228	Never

Training History Course Directory

Compliance Summary for Ozerov Lab

Training: ⚠
Equipment: ✔

View Dashboard

SDS Search

Chemical Name or CAS Number:

Search

Need Support?

Click to view our knowledge base.