Vertical Safety Engagement Through New Community Connections of the University of Minnesota Joint Safety Team

Vilma S. M. Brandao, Steven K. Butler, Gretchen S. Burke
Joint Safety Team (JST):
A researcher-led lab safety initiative between CHEM and CEMS departments supported by departmental leaders and EHS
The UMN Joint Safety Team

Analysis and Compliance
Student-led lab walkthroughs, Safety surveys

Education and Resources
Bi-monthly LSO meetings, LSO guidebook

Public Relations
Presentation safety moments, Safety posters and JST social media

Community Connections
The UMN Joint Safety Team

Analysis and Compliance
Student-led lab walkthroughs, Safety surveys

Education and Resources
Bi-monthly LSO meetings, LSO guidebook

Public Relations
Presentation safety moments, Posters and JST social media

Community Connections

Spread to R1 Institutions

Industry
National labs

Career
PUIs
High schools

Devel.
Emphasizing Safety Early

How do we expand the JST ideals to the High School setting?
Emphasizing Safety Early

How do we expand the JST ideals to the High School setting?

Through the teachers!
Teacher Incentives

Collaboration with Colorado School of Mines

Continuing Education
Workshop Curriculum

Waste handling, storage, and disposal
Adam Krajicek and Brian Andersson

Safer Demos
Dr. Harrison Frisk

Make it safe, make it green
Dr. Jeffrey Buenaflor

PPE and Liability
Dr. Nyema Harmon and Chuck Handlon

Safety Culture
Steven Butler and Vilma Brandao
Workshop Execution
Primary Undergraduate Institutions (PUIs)
Why PUIs?

A visit to a PUI sparked the idea of creating the CCC Difference in safety teams
- Student’s research experience is shorter
- Small research groups

The connection starts: Mostly professors that have been a part of the department for a long time with new professors interested in changing the culture
- Student research labs and laboratory classes
- Current safety practices do not check comprehension
- Disengaged students
Goal: improve student’s appreciation for safety

Students can create an easier and more intuitive safety code to students, faculty will also benefit from it.

Working closely with the CCC:

- Invite students to participate in laboratory walkthroughs, bimonthly meetings and events
- Learn how other universities and PUIs are handling safety
- Encourage students to take a personal role in lab safety and invite discussions to take place

- **U of WI – Eau Claire**
  Chemistry
  Joined JST events
  Improving communication

- **U of NC – Ashville**
  Chemistry Department
  Joined JST events
  Biology department contact initiated
UofWI - The Beginning

April 2021
Dr. Krysti K. Gupta initiated contact
- Improve safety culture in both Chemistry and Biology departments of UW Eau Claire

August 2021
UWECSST 4 Core students, Dr. Krysti K. Gupta as the faculty advisor.
- Establishing a safety team
  - Student engagement
  - Faculty engagement

October 2021
- JST visit to Eau Claire
JST visits UW Eau Claire

Departmental seminar presentation.
- What is safety culture
- Why safety is important.
- When to wear/ NOT to wear PPE
- What small steps you can take

Tour the facility, tour their labs and gave tips on how to improve

Requested to include their teaching labs, but UWEC is a very research focused PUI.
UW Eau Claire visits UMN

Currently 9 members structured in public relations, student resources, besides the administrative committee.
Visit on April 2022:
- Faculty meetings
- Lab safety walkthrough
Upward Efforts: JST Industry Connections
Industrial Safety Connections

The JST has historically organized industrial visits to the DOW campus in Midland, MI and the Valspar Corporation corporation in Minneapolis, MN.

New JST CCC Initiatives

- Invite speakers to discuss their industry safety practices
- Create an informal space to ask questions and build relationships
- Host lunch networking series
- Organize lab walkthroughs with local industries
Industry Connections Seminars

- Pre-seminar question submission, brief presentations followed by open conversation
- Over 50 attendees: Chem Dept. and CEMS graduate students, postdocs, and PUI connection students and professor

3M November 2021
Dr. Eric Olson, Advanced Research Specialist, Wet Chemical Analysis
Dr. Jeff Ting, Senior Polymer Scientist, Materials Informatics

PPG April 2022
Dr. David Stone, Research Associate I, Substrate Protection
Dr. Derek Saxon, Research Chemist I, Polymer Synthesis
Student’s Industrial Safety Insights:

• Safety considerations and waste stream recorded before ordering new materials

• Internal emergency response team, made up of volunteers

• Weekly hall meetings keep neighboring labs aware of safety risks

• Practice emergency scenario “Box Drills”
New Vertical Safety Connections

- Career
- Education

Industry
National labs
PUIs
High schools

Formation of other LSTs
Contributors and Sponsors

Community Connections Committee:  

JST Administrative Committee:

Email: jst@umn.edu  
Website: jst.umn.edu