

Lab Safety Teams at Michigan Tech: Student efforts to promote safety within the Chemistry department and beyond

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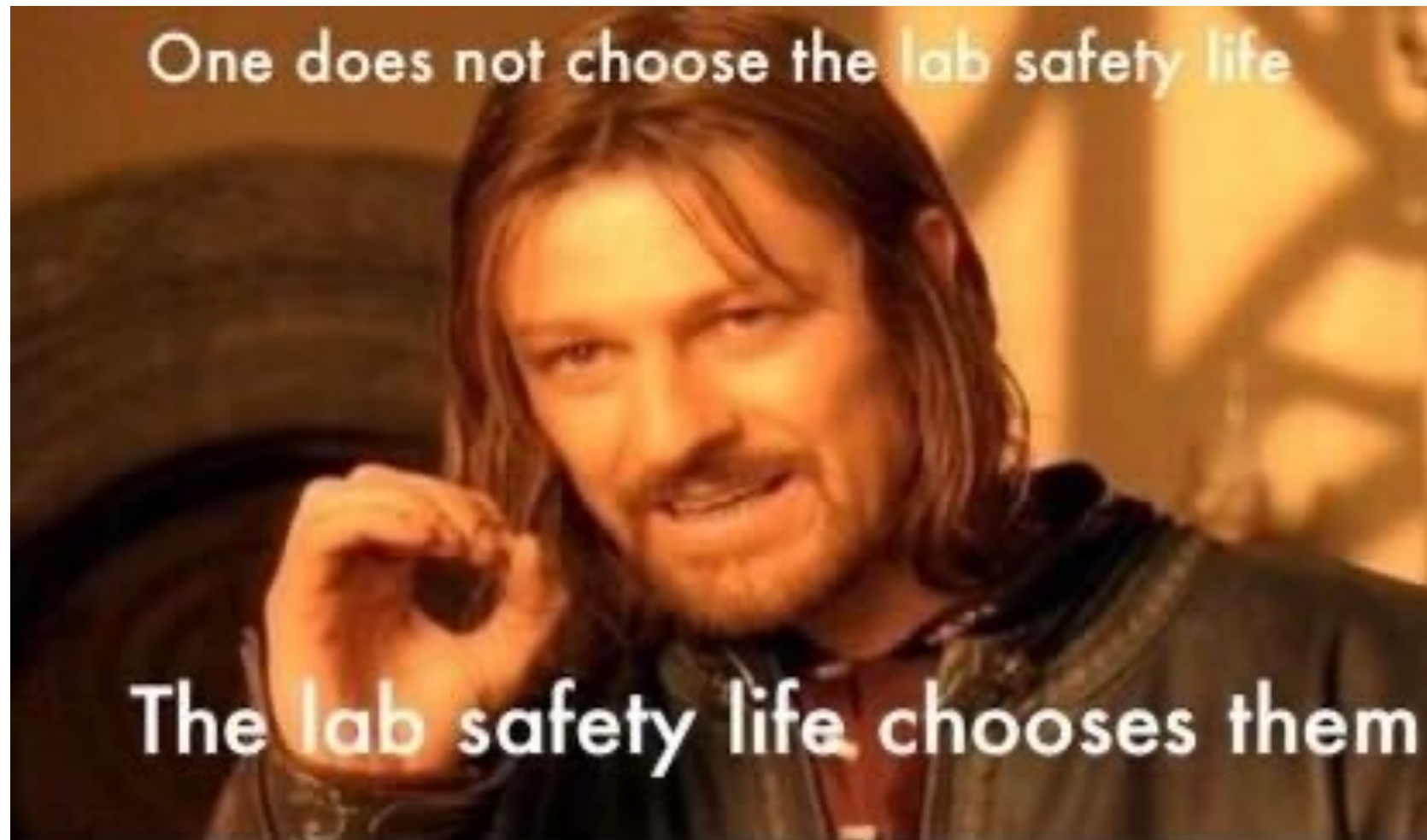
8/20/23



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Outline

- What's my story?
- The Chemistry Graduate Safety Committee
- Supporting Graduate Safety Education and Training
 - The role of the ACS CHAS Division
 - The role of Champions (Faculty, Staff, Department, Research Integrity)
 - The role of the Student Researchers
- What we've learned
- Moving Forward

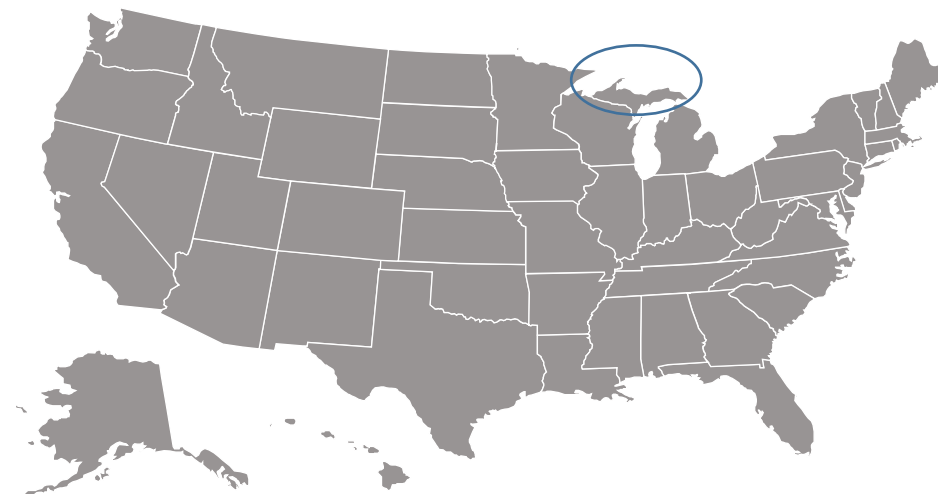


What's my story?

- Started Grad School in Fall 2018
- Research in Organic Synthesis and Chemical Biology
- Lack of adequate preparation to work safely in the lab



Improving the academic safety culture:
the place of LST – ACS GP Chemist



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CHEMISTRY GRADUATE SAFETY COMMITTEE

- Formed in Spring 2021
 - MTU Registered Student Organization
 - ACS Graduate Student Organization
- Consists of
 - Lab Safety officers (Emergency Contacts), Personnel from the Research Integrity Office, a Faculty champion, and *Undergraduates in research labs*
- **Our mission:** to increase safety awareness and improve the safety culture within the department through student engagement in safety-related discourses.

To provide a platform where graduate researchers working within chemical labs can teach and learn about safer laboratory practices while building their safety leadership skills.

Some Notable Members



Adelina Oronova



Alexander Apostle



Sodiq Waheed, PhD



Priyanka Kadav, PhD



Nazar Gora



Alex Ismail



Devrim Durur



Dilka Arachchige

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Supporting Graduate Safety Education and Training

- The role of the ACS CHAS Division
- The role of Champions (Faculty, Department, Research Integrity)
- The role of the Student Researchers



The role of ACS CHAS Division

ACS CHAS Peer Led Workshop:



Empowering academic researchers to strengthen safety culture



Registration for this workshop is \$25 per participant. This **workshop** is directed at frontline researchers in academic institutions: **graduate students, postdoctoral scholars, and undergraduate students**. Faculty and safety staff are also very much encouraged to participate.

Workshop Goals:

- Educate participants about the value of risk assessment
- Guide participants towards gaining awareness of safety culture messages from leadership at their institutions
- Empower participants to expand their safety networks and develop laboratory safety teams

<https://dchas.org>

- Peer-Led Workshops
 - Lab Safety Teams (LST) Workshop
 - *Acknowledging the voices and experiences of student researchers*
 - *Professional development opportunities*
 - RAMP Workshop
- LST Quick Connections
 - LST leaders sharing best practices



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The role of Champions

- Faculty, Staff & Department
- Research Integrity Office



Importance of a Champion

“A person who enthusiastically supports, defends, or fights for a person, belief, right, or principle.”

" A true champion without a cause is entrapped energy. A great cause without a champion is but an elusive dream. But with a great cause with a true champion is the realization of a vision"

- Robert Porter Lynch



Listen to Needs



Give Advice



Advocate



Empower



**Provide/Seek
Support**

The role of Faculty and the Department



Empower:

*to encourage
and support
the ability to
do something.*

“Hello Grads,

I'd like to support several graduate students from different labs to attend this workshop, “Empowering Academic Researchers To Strengthen Safety Culture.”
The department will cover the \$25 fee for up to 8 participants.

Please let me know if you'd like to register for this.
Dr. Sarah A. Green (former dept chair)”

“Hello Mikhail, Monica, Parya, Adelina, Abhijeet, Alexander, and Shulin,

Please go ahead and register for the workshop, then send the receipt for \$25 to Charlene for reimbursement.

Registration is now open for the Fall 2020 “Empowering Academic Researchers To Strengthen Safety Culture” workshop at <http://dchas.org/2020/07/11/lst-workshop-registration-2020-3/>

We will want to see your certificate when you complete the workshop after November 12th. And let's plan a session afterward for you to report back to the department.

Thanks for volunteering to do this!
Sarah”



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The role of Faculty and the Department



Empower:
*to encourage
and support
the ability to
do something.*

ACS CHAS Stakeholder Workshop:

ACS Technical Division
Chemical Health & Safety (CHAS)

Empowering academic researchers to strengthen safety culture

JUST
JOINT SAFETY TEAM

Thursday, Nov 12, 2020 from 2PM-6PM ET
The workshop is \$25 per participant.

This **4-hour workshop** is primarily directed at frontline researchers in academic institutions: **graduate students, postdoctoral scholars, and undergraduate students**. Faculty and safety staff are also very much encouraged to participate.

Workshop Goals:

- Educate participants about the value of risk assessment
- Guide participants towards gaining awareness of safety culture messages from leadership at their institutions
- Empower participants to expand their safety networks and develop laboratory safety teams

Empowering Academic Researchers to Strengthen Safety Culture: An American Chemical Society Workshop

An account given by: Alexander Apostle, Adelina Oronova, Parya Siahcheshm, Komal Chillar, Abhijeet Patil, and Monica Nyansa

ACS
CHEMICAL
HEALTH & SAFETY

ACS Committee
on Chemical Safety

ACS Chemical
Safety Programs

ACS Division of Chemical
Health and Safety

**Empowering Academic Researchers
to Strengthen Safety Culture**

November 12, 2020

Facilitators: Jessica DeYoung, University of Iowa
Sarah Zinn, University of Chicago

Workshop Leader: Jessica A. Martin, University of Connecticut
CHAS Coordinator: Dr. Kali A. Miller



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The role of Faculty and the Department



Empower:

*to encourage
and support
the ability to
do something.*

“Thanks to students Abhijeet Patil, Adelina Oronova, Alexander Apostle, Komal Chillar, Monica Nyansa, and Parya Siahcheshm for their Dec 11th presentation "Reflecting On Safety During The Holiday Season."

The first outcome of that event is a new graduate safety committee, which will have its first meeting soon. “

Grad students, note this article:

The Joint Safety Team at the University of Minnesota, Twin Cities: A Model for Student-Led Safety



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The role of Faculty and the Department



Listen to Needs

Mercury Thermometer Collection



Lab Coat Laundry



***SAFETY
SIGNAGE
CAMPAIGN***



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The role of Faculty and the Department

Annual Hands-on Fire Extinguisher Training



Listen to Needs

FIRE EXTINGUISHER SAFETY EVENT AND ICE CREAM SOCIAL

Learn how to safely use a fire extinguisher while having ice cream



DATE

FRIDAY 17TH SEPTEMBER, 2021

TIME

3-5 PM



LOCATION

Gravel Parking Lot by the Basketball
Fields on Campus

Please **RSVP** as we need a head count!

Email chemsafetycom_l@mtu.edu with any
questions or concerns

Chemistry Graduate
Safety Committee
(CGSC)



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The role of Faculty and the Department

Annual Departmental Lab Clean-Up and Safety Chat



Listen to Needs

DEPARTMENTAL LAB CLEAN UP, LUNCH AND SAFETY CHAT EVENT

Date- **Tuesday, June 20
2023**

Time -10 AM- 2 PM

Location For Lunch &
Safety Chat -
**Lawn in front of
ROTC**

Please **RSVP** as we need a
head count

Email
chemsafetycoml@mtu.edu
with any questions or
concerns



1

LAB CLEAN UP
10 AM-12 PM

2

**VOLUNTARY LAB
WALKTHROUGHOUT**
12 PM-12.30 PM

3

**LUNCH & SAFETY
CHAT**
12.30 PM-2 PM



CHEMISTRY GRADUATE
SAFETY COMMITTEE



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The role of Faculty and the Department



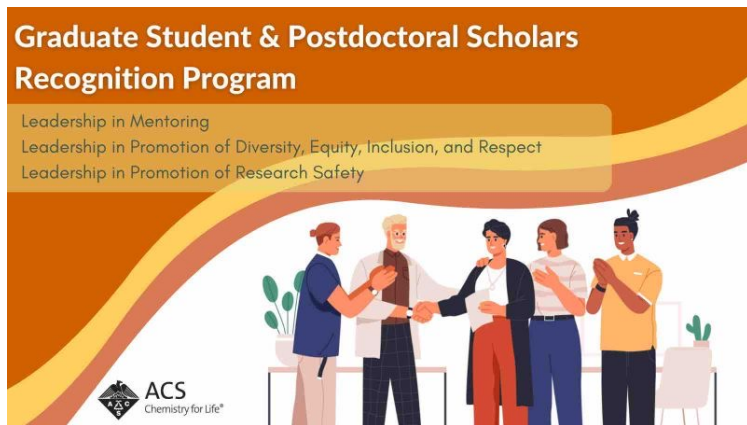
Advocate:
*to publicly support
or suggest an idea,
development, or
way of doing
something*

- Departmental Ambassador Award

Michigan Technological University
Department of Chemistry

2021-2022 Ambassador Award

- Nominations for Awards



- Recommendation Letters



GRADUATE STUDENT SAFETY
LEADERSHIP AWARD



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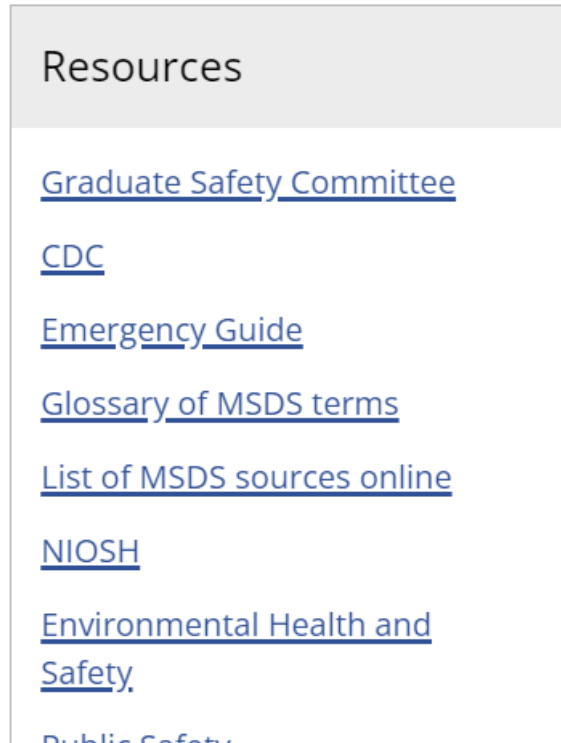
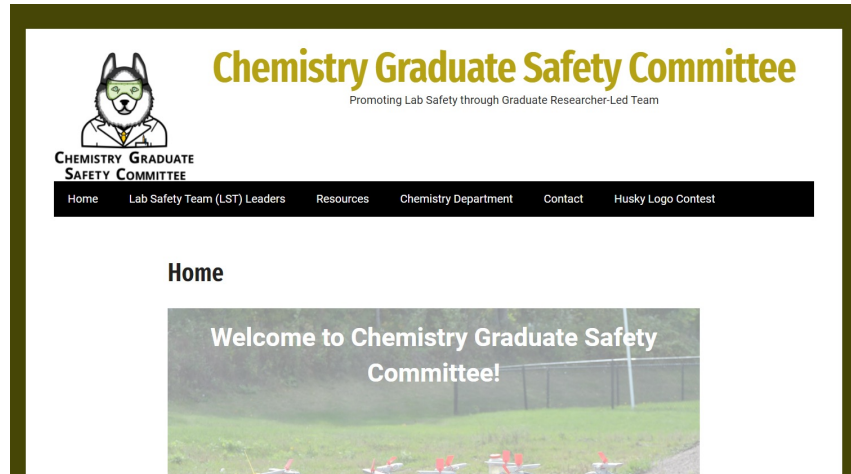
The role of Faculty and the Department

- Chemistry Graduate Safety Committee Website



Advocate:

*to publicly support
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development, or
way of doing
something*



The role of Research Integrity/ EH&S



Advocate:
*to publicly support
or suggest an idea,
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way of doing
something*



Jeffrey Lewin
Director of Chemical
Laboratory Operations



David Dixon
Director of Biological
Laboratory Operations

DEPARTMENTAL LAB CLEAN UP AND LUNCH AND SAFETY CHAT EVENT

DATE

MONDAY, JULY 11, 2022

TIME

10 AM TO 2 PM

PROGRAM OUTLINE

10 AM TO 12 PM : LAB CLEAN UP

12 PM TO 12:30 PM : VOLUNTARY LAB WALKTHROUGHS

12:30 PM TO 2PM: LUNCH AND SAFETY CHAT (There will be a short interactive presentation by Jewin Lewin from Research Integrity on managing hazardous waste in the lab)

LOCATION FOR LUNCH AND SAFETY CHAT: Chemistry Learning Center, RM 208

Please **RSVP** as we need a head count!

Email chemsafetycom-l@mtu.edu with any questions or concerns

Chemistry Graduate
Safety Committee
(CGSC)



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The role of Research Integrity/ EH&S



Advocate:

*to publicly support
or suggest an idea,
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something*

Financial Support to Conferences



CSHEMA 2023 @ Boston



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The role of Faculty and Research Integrity



Advocate:

to publicly support or suggest an idea, development, or way of doing something

- Beyond the Chemistry Department

Invitation to Present about CGSC initiatives at the University CHO meeting



Connecting CGSC to interested departments and Colleges within MTU:


- College of Forest Resources and Environmental Sciences)Chemical
- Department of Engineering
- Department of Civil, Environmental and Geospatial Engineering



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The role of the student researchers

- Recognizing the relevance of this professional development opportunity as part of their education
 - Monthly Lab Safety Officer meeting
 - Periodic Emergency kit inspection
 - Registering as a student organization
 - LSO Guidebook (Adapted from UMN JST LSO Guidebook)



Chemistry Graduate Safety Committee
Promoting Lab Safety through Graduate Researcher-Led Team

**CHEMISTRY GRADUATE
SAFETY COMMITTEE**

Home Lab Safety Team (LST) Leaders Resources Chemistry Department Contact Husky Logo Contest

Resources

Lab Safety Officer (LSO) Guidebook

Table of Contents

Contents

About the Chemistry Graduate Safety Committee	1
Roles and Responsibilities of a Lab Safety Officer (LSO)	2
Research Group Responsibilities	2
Lab Safety Team (LST) Responsibilities	5
Chemical Safety Plan and Emergency Procedures	7
Chemical Spills Emergency Procedures	7
Standard Operating Procedures	10
Writing and Maintaining Laboratory Standard Operating Procedure (SOP)	10
Organizing and Writing the SOP	11
Maintaining Your SOPs	12
Conclusion	12
List of Common Laboratory SOPs	13
TEMPLATE: MTU CHP Standard Operating Procedure	15
Record Keeping	19
Purpose	19
Hazardous Waste	19
Other Additional Links	19

What We've Learned

Improving and maintaining a positive safety culture



" A true champion without a cause is entrapped energy. A great cause without a champion is but an elusive dream. But with a great cause with a true champion is the realization of a vision"
- Robert Porter Lynch



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Moving Forward

- Mentoring and empowering the next generation of safety leaders within the department



Acknowledgment



Michigan Technological University
Chemistry

Dr. Green, Charlene and Megan



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