

Identification

Northern Illinois University has reflected on its safety culture and has been working to enhance this culture. As the graduate students in the Department of Chemistry and Biochemistry learned about safety in government and industrial lab via a pilot safety course during the fall 2016 semester. They found that their own safety culture could be improved upon.

Method

The Student Advisory Safety Committee (SASC) was formed by a group of graduate students in the Department of Chemistry and Biochemistry. These students believe that to affect a change in the safety culture of the department that they need to become active members of the change. According to their charter:

“The mission of the Student Advisory Safety Committee (SASC) is to promote, encourage, and enhance the safety culture in the Department of Chemistry and Biochemistry at Northern Illinois University.”

The charter of the SASC contains their objectives and scope of activities including:

Advising, consulting with, and making recommendations to the faculty, staff, and students of the Department of Chemistry and Biochemistry of Northern Illinois University. The committee also addresses matters relating to laboratory safety in both teaching and research laboratories by: promoting a safety culture which incorporates all students and department members; informing students and department members of safety practices found outside of academia; recommending procedural changes to current practices in order to enhance the likelihood of safety within the department and organizing events which help reduce hazards within the department

Furthermore, the description of duties of the committee are as follows:

SASC promotes safe practices and addresses safety concerns within the department. When necessary, the committee will recommend to management ways of controlling or eliminating hazards within the department.

Method of Implementation

The first meeting of graduate students interested in developing a committee was in December of 2016. By spring 2017 they had formed an executive board and started work on a charter. The founding executive board includes the following graduate students: Katarzyna Hoerchler (co-chair), Travis Mackoy (co-chair), Andrew Feliciano, Dionne Griffin, Sami Varjosaari, and Sudeshna Chakraborty. Advisors included Michele Crase, Lab Safety Manager in the Office of Research Compliance, Integrity and Safety; and Andy Small, Lab Manager in the Dept. of Chemistry and Biochemistry.

In its first year the SASC implemented several changes through initiatives with the full support of their department. A total of fourteen initiatives were identified by the SASC and are described below. The status of each initiative is as of February 2018.

Initiative #1 -- PPE in appropriate locations only and post signs to not wear PPE in bathrooms, not use lab gloves to open common doors, etc. STATUS: Signs posted.

Initiative #2 -- Implement and facilitate regular and complete voluntary lab coat laundering (meet with Andy Small to implement and send reminder emails to department letting everyone know when and where). STATUS: Member of SASC launders lab coats at the end of each month.

Initiative #3 -- System for anonymous safety concern reporting which includes a drop box near the main office that is checked regularly. Concerns are brought anonymously to Michele Crase.

STATUS: Drop box was purchased and placed next to mailboxes. The box is checked every week.

Initiative #4 -- Periodic Safety Shower / Eye Wash Testing STATUS: Showers are tested each semester.

Initiative #5 -- Pursue SASC funding for safety field trips, speaker invitations, safety awards, safety swag, etc. STATUS: In progress.

Initiative #6 -- Design Annual Laboratory Spring Cleaning Event including a check list specific to each research lab, chemical swap between labs, waste disposal and lunch for everyone paid for by department. STATUS: Initiated. Good participation by numerous labs, but improvements needed to increase participation.

Initiative #7 -- Track safety audit observations/statistics STATUS: In progress.

Initiative #8 -- Identify and invite guest safety speakers. STATUS: Guest speakers came from Argonne National Laboratory and EcoLab for the spring 2018 semester invited.

Initiative #9 -- Maintain a safety bulletin board with safety related information, advertisements for safety trainings, etc.) STATUS: Produced and maintained.

Initiative #10 -- Implement student presentations of safety aspects related to their research during group meetings, divisional seminars, defenses, perhaps even safety trainings/discussions specific to a particular lab or equipment, etc. STATUS: In progress.

Initiative #11 -- Launch official NIU website for SASC (list active members for each semester, post departmental safety information, link to other university student safety organizations, etc.) STATUS: Launched and maintained.

Initiative #12 -- Coordinate online or in-person safety trainings including a field trip tours of companies and national labs, inviting individuals to come to NIU to offer safety training (for example the existing fire extinguisher and CPR trainings), or emailing the department to advertise an online

training). STATUS: Field trip coordinated to Argonne National Laboratory and to EcoLab to tour safety practices.

Initiative #13 – Create a departmental safety newsletter (one page, once per semester) STATUS: Two newsletters published. (See attached)

Initiative #14 – Coordinate efforts to improve safety hazards found in undergraduate teaching laboratories. STATUS: In progress

Cost

The graduate students of the SASC began regular meetings and developed a list of initiatives they planned to achieve. This group has not spent any university funds, so they are extremely cost effective.

Outcome

An increased awareness of safety of the graduate students has filtered throughout the department. Most initiatives has proven to be successful. As we increase the number of undergraduates in the research laboratories, the graduate students are empowered to pass along the messages of a positive safety attitude and an enhanced safety culture.

Applicability to Other Institutions

A student directed safety committee such as the SASC can be developed at other institutions easily. With a little effort on the student's part they can become integral in the enhancement of a safety culture. Graduate students often know what needs to be done, they only need to be empowered to do it.

NIU Student Advisory Safety Committee Newsletter Spring 2018

"The mission of the Student Advisory Safety Committee is to promote, encourage, and enhance the safety culture in the Department of Chemistry and Biochemistry at Northern Illinois University"

EVENTS AND STUDENT INVOLVMENT

Call for suggestions:

We are looking for suggestions to improve undergraduate teaching lab safety. Please e-mail us with any ideas you have!

Upcoming trips

Tour of EcoLab (Naperville): *March 9*

Previous event recap:

Spring Cleaning (Jan 15 – 19)

Great departmental participation! Lets continue to keep our labs safe and clean!

UPCOMING SASC MEETINGS

General member meeting:

April 23 at 4 pm in LaTourette 300

Meeting topics: Feedback from general assembly and executive board elections

FEATURED SAFETY TIP

Check out this quick reference on Chemical and Biohazard waste disposal procedures:

<https://chem.duke.edu/about/disposal-procedures#silica-gel-disposal>

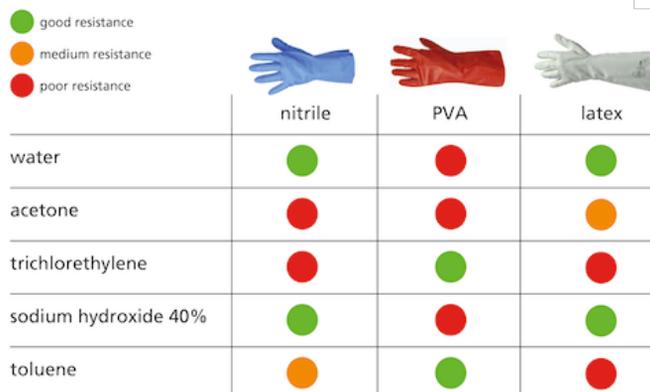
GENERAL REMINDERS

The Anonymous Safety Concern Box is in the mailroom (Faraday 324)

End of month lab coat washing – look for the laundry basket on your floor.

Don't forget to include a safety moment in your literature and research talks!

Table of chemical resistance



Legend:

- good resistance
- medium resistance
- poor resistance

	 nitrile	 PVA	 latex
water	●	●	●
acetone	●	●	●
trichlorethylene	●	●	●
sodium hydroxide 40%	●	●	●
toluene	●	●	●

For more info, check out:

<https://www.2mains.ch/en/course/full/2>

Visit us online at http://go.niu.edu/sasc_chem

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