

73RD ANNUAL CSHEMA CONFERENCE

AUSTIN

JULY 18-22, 2026

A stylized acoustic guitar is the central graphic. The body is a large, rounded shape with a light green center and brown outer sections. The neck and headstock are brown with several parallel lines representing strings. A dark brown circle with a white border is positioned over the soundhole, containing the word 'CSHEMA' in white, bold, sans-serif capital letters. A small dark brown rectangle is located below the soundhole.

CSHEMA

PROGRAM GUIDE



SPONSORS

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Campus Optics

CampusOptics is a modern, mobile EH&S platform purpose-built for institutions of Higher Education. Trusted by over 150 leading institutions, CampusOptics streamlines the management of a wide array of critical EH&S functions, including chemical inventory, hazardous waste, radiation safety, inspections, assets, protocols, permits, incidents, and assessments. With innovative technology and exceptional customer support, CampusOptics empowers campus safety professionals to improve collaboration, reduce risk, and enhance safety culture.



Ideagen

Schools, colleges and universities face growing compliance obligations — from safeguarding and staff training to policy management and incident reporting.

Ideagen brings together education software for policy management, regulatory intelligence and workforce training so every institution can meet its duty-of-care obligations with confidence and clarity.

Gold



Bronze



Other



WELCOME

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MESSAGE FROM THE PRESIDENT

Howdy and welcome to the 73rd Annual CSHEMA Conference in Austin, Texas!

My very first CSHEMA conference was here in Austin, so it's especially meaningful to me to be back here welcoming you to this vibrant city as President. Our theme over this past year has been learning, and conferences like this are where that happens most visibly: we learn by comparing approaches, sharing what worked (and what didn't), and building connections that outlast any single session.

My sincere thanks go to **Nancy Eaker** and the **Conference Planning Committee** for shaping this year's conference, and to **Gloria Ruiz** and the **Conference Education Subcommittee** for assembling such a strong technical program. I also want to thank all of our **presenters**, who generously share their experience and knowledge, our **exhibitors and sponsors**, whose contributions makes this conference possible, and our **Central Office** for their support.

As we come together, I'd like to celebrate some key accomplishments from the past year:

- **Mission & Vision** – We continued implementing the 2021–2026 Strategic Plan and began shaping the next one, along with refreshing our Mission and Vision statements to better align with current goals and member needs.
- **Engagement in Action** – We expanded Lab Safety Awareness Week, supported our Communities of Practice, renewed key Strategic Alliance Partnerships, and piloted a Graduate Safety Certificate to provide more value to our members.
- **Professional Growth** – We delivered major in-person events in Seattle and Richmond, launched the CSHEMA Academy as our central online learning hub, continued our successful webinar programming, and introduced the “Seattle Comes to You” Virtual Showcase to bring top conference content directly to our members wherever they are.
- **Navigating Change** – We engaged on federal rules, government funding decisions, and court cases affecting our members; collaborated with CUPA-HR, which conducts the primary national salary surveys for higher education, to better define EHS job roles; and negotiated and implemented a new management company contract with Association Headquarters to better support our member services, events, technology, and sponsorships.

Throughout this week, I hope you'll lean into the learning theme: attend sessions that stretch you, talk with exhibitors and partners about what your campus needs, and make time to learn from colleagues old and new.

Please also plan to join us at the **Annual Business Meeting** Wednesday morning, where we'll share more about what we've learned this year, how it's shaping where we're headed next, and formally welcome someone who I truly admire, **Robin Izzo**, as the incoming CSHEMA President. It's a great opportunity to see the bigger picture and understand what comes next.

Thank you for being here, and for all you do for your campuses and for this community!

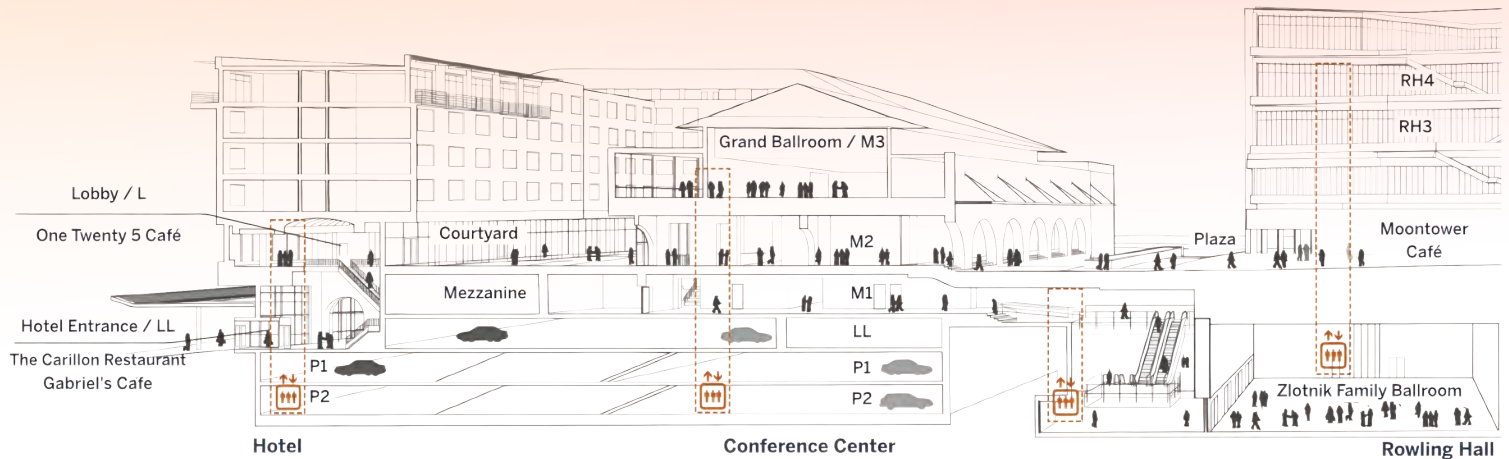
Warm regards,

Mary Lindstrom

CSHEMA President 2025–2026



HOTEL LAYOUT



RH 3 _____ Pecos, Comal, Brazos, RH 3 Prefunction
RH 4 _____ Guadalupe, Lavaca, RH 4 Prefunction
Lower Level _____ Hotel Entrance, The Carillon Restaurant, Gabriel's Café

Level M1 _____ Zlotnik Ballroom
Level M2 _____ Tejas, Front Desk, Business Center
Level M3 _____ Grand Ballroom

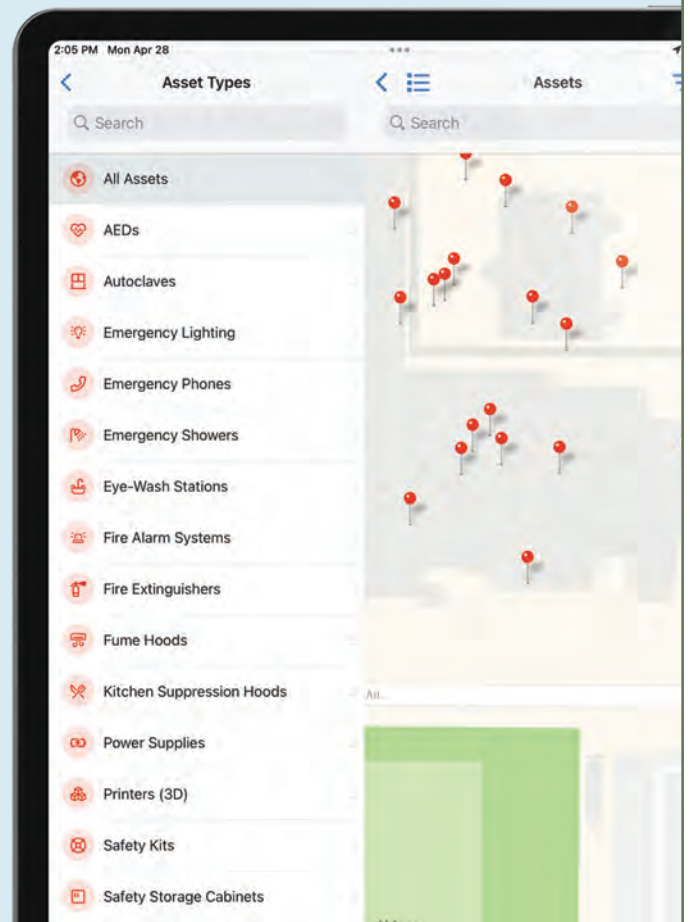
CampusOptics

An EH&S Solution designed for Higher Education

- | | |
|---|--|
|  Chemical Inventory Management |  Hazardous Waste Management |
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|  Training Management |  Radiation Safety |
|  Issue Logging & Remediation |  Incident Management |
|  Safety Inspections |  Occupational Safety |
|  Permit Management |  Compliance Calendar |
|  Protocol Management |  Hazard Assessments |

Visit us in the Exhibit Hall, to learn how CampusOptics can be your single source of truth for all your campus safety data.

campusoptics.com



CORPORATE PARTNERS

3Flow

3flow.com



Over the past 30 years, 3Flow has earned recognition as a worldwide leader in advanced indoor air systems for laboratory, research, and manufacturing environments. Our specialists provide industry-best expertise, analysis, products and training to deliver the three key performance benefits that flow through your systems: occupant safety, energy efficiency, and organizational success.

The 3Flow team is comprised of seasoned experts with decades of experience in airflow systems engineering, airflow and ventilations safety, building construction and retrofits, product design, testing and training. Our name is derived from three primary areas of focus: Enhancing safety, reducing waste, and facilitating success.

Arcwood Environmental

arcwoodenviro.com



At Arcwood Environmental, we minimize the impact of waste to clear the way for a better future. Backed by decades of experience, we partner with Fortune 500 companies and local enterprises across industries—including pharmaceutical, chemical, advanced manufacturing, oil and gas, and steel—to tackle the world's most pressing industrial waste challenges. Our comprehensive agile and scalable solutions span the entire waste management hierarchy, from prevention and recycling to treatment and disposal. Our customizable solutions are designed to keep operations running smoothly while supporting compliance and sustainability goals. We're known for our responsiveness to our customers, ongoing strategic collaboration, and commitment to strong ethics and safety. Learn more at www.arcwoodenviro.com.

Azelia Labs

azelialabs.com



Azelia Laboratories helps higher education EHS leaders fix research safety problems that keep resurfacing: slow or confusing review processes, unclear ownership between EHS and research, and biosafety or compliance findings that never stay closed. All of our consultants have experience as university EHS safety leaders, so we understand the pain points, inefficiencies, and budget constraints you navigate every day, and we tailor solutions to your actual resources and culture. We focus on clarifying roles across departments, institutional committee efficiency, and risk assessments across labs, vivaria, and core facilities—turning complex requirements into simple, repeatable workflows for investigators and staff. Services include program assessments, policy and charter development, workflow and forms redesign, fractional officer support, and memorable, custom training for scientific and administrative audiences. As an independent, women-owned consulting firm with a national, higher-ed EHS footprint, we support institutions across the U.S. through targeted projects and long-term collaborations in research safety.

BSI Consulting

www.bsigroup.com



Our mission is to empower you to inspire trust, foster excellence, and ensure safety in your organization; driving positive change for a better world. We exist to have a positive impact on society. Find out how we partner to deliver solutions to society's biggest challenges.

Campus Optics

www.campusoptics.com



CampusOptics is a modern, mobile EH&S platform purpose-built for institutions of Higher Education. Trusted by over 150 leading institutions, CampusOptics streamlines the management of a wide array of critical EH&S functions, including chemical inventory, hazardous waste, radiation safety, inspections, assets, protocols, permits, incidents, and assessments. With innovative technology and exceptional customer support, CampusOptics empowers campus safety professionals to improve collaboration, reduce risk, and enhance safety culture.

Cintas First Aid and Safety

cintas.com



From restrooms and classrooms to auditoriums and gymnasiums, your school buildings and campus work hard for everyone in them, and your employees work just as hard to make sure floors are clean, restrooms are welcoming and dining halls are ready to serve. Cintas provides crisp, comfortable workwear with inclusive laundry service, so your facilities teams can feel confident and stay focused on getting the job done efficiently. Safety is never compromised, with an array of first aid products and safety services, including fire protection. Even at your busiest, you can open your doors with confidence knowing Cintas has you covered with a wide range of products and services that put learning first.

Consolidated Safety Services, Inc. (CSS)

www.css-inc.com



CSS services are organized into several core competencies and cross-cutting services that we have cultivated through our 30+ years of corporate experience. Our diverse staff of employee-owners represent close to 70 distinct disciplines ranging from astronomy to zoology. The majority of our staff hold advanced education degrees, and professional certifications, reflecting a level of scientific expertise critical to the mission of our clients.

The EI Group, Inc.

www.ei1.com



The EI Group, Inc. (EI) is an environmental, health and safety (EHS) consulting firm headquartered in Research Triangle Park, North Carolina, with branch offices strategically located throughout the United States and the capability to serve a wide variety of industries across the world. Founded in 1989 solely as an environmental consulting firm, EI's response to its clients' needs led to a natural progression for the company to widen its scope of services. As a result, EI began providing comprehensive consulting in areas including industrial hygiene, safety and occupational health. EI's diversification of complementing services has made it the one and only call its clients ever need to make for comprehensive occupational safety and health and environmental engineering consulting.

Environmental Health & Engineering, Inc.

www.eheinc.com



Colleges and universities face unique environmental health and safety (EHS) challenges due to the wide range of building types and operations—from residence halls and classroom facilities to advanced research laboratories and historic infrastructure.

Environmental Health & Engineering (EH&E) offers integrated solutions that reflect the full complexity of higher education settings. Our team combines expertise in safety, engineering and environmental science to evaluate issues from multiple perspectives—delivering practical, balanced and sustainable outcomes.

With nearly 40 years of experience partnering with colleges and universities across the country, we understand how to tailor our support to your institution's infrastructure and long-term objectives.

- Biosafety Consulting & Strategic Staffing
- EHS Program Support & Compliance Management
- Indoor Environmental Quality
- Commissioning, Engineering & Energy Optimization
- Exposure & Risk Analysis

Whether you need to fill critical staffing gaps, optimize building systems, or strengthen laboratory safety, EH&E provides the deep expertise your institution needs to succeed.

Fume Hood Certified

www.fumehoodcertified.com



Fume Hood Certified (FHC) helps laboratories see and verify containment, not just measure airflow. Founded by Chip Albright, who brings 40+ years of fume hood design and manufacturing expertise, FHC is built around one principle: face velocity alone doesn't tell you whether a hood is protecting the people working at it.

For educational and private institutions alike, FHC is the only provider delivering real-time laser containment visualization, making airflow visible and pairing it with the dynamic challenges ASHRAE 110's foreword recommends. Safety professionals get the evidence to trust their containment and demonstrate it within minutes.

FHC also provides extensive on-site training and troubleshooting, building competency where the work actually happens.

Ideagen

www.ideagen.com



Schools, colleges and universities face growing compliance obligations — from safeguarding and staff training to policy management and incident reporting.

Ideagen brings together education software for policy management, regulatory intelligence and workforce training so every institution can meet its duty-of-care obligations with confidence and clarity.

Lighting Resources

lightingresourcesinc.com



Lighting Resources is among the nation's largest bulb recyclers, delivering environmentally sound processing to businesses and commercial contractors for more than 25 years.

With 12 facilities nationwide, our own fleet of permitted vehicles, and a comprehensive mail-back recycling program, Lighting Resources is uniquely positioned to manage universal waste by the unit or truckload.

Lighting Resources (bulk recycling division) delivers waste processing and management solutions for all types of bulbs, batteries, PCB and non-PCB ballasts, mercury-containing devices, electronic waste, tritium exit signs, smoke detectors, airbags and more!

EZ on the Earth (mail-back recycling division) provides a simple and efficient process. First, select the appropriate recycling kit for the materials you need to dispose of, such as batteries, bulbs, or ballasts. Once you receive the kit, fill it with your waste and securely seal the box. Then, schedule a convenient pickup, and we'll handle the rest by collecting the box from your location.

Minus80 Monitoring

minus80monitoring.com



Minus80 Monitoring provides an easy, effective, and economical way to remotely monitor critical parameters for any type of temperature controlled storage unit.

Real time monitoring, alerting, and reporting helps to protect your lab from loss due to the failure of a temperature controlled unit, from a door left open, or from a temperature exceeding the desired threshold. With the ability to immediately know of impending loss, your research is protected.

Risk & Safety Solutions

<https://riskandsafety.com>



Our approach is simple. We build innovative, user-friendly solutions collaboratively with our EH&S and research communities and continuously improve upon them based on user feedback. Our goal is to provide our users with the technology and value they need to excel in their jobs. We have been using this approach for over a decade, and it has proven to reduce the challenges of adopting new EH&S technology.

SafetyStratus, Inc

www.safetystatus.com



SafetyStratus provides cloud-based EHS management software, offering tools for inspections, incident management, chemical inventory, and training to enhance campus safety and compliance.

Salute Safety

www.salutesafety.com



Salute Safety is a cloud-based, all-in-one Environmental Health and Safety software company that helps organizations streamline compliance, manage risk, and improve workplace safety. Its platform centralizes critical safety programs such as incident reporting, inspections and audits, chemical inventory, waste management, and permits. Designed for healthcare, life sciences, higher education, and other complex environments, Salute enables safety teams to automate workflows, generate actionable reports, reduce administrative burden, and maintain regulatory compliance through a unified, user-friendly platform.

SciSure

www.scisure.com



SciSure delivers integrated laboratory safety and compliance solutions, empowering research organizations to manage hazards, training, and regulatory requirements efficiently.

Triumvirate Environmental

www.triumvirate.com



Passionate about customer service and dedicated to safety, Triumvirate Environmental has been providing environmental, health, and safety (EHS) services to world-renowned universities for more than 35 years. Triumvirate Environmental's highly experienced specialists develop innovative EHS programs and solutions targeted to the unique needs and challenges of colleges and universities.

This industry leader, headquartered in Somerville, Massachusetts, provides waste management and disposal solutions, EHS consulting services, and laboratory and facility services to customers across the United States and Canada. Triumvirate Environmental helps companies ensure regulatory compliance, minimize waste, and reduce costs.

Whether they are decontaminating a lab, preparing a university for an OSHA inspection, or disposing of hazardous waste streams, Triumvirate Environmental's employees pride themselves on exceeding customers' expectations. Taking the worry out of EHS management, they enable companies to focus on their core business.

You can learn more about Triumvirate Environmental by visiting their website at www.triumvirate.com.

Vertere

www.vertere.com



For over 30 years, Vertere has served the laboratory community with a flexible barcode-enabled, container tracking inventory system. Whether you manage chemicals, biologicals, equipment, or stockroom supplies, Vertere addresses the challenges of inventory management with a powerful shared database engine in over 1000+ labs globally.

CSHEMA Scholarship Fundraising Opportunities

- **The Tuesday Mixer will be Line Dancing! No cover charge.**
- **Extra CSHEMA Conference T-Shirts are available to purchase.**
- **Participate in the CSHEMA Silent Auction and bid high!**
- **All proceeds will go to the scholarship fund.**

Personal Care Lounge

CSHEMA is pleased to offer a dedicated Personal Care Lounge for attendees who may need a quiet, private space during the conference. This room may be reserved for personal wellness needs, including prayer, meditation, expressing milk, taking a break from conference activities, or other personal care purposes. **Please visit the Registration Desk to reserve the space.**

STRATEGIC ALLIANCE PARTNERS

ABSA

www.absa.org



ABSA International promotes biosafety as a scientific discipline and serves the needs of biosafety professionals worldwide. It provides a forum for the exchange of biosafety information and represents the interests of biological safety practitioners.

Chemical Insights - Not For Profit

www.chemicalinsights.org



Chemical Insights, an Institute of Underwriters Laboratories, delivers scientific insight for informed environmental health decisions, supporting research and guidance on topics like 3D printing safety and indoor air quality.

Campus Fire Safety

www.mycfcs.org



The Center is a non-profit organization devoted to reducing campus fire incidents through education, engineering, and enforcement. It serves as the national voice for campus fire safety.

CSHEMA Welcome Reception

Sunday, July 19th from 6:00PM – 9:00PM

Join us for a cold drink in a metal pint glass, compliments of CampusOptics.

CSHEMA Platinum Sponsor:



Safety starts with visibility across every lab, team, and location



Health & Safety

- Centralize chemical inventory, inspections, and compliance workflows
- Track chemicals from procurement through disposal
- Improve audit readiness with real-time reporting
- Reduce manual processes and compliance gaps
- Support safer, more efficient laboratory operations



Visit us at
booth 201 & 300

SCHEDULE

Saturday, July 18, 2026 **Times noted in Central Time*

Time	Session Type	Title	Presenter(s)	Location
7:00am - 5:00pm		Registration Open / Information Desk		Zlotnik Pre Function
8:00am - 4:00pm	Meeting	Board of Trustees Meeting		Conference Room 301
8:00am - 5:00pm	8-Hour PDS	Industrial Hygiene 101	Bobby Clark	Guadalupe
8:00am - 5:00pm	8-Hour PDS	Mastering Laboratory Ventilation Safety From Design to Safe Use	Chip Albright	Lavaca
8:00am - 5:00pm	8-Hour PDS	Risk Isn't What You Think (It's What You Perceive and Feel)	Jonathan Klane	Brazos
12:00pm - 1:00pm		Lunch (PDS Attendees Only)		
1:00pm - 5:00pm	4-Hour PDS	Building the Dream Team - Vital Partnerships and Strategic Planning for EHS	Amy Orders	Pecos
1:00pm - 5:00pm	4-Hour PDS	Mitigating Risks: A Practical Guide to High Activity Radioactive Sources & Alternative Technologies	Jacob Kamen, Brandon Hughes, Hannah Gagarin, Chad Ummel	Comal
6:00pm - 9:00pm	Social	Leadership Event (Invitation Only)		

Fay M. Thompson Scholarship Silent Auction Fundraiser

Who is Fay M. Thompson, for whom the scholarship is named?

[CLICK HERE](#) to see a tribute by Bruce Backus, (retired) CSHEMA President 2011–2012.

How it Works:

We're asking Institutions, departments, or colleges within Institutions, or even individuals, to put together a 'basket' of items that would be of interest to a wide audience. We love items that your region/state/city is well-known for or unique items that you have crafted. Please don't provide school swag.

Please bring your donated item with you to the CSHEMA Registration Desk located in the Zlotnik Foyer. To make it easier for winners to travel home with their prizes, we kindly ask that donated items be small enough to fit in carry-on luggage.

Social Media Tags

#CSHEMA #EHS



Please note that CSHEMA is unable to package or ship auction items to winners. All items must be taken by the winner at the conclusion of the event.

Bidding:

The items will be on display in the Grand Ballroom. Bidding begins Monday, July 20 at 7:30am until 8:00pm on Tuesday, July 21.

Item Delivery:

Each item will be awarded to the highest bidder. You must be present to claim your prize. Payment is required at the time your winning bid is confirmed. Winning items must be taken with you following the event.

Sunday, July 19, 2026 *Times noted in Central Time

Time	Session Type	Title	Presenter(s)	Location
7:00am - 5:00pm		Registration Open / Information Desk		Zlotnik Pre Function
7:00am - 6:00pm		Exhibit Hall Open		Grand Ballroom
8:00am - 4:00pm	Meeting	Board of Trustees Meeting		Conference Room 301
8:00am - 12:00pm	4-Hour PDS	Hands-On Workshop on Interactive Safety Training	Sydney Johnston, Lakshmi Attigala, Michelle Thompson	Pecos
8:00am - 12:00pm	4-Hour PDS	Beyond Compliance: Designing Engaging and Accessible eLearning	Alisha Diego Klatt, Kirsten Yi Guan, Hannah Ramsey	Brazos
8:00am - 12:00pm	4-Hour PDS	Creating a Unified Safety Culture in Academic Laboratories	Gloria Ruiz	Lavaca
8:00am - 12:00pm	4-Hour PDS	Lab Safety 101: Building a Resilient Academic Lab Safety Program	Larry Mendoza	RH 4.416
8:00am - 12:00pm	4-Hour PDS	Lithium-Ion Battery Safety: What Everyone Needs to Know	Eric Huhn	Guadalupe
8:00am - 12:00pm	4-Hour PDS	RCRA 101: Introduction to the Resource Conservation and Recovery Act	Courtney Kerr	Comal
8:00am - 12:00pm	4-Hour PDS	Using Real Leading Indicators to Demonstrate the Value of EHS	Kathy Malone	RH 4.308
12:00pm - 1:00pm		Lunch (PDS Attendees Only)		
1:00pm - 4:00pm		Leadership Workshop		RH 4.314
5:00pm - 6:00pm	Social	1st Time Attendee Event, Sponsored by 		Tejas
6:00pm - 9:00pm	Social	Welcome Reception, Sponsored by  Hors d Oeuvers & Mingling Awards Ceremony starting at 7pm		Zlotnik

Keynote Speaker

Patrick Nelson

July 20 • 11:05am - 12:15pm • Zlotnik

Patrick has gained both local and national accolades for his military service, academic career, and work as a professional speaker and trainer including being named the inaugural NFL-Tillman Military Scholar. He is an experienced leader that spent nearly seven years in the U.S. Army as a paratrooper and completed three combat deployments leading soldiers. His military awards include the Bronze Star Medal and the Purple Heart Medal.

Patrick is an engaging facilitator that has led leadership development programs for a variety of clients, from Fortune 500 clients to small businesses and across a variety of industries. Off the proverbial leadership field, he serves his community by actively volunteering with Tee It Up for the Troops, a non-profit organization that raises money for wounded veterans.

Patrick studied at Minnesota State University and received a Bachelor's Degree graduating Magna Cum Laude. He also has a Master's Degree in Sport Management from Minnesota State and a Masters in Organization Development from Pepperdine University.



Monday, July 20, 2026 *Times noted in Central Time

Time	Session Type	Title	Presenter(s)	Location
6:30am - 7:30am		Fun Run		Meet in hotel lobby
7:00am - 5:00pm		Registration Open / Information Desk		Zlotnik Pre Function
7:00am - 5:00pm		Exhibit Hall Open		Grand Ballroom
7:30am - 8:30am		Breakfast		Grand Ballroom
8:40am - 9:25am	Technical	Addressing Reproductive Health Concerns in Research Laboratories	Mita Juristyarini	Lavaca
8:40am - 9:25am	Technical	Building Beyond Compliance: Safety Training that Works	Sydney Johnston	Guadalupe
8:40am - 9:25am	Technical	Changing Image: Creating a New Culture of Safety	Jacob Broderick	RH 4.416
8:40am - 9:25am	Technical	Creative Strategies for Scenario-Based Lab Safety Training	Peggy Lei	RH 4.308
8:40am - 9:25am	Technical	Developing Industrial Hygiene & Safety Elements at a University to Incorporate an Indoor Air Quality (IAQ) Mold/Water Damage Response Program	Mark Hlebichuk	5th Floor Special Events
8:40am - 9:25am	Technical	OSU's Approach to Fire and Life Safety Issues Attributed to Human Behavior	Gerald Petre	RH 4.314
8:40am - 9:25am	Technical	Safety & Compliance for a Dynamic Campus Utility Department	Sean Speed	Brazos
8:40am - 9:25am	Technical	The Unknown Risks of Having A Rail Line Adjacent to Your Campus	Andrew Lawson	Pecos
9:35am - 10:20am	Technical	Developing a University Policy for Service Animals in Research and Teaching Laboratories: Process, Challenges, and Implementation Strategies	Erica Gonzaga	Lavaca
9:35am - 10:20am	Technical	From Compliance to Curriculum: How Becoming Faculty Changed My View of Safety	Gloria Ruiz	Guadalupe
9:35am - 10:20am	Technical	Safety is for Everyone, Not Just Students and Staff	Angie Vreugdenhil	RH 4.416
9:35am - 10:20am	Technical	Safety Signs: Make Them Suck Less	Eric Huhn	RH 4.308
9:35am - 10:20am	Technical	Safety Culture- Research Hazard Assessment	Patricia Delaney	5th Floor Special Events
9:35am - 10:20am	Technical	Evolution of a -80°C Freezer Program	Courtney Kerr	RH 4.314
9:35am - 10:20am	Technical	CSI Isnt Just on TV: Environmental Forensics and Uncharted Challenges in University EHS	Cheri Hildreth, Tamece Knowles	Brazos
9:35am - 10:20am	Technical	The Most Dangerous Place on Campus	John DeLaHunt	Pecos
9:35am - 10:20am	Vendor	Introducing: CampusOptics Form Exchange	Brandon Phipps	Comal
10:30am - 11:00am		Break with Exhibitors		Grand Ballroom
11:05am - 12:15pm	Keynote	Keynote Address	Patrick Nelson	Zlotnik
12:15pm - 2:00pm		Lunch with Exhibitors, Sponsored by  Poster Sessions		Grand Ballroom
2:10pm - 2:55pm	Technical	Sneezing and Wheezing: Evaluating and Controlling Laboratory Animal Allergens	Brent Cooley, Alexis Parker-Vega	Lavaca
2:10pm - 2:55pm	Technical	Providing Labs a Voice: How Safety Benefits from Creating a Lab Manager's Forum	Ryan Lisk, Bruce Brown	Guadalupe
2:10pm - 2:55pm	Technical	Leading the Way: Building a Proactive Safety Culture in Higher Education	Otu Inyang	RH 4.416
2:10pm - 2:55pm	Technical	From Franken - Systems to Streamlined Solutions	Michelle Thompson	RH 4.308
2:10pm - 2:55pm	Technical	From Compliance to Confidence: Visualizing Fume Hood Containment on a University Budget	Tricia Hahn, Alex Albright	5th Floor Special Events
2:10pm - 2:55pm	Technical	An Interdisciplinary Approach to Lithium-Ion Battery Safety	Nicole Sanders, David Kalafut, Vinay Premnath	RH 4.314
2:10pm - 2:55pm	Technical	Enhancing Engineering Safety via Support and Project Safety Analysis (PSA) Synergy	Abdulhaqq Ibrahim, Mario Gomez Hernandez	Brazos
2:10pm - 2:55pm	Technical	Building a Statewide Higher Education Safety Council: A Model for System-Level Impact	Jacqueline Roquemore, Teresa Belback	Pecos
2:10pm - 2:55pm	Vendor	AI That Holds Up Under Audit: Practical Applications for Campus EHS	Stephenie Langston	Comal

Monday, July 20, 2026 *CONTINUED*

Time	Session Type	Title	Presenter(s)	Location
3:05pm - 3:50pm	Technical	<i>From Data to Decisions: Using AI to Evaluate and Strengthen Injury Prevention Programs in Higher Education</i>	Diana Cox, Veronica Nelson	Lavaca
3:05pm - 3:50pm	Technical	<i>Beyond the Matrix: Rethinking PPE for Modern Academic Labs</i>	Mary Lindstrom	Guadalupe
3:05pm - 3:50pm	Technical	<i>Recognizing Everyday Excellence in Safety</i>	Lakshmi Attigala	RH 4.416
3:05pm - 3:50pm	Technical	<i>An Innovative Safety Training - Game Based Learning Method</i>	Margaret Smallbrock, Kevin Dolge, Patrick Ceas, Joe Udelhofen	RH 4.308
3:05pm - 3:50pm	Technical	<i>Toxic Wind Blowback in Fume Hood Buildings</i>	Victor Neuman	5th Floor Special Events
3:05pm - 3:50pm	Technical	<i>Stay Calm, Act Fast: Five Steps to Handle Cardiac and Bleeding Emergencies</i>	Barbara Kinter, Sarah Gillen	RH 4.314
3:05pm - 3:50pm	Technical	<i>After the Fact Permitting: Old Problems, New Headaches</i>	Jennifer Laine	Brazos
3:05pm - 3:50pm	Technical	<i>Applying Safety Science Concepts to Your Programs</i>	Sara Souza	Pecos
4:00pm - 4:40pm		Break with Exhibitors		Grand Ballroom
6:30pm - 8:30pm		Vendor Events (Invitation Only)		

Tuesday, July 21, 2026 **Times noted in Central Time*

Time	Session Type	Title	Presenter(s)	Location
7:00am - 5:00pm		Registration Open / Information Desk		Zlotnik Pre Function
7:00am - 2:00pm		Exhibit Hall Open		Grand Ballroom
7:30am - 8:30am		Breakfast		Grand Ballroom
8:40am - 9:40am	Keynote Panel	<i>Risk, Rules, and Resources: The EHS Balancing Act</i>		Zlotnik
10:00am - 10:45am	Technical	<i>What Scientists Wish Biosafety Officers Knew and What Biosafety Officers Wish Scientists Knew</i>	Glen Alberts	Lavaca
10:00am - 10:45am	Technical	<i>Leveraging the Power of AI for Lab Safety</i>	Andrew Pemberton	Guadalupe
10:00am - 10:45am	Technical	<i>Stop Managing Safety & Start Leading It: How Bold EHS Leaders Drive Influence, Alignment, and Real Change</i>	Denise Pappas	RH 4.416
10:00am - 10:45am	Technical	<i>Visual Chemical Safety Revisited - How Does AI Change the Picture?</i>	Kathy Malone	RH 4.308
10:00am - 10:45am	Technical	<i>Ototoxic Chemical Exposures, Toxicology, and Workplace Applications</i>	Mike Albert	5th Floor Special Events
10:00am - 10:45am	Technical	<i>Approved Storage of Hazardous Materials</i>	Megan Hall	RH 4.314
10:00am - 10:45am	Technical	<i>Diversifying Surveys Across Campus at Oklahoma State University - Workplace Surveys</i>	Val Freeman	Brazos
10:00am - 10:45am	Technical	<i>Science, Safety and Scuba: A Comparison of Scientific Diving with Maximum Containment (BSL-4) Research and How Training and Operational Standards Apply, or Should Apply, to Both.</i>	Lizzie McNamee, Anna Elzanaty	Pecos
10:45am - 11:25am		Break with Exhibitors		Grand Ballroom

Tuesday, July 21, 2026 *CONTINUED*

Time	Session Type	Title	Presenter(s)	Location
11:25am - 12:10pm	Technical	Occupational Health as Strategy: Protecting People, Powering Performance	Matthew Hamm	Lavaca
11:25am - 12:10pm	Technical	Optimizing Lab Safety: Risk-Based Chemical Hazard Classification	Johanna Andryszewicz, Janina Willkomm	Guadalupe
11:25am - 12:10pm	Technical	Double Agents: Safety Professionals Embedded at the Intersection of EH&S and Research Communities	Devin Leonard, Anna Gioseffi	RH 4.416
11:25am - 12:10pm	Technical	Data-Driven Decision Making: what the LionSafe Risk Assessment Reveals About Research Safety	Diann Stedman, Peter Muldoon, James Crandall	RH 4.308
11:25am - 12:10pm	Technical	With Love, Your Friendly Neighborhood Industrial Hygienist	Kelsey Griffith	5th Floor Special Events
11:25am - 12:10pm	Technical	Verify Then Trust: Accepting a New Fire Panel as an Embedded EHS Professional	Anthony Murph	RH 4.314
11:25am - 12:10pm	Technical	Proactive PFC management, Lessons Learned in Campus Wide Inventory/Disposal of PFCs	Tom Syfert, Adam Roberge	Brazos
11:25am - 12:10pm	Technical	Not Your Usual EHS training - Role Playing for the Win!	Amy Orders, Hans Neilson	Pecos
11:25am - 12:10pm	Vendor	From Purchase Order to Chemical Intelligence: Why Procurement Integration Matters	Daina Huntington	Comal
12:20pm - 2:00pm		Lunch with Exhibitors, Sponsored by  Poster Sessions		Grand Ballroom
2:15pm - 3:00pm	Technical	Evaluating the Effectiveness of Targeted Sharps Safety Interventions at the Abigail Wexner Research Institute	Sumit Ghosh	Lavaca
2:15pm - 3:00pm	Technical	Lab Check-ins: Strengthening EHS & Research Relationships	Kaleela Kadir	Guadalupe
2:15pm - 3:00pm	Technical	From Audit to Action: Driving Safety Transformation	Elizabeth Henry	RH 4.416
2:15pm - 3:00pm	Technical	Excel Tool development for Laboratory Chemical Management	Karen Jackson	RH 4.308
2:15pm - 3:00pm	Technical	Assessment of Inhalation Risks Associated with Off Gassing from 3D Printing Dental Resins	Qian Zhang	5th Floor Special Events
2:15pm - 3:00pm	Technical	Two Buildings, Two Pathways: Operationalizing EHS in New Construction and Institutional Merger Environments	Connor Cordray, Shalaka Kotkar	RH 4.314
2:15pm - 3:00pm	Technical	Innovative Environmental Compliance Strategies at UC Berkeley: Integrating Stormwater Management and Remediation with Institutional Priorities	Alicia Bihler	Brazos
2:15pm - 3:00pm	Technical	Implementation of Agriculture Field Safety	Sam Stoxen	Pecos
3:10pm - 3:55pm	Technical	Beyond the Threshold: Managing Biological Toxins in Academic Labs	Allyssa Baptista	Lavaca
3:10pm - 3:55pm	Technical	Fume Hood MythBusters: Why Face Velocity Isn't Enough for Safety	Chip Albright	Guadalupe
3:10pm - 3:55pm	Technical	How to Make Friends and Influence People: Building Partnerships that Advance Campus Safety	Robin Izzo	RH 4.416
3:10pm - 3:55pm	Technical	Behind the Curtain: AI and the Dangerous Illusion of Compliance	Robert Day	RH 4.308
3:10pm - 3:55pm	Technical	A Multi-Disciplinary Team Approach is Best at Solving the Actual Problem	Jonathan Klane, Alex Albright	5th Floor Special Events
3:10pm - 3:55pm	Technical	How Fayetteville State University Built a Campus-Wide Culture of Cardiac Preparedness	Gina Rodriguez, Andrea Cortez	RH 4.314
3:10pm - 3:55pm	Technical	The Dirt on Campus Edible Gardens	Leanne Wright, Lei Ilan-Garcia	Brazos
3:10pm - 3:55pm	Technical	Controlled Substances and Drug Contraband: A Deep Dive into Regulatory Requirements to Establish Institutional Compliance	Carrie Colbert	Pecos
4:10pm - 5:00pm		CoP Meetings		Various Rooms
6:00pm - 9:00pm	Social	Scholarship Fundraiser		Grand Ballroom

Wednesday, July 22, 2026 *Times noted in Central Time

Time	Session Type	Title	Presenter(s)	Location
7:00am - 5:00pm		Registration Open / Information Desk		Zlotnik Pre Function
7:30am - 8:30am		Breakfast		Zlotnik Prefunction
8:40am - 9:50am		Annual Business Meeting		Zlotnik
9:50am - 10:10am		Break		RH 3&4 Prefunction
10:10am - 10:55am	Technical	Compressed Gas Cylinder s Safety Guidelines	Scott Nelson	Lavaca
10:10am - 10:55am	Technical	Enhancing Laboratory Safety Through a Comprehensive and Collaborative Inspection Program	Ying Liu	Guadalupe
10:10am - 10:55am	Technical	EHS beyond the Labs: Making Chemical Safety, Management, and Disposal Accessible for Commonly Overlooked Departments	Sarah Wannemuehler	RH 4.416
10:10am - 10:55am	Technical	Safety Without Barriers: Designing Digital Content for Real-World Accessibility	Hannah Ramsey, Kristen Guan	RH 4.308
10:10am - 10:55am	Technical	Fume Hood Commissioning Challenges and How the Laboratory Ventilation Management Plan Assures Proper Performance	Thomas Smith, David Brummitt, Clarissa Lynch	5th Floor Special Events
10:10am - 10:55am	Technical	Revisiting Our Old Friend HAZWOPER, a Deeper Look at University Requirements	Dennis Terpin	RH 4.314
10:10am - 10:55am	Technical	Navigating Environmental Compliance: Progress and Challenges on a Large University Campus	Amit Nair	Brazos
10:10am - 10:55am	Technical	Celebrate Good Times, Come On!	Zoe Harris	Pecos
10:55am - 11:15am		Break		RH Prefunction
11:15am - 12:00pm	Technical	Biosafety Made Simple	Ekaterina Semenyuk	Lavaca
11:15am - 12:00pm	Technical	Defining the Value of the EHS Professional in Higher Education	Stephen Larson	RH 4.416
11:15am - 12:00pm	Technical	From Paper to Electrons Moving Into the Future, Whether We Like It or Not	Alicia Duprey-Gatrell	RH 4.308
11:15am - 12:00pm	Technical	Nitrous Oxide Safety: Hazard Recognition, Assessment and Mitigation Strategies in Dental Spaces	Charisma Lattao, Spencer Chichester	5th Floor Special Events
11:15am - 12:00pm	Technical	Educational Institutions as Special Event Venues	James Rainer	RH 4.314
11:15am - 12:00pm	Technical	Using EHS Contractors and Peer Reviews for Program Development	Amy Orders, Janet Eggum	Brazos
11:15am - 12:00pm	Technical	Integrating Laser Safety Oversight into the Procurement Process	Otu Inyang	Pecos
12:10pm - 1:10pm		Lunch, Sponsored by 		Zlotnik Prefunction
1:20pm - 2:05pm	Technical	Chemical Hygiene Plan in Daily Practice	Ivet Hernandez, Beth Welmaker	Guadalupe
1:20pm - 2:05pm	Technical	From Data to Decisions: Leveraging Information Systems to Strengthen Safety Operations at UNLV	Robert Deaver, Paul Garcia	RH 4.308
1:20pm - 2:05pm	Technical	Real-Time Particle Monitoring as a Quality Improvement Tool for Construction Projects	Milton Griggs	5th Floor Special Events
1:20pm - 2:05pm	Technical	The Hunt for Picric Acid	Jennifer Laine	RH 4.314
1:20pm - 2:05pm	Technical	The Most Dangerous Tasks on Campus (Both Usually EHS Operations)	John DeLaHunt	Brazos
2:15pm - 3:00pm	Technical	Six Years of Progress: Designing, Implementing, and Evolving a High Reliability Lab Closeout Program at UF	Erica Gonzaga	Guadalupe
2:15pm - 3:00pm	Technical	Strengthening Safety Culture Through Purdue's Integrated Safety Plan	Mita Juristyarini, Michael Silanskis	RH 4.416
2:15pm - 3:00pm	Technical	Open-Source, On-Premises Laboratory Telemetry: Enhancing Safety and Operational Resilience	Richard Blair	RH 4.308
2:15pm - 3:00pm	Technical	Experience How Group Story Sharing Helps Fix Fume Hood Challenges	Jonathan Klane, Alex Albright	5th Floor Special Events
2:15pm - 3:00pm	Technical	Performance and Security Assessment of X-ray Irradiators as a Replacement for Cesium-137 Sources in Industrial Sterilization: A Brazilian Case Study Informed by the Goiânia Legacy	Joao Claudio Batista Fiel	Brazos

AWARDS

Dr. Fay Thompson Scholarship Recipients

Sponsored by Safety Stratus

Emily Ho, The University of Maryland
- College Park

Annabelle Magill, Worcester
Polytechnic Institute

Aaron Zheng, Kennesaw State
University

Innovation Award for Process Improvement

Large School:

Virginia Commonwealth University

Medium School:

California State University
- San Marcos

Small Schools:

South Dakota School of
Mines and Technology,
Carleton College,
St. Olaf College

Innovation Award for Resource Enhancement

Large School:

University of Florida

Medium School:

California State University
- San Marcos

Small School:

Carleton College

Innovation Award for Safety Culture

Large School:

University of Florida

Medium School:

California State University
- San Marcos

Small School:

Carleton College

Marketing Single Media Award

Large School:

Iowa State University

Medium School:

Oklahoma State University

Small School:

Montgomery College

Marketing Campaign Award

Large School:

University of Maryland

Medium School:

Nova Southeastern University

Comprehensive EHS Marketing and Communications Program

Large School:

University of Florida

Medium School:

Oklahoma State University

Campus Leaders Who Care Award

Amy Sebring, Virginia Tech

Rising Star Award

Haleigh Machost, University
of Minnesota - Duluth

Safety Professional Award

Mark Hlebichuk, University of Montana

Excellence in Volunteerism

Beth Welmaker, Nova
Southeastern University

Honorary Life

Francis Churchill,
University of Vermont

PROFESSIONAL DEVELOPMENT SESSIONS

July 18 - 8:00am - 5:00pm

Industrial Hygiene 101

Bobby Clark

Industrial hygiene is the science and art of anticipation, recognition, evaluation, and control of occupational hazards. The principles of industrial hygiene have broad application across almost all environmental health and safety fields. This course is designed to introduce safety professionals to industrial hygiene. This includes instruction in recognizing occupational hazards (chemical, physical, noise-related, biological, radiologic, and ergonomic), evaluating hazards through the use of direct-reading instruments and sampling equipment, and controlling hazards through the use of ventilation, personal protective equipment, and other types of controls. Attendees will be presented with real-world hazard scenarios and use the tools presented in the course to address the challenges presented by the scenarios.

Mastering Laboratory Ventilation Safety From Design to Safe Use

Chip Albright

How do we ensure our labs stay safe as research evolves, buildings age, and new technologies emerge? This full-day professional development session provides a comprehensive exploration of laboratory ventilation safety, equipping participants with both the technical knowledge and leadership strategies needed to manage and improve fume hood safety on campus. Drawing on over 45 years of experience in fume hood innovation, I will guide attendees through an integrated journey from design to safe use of laboratory ventilation systems. In the morning, we will focus on the engineering aspects: the fundamentals of lab HVAC systems and fume hood design. Participants will review key standards (such as OSHA's Laboratory Standard, ANSI/AIHA Z9.5 for lab ventilation, and ASHRAE 110 for hood performance testing) that inform how labs are built and maintained for safety. We'll discuss how to apply these principles when designing or renovating lab spaces and considering energy-efficiency measures without compromising safety.

We will also examine the emergence of high-performance "smart" fume hoods and controls that adapt to changing conditions to maintain containment. In the afternoon, the session shifts to operations, testing, and culture. Attendees will delve into effective methods for commissioning and routinely verifying fume hood performance (with demonstrations of containment testing techniques, airflow monitoring, and other validation tools). Just as importantly, we will address the human factors: how to train scientists and students to use hoods properly, how to establish a safety culture where ventilation issues are promptly reported and corrected, and how to communicate technical ventilation concepts to non-technical stakeholders (like faculty or capital planning committees) in order to gain support for safety improvements. Interactive breakout exercises will allow participants to troubleshoot real-world scenarios – for example, diagnosing the cause of a fume hood's poor performance or developing a response plan after a ventilation-related incident – and to develop action plans for improving their own institution's lab ventilation safety programs. By the end of this intensive workshop, participants will have a 360-degree understanding of laboratory ventilation safety. They will be empowered not only to identify and fix technical issues in hoods and HVAC systems, but also to champion holistic improvements – bridging gaps between EHS, facilities management, and lab personnel. Ultimately, attendees will be equipped to ensure that front-line safety equipment like fume hoods truly functions as the last line of defense against laboratory accidents, creating safer labs and a stronger culture of safety on campus.

Risk Isn't What You Think (It's What You Perceive and Feel)

Jonathan Klane

Ever wonder, what is risk really? And how or why do our perceptions of it differ so much? Risk is a human construct, not a natural or intrinsic phenomenon. Risk can be mathematically expressed as $\text{risk} = \text{severity} \times \text{exposure} \times \text{probability}$. It can also be presented graphically in a two-dimensional matrix (e.g., severity on the y-axis, and probability on the x-axis). But neither of these do justice to how humans perceive the risks they might face. Yet these artifacts of the analytical risk system predominate much of our approaches to comprehending and assessing risks. The experiential or affective risk system is used much more by humans. Some aspects include cognitive biases, heuristics,

threat-to-value, our fast-thinking brain, arithmetic of compassion, identifiable victim effect, and risk as feelings. Learners will work in small teams to improve how they think about, conceive, assess, share, feel, and perceive risk. There'll be many risk scenarios that the teams will engage in. Each team will also facilitate a brief conversation on the risk scenario and their processes and potentially different risk perceptions. Learners will leave with a new perspective on risk and our widely, wildly, and weirdly differing risk perceptions. This will help them relate with, accept, and collaborate with others on risky endeavors.

July 18 - 1:00pm - 5:00pm

Building the Dream Team - Vital Partnerships and Strategic Planning for EHS

Amy Orders

In today's rapidly evolving higher education landscape, Environmental Health & Safety (EHS) teams cannot successfully operate in isolation. Complex challenges—ranging from regulatory compliance, emergency preparedness, organizational resilience, and employee well-being—require integrated strategies supported by cross-disciplinary expertise. This presentation brings together a multidisciplinary team of leaders from risk management, insurance, police, emergency management, and EHS to demonstrate how high-functioning partnerships can elevate an organization's safety culture, reduce operational risk, and strengthen strategic planning.

Through real-world examples, participants will learn how collaborative teams break down silos, leverage shared data, align priorities, and build a unified risk and safety strategy. Presenters will highlight how to establish trust across departments, create predictable communication pathways, and embed joint decision-making into everyday operations, especially during times when interpersonal communication and organizational pressures can strain relationships.

Participants will leave with a practical framework (from exercises and take away examples) for building their own "Dream Team" of internal and external partners—one capable of anticipating needs, responding collaboratively to campus needs, and designing proactive strategies that improve resilience across the organization.

Mitigating Risks: A Practical Guide to High Activity Radioactive Sources & Alternative Technologies

Jacob Kamen, Brandon Hughes, Hannah Gagarin, Chad Ummel

This four-hour learning session is for all CSHEMA members interested in understanding and mitigating the risk of high activity radioactive sources, aligning with the U.S. national security strategy to eliminate radiological risks. High-activity radioactive sources are used in hospitals, research institutions, and on academic campuses for peaceful purposes. This course will review the dual-use nature of these materials, the risk they pose to public health and safety, and current federal programs that support the transition to safer, and more secure radiation technologies. This course will explore key regulatory guidelines, highlight case studies of institutions who have successfully eliminated radiological risks, and explore federal incentives available to institutions that are looking to switch to a more secure radiation modality. Crucially, participants will have a better understanding of insurance and liability coverage for on-campus radioactive sources and identify critical safety and security measures, emphasizing the importance of an integrated approach. This course will also cover U.S. government (DOE/ NNSA/ORS) programs that incentivize and facilitate replacement with safer alternative technologies. This session will outline conditions and pathways for eligible institutions to transition to more secure alternative radiation technologies. It will detail general disposal methods through government-supported initiatives like the Cesium Irradiator Replacement Project (CIRP) and Off-site Source Recovery Program (OSRP), highlighting substantial financial benefits, including the government's 50% cost-sharing for switching to X-ray irradiators and total cost of cesium disposal. Attendees will gain insight into these incentive programs, general radiological security best practices, and the government's significant achievements in irradiator disposal. Finally, the course will highlight case studies directly from institutions that have successfully transitioned to more safe, secure, and efficient technologies. These case studies will provide invaluable insights into how such transitions alleviate burdens of complying with 10 CFR Part 37 regulations (security, FBI background checks, etc.) and share crucial lessons learned. This session will equip you with knowledge and practical steps to enhance campus safety, reduce regulatory burdens, and leverage significant cost-saving opportunities.

July 19 - 8:00am - 12:00pm

Hands-On Workshop on Interactive Safety Training

Sydney Johnston, Lakshmi Attigala, Michelle Thompson

Creating a series of interactive, engaging training modules is far from simple. It requires careful attention to detail, a good understanding of how adults learn, and the ability to adapt instructional methods to meet different learner needs. The Lab Safety Group (LSG) within the Department of Environmental Health and Safety at Iowa State University took on this challenge with intention and creativity, designing a hands-on training series that brings laboratory safety concepts to life.

This immersive four-hour workshop offers attendees an inside look at how to thoughtfully select, structure, and refine laboratory safety training modules to maximize engagement and practical skill-building. Attendees will not only learn about the instructional design process behind the curriculum, but they will also actively participate in the same interactive activities used in our training series. Working in small groups, they will practice applying safety concepts and problem-solving in real-world scenarios. Each attendee will receive a comprehensive instructional Facilitator's Guide that outlines the modules in detail. These modules cover a broad range of essential laboratory safety topics, from developing hazard assessments and writing SOPs to interpreting safety data sheets, selecting proper PPE, and sorting different laboratory waste streams.

By the end of the workshop, attendees will leave with a deeper understanding of how interactive training can transform safety culture, along with practical tools and adaptable activities they can implement within their own institution.

Beyond Compliance: Designing Engaging and Accessible eLearning

Alisha Diego Klatt, Kirsten Yi Guan, Hannah Ramsey

This workshop is designed for trainers, subject matter experts (SMEs), EHS leaders, and others responsible for developing or overseeing self-guided eLearning courses. The session emphasizes moving beyond compliance-driven training to create learning experiences that are engaging, accessible, and impactful. Participants will examine best practices for identifying training needs, defining learning outcomes, and collaborating across roles to design well-structured courses. The workshop shows how adult learning principles—such as relevance, prior knowledge, and problem-solving—can be applied through scenarios and case studies to improve engagement, risk awareness, and decision-making.

Through examples and demonstrations, presenters will illustrate how Articulate Storyline and Articulate Rise support interactive and accessible eLearning design, including closed captioning, alternate text, and logical navigation. The session also highlights practical ways AI tools can assist with scripting and content

development. Participants will take part in guided discussions and breakout activities focused on design decisions and real-world application. The workshop concludes with key takeaways and resources to support continued development of learner-centered eLearning.

Creating a Unified Safety Culture in Academic Laboratories

Gloria Ruiz

Laboratory safety in higher education requires consistent practices that support both teaching and research activities. Teaching laboratories serve large numbers of students who have a wide range of experience. These spaces rely on structured instruction and routine procedures. Research laboratories involve independent work, specialized methods, and constantly changing projects. These differences can create uneven safety expectations and inconsistent risk awareness across an academic institution.

This four-hour Professional Development Session examines practical methods to strengthen safety culture in both settings. Participants will explore effective training approaches, communication strategies, and hazard recognition techniques. They will work with case studies and guided discussions to identify common safety challenges. They will also learn approaches that improve accountability and promote shared responsibility among students, faculty, and researchers.

By the end of the session, participants will gain practical tools that support consistent oversight, improved compliance, and a stronger culture of safety throughout teaching and research environments.

Lab Safety 101: Building a Resilient Academic Lab Safety Program

Larry Mendoza

This course equips both new and experienced laboratory and chemical safety officers with the practical skills and tools needed to implement and sustain an effective laboratory safety program within academic environments. Emphasizing communication, leadership, and other key soft skills, the course focuses on actionable strategies rather than detailed regulatory analysis. Through real-world examples—highlighting both successful approaches and common pitfalls—participants will explore what truly drives a resilient and compliant safety culture. Recognizing that institutions vary widely in structure, resources, and culture, the course incorporates guided group discussions to encourage idea sharing and collaborative problem-solving. Designed to be highly interactive, this session uses real-life stories and practical techniques to help safety professionals strengthen and advance their laboratory safety programs.

Lithium-Ion Battery Safety: What Everyone Needs to Know

Eric Huhn

Lithium-ion batteries are now embedded in nearly every aspect of modern life; from consumer electronics and power tools to e-mobility devices, energy storage systems, and electric vehicles. While these technologies offer significant benefits, they also introduce unique safety challenges that are often misunderstood, oversimplified, or misrepresented in media coverage and product marketing. This session provides a practical, science-based introduction to lithium-ion battery safety for safety professionals, facilities personnel, risk managers, and others who may encounter these systems but are not battery or emergency response specialists. The course begins with a concise, accessible foundation in electrochemistry, establishing how batteries store energy and how voltage, current, and capacity relate to real-world hazards. Participants will then explore why lithium-ion batteries, while fundamentally similar to other electrochemical systems, present elevated thermal and electrical risks due to their high energy density. Building on this foundation, the session examines thermal runaway, electrical shock, and arc-flash hazards in a way that emphasizes recognition, prevention, and informed decision-making rather than emergency intervention. Special attention is given to common misconceptions, unsafe charging and storage practices, and the growing market of unverified “solutions” that claim to eliminate lithium-ion battery risks. The course concludes with practical guidance on emergency response principles, coordination with fire departments, and what information non-responders should be prepared to provide during an incident. Throughout the session, participants are encouraged to critically evaluate risk claims, understand applicable codes and standards, and apply lessons learned to their own workplaces and facilities.

RCRA 101: Introduction to the Resource Conservation and Recovery Act

Courtney Kerr

This course provides a foundational understanding of the Resource Conservation and Recovery Act (RCRA), focusing on hazardous waste management. Participants will explore key concepts, including:

- The definition and significance of solid waste
- Hazardous and universal waste classifications
- Characteristics and listings of hazardous waste
- Generator status and its regulatory implications
- Key provisions of RCRA beyond waste management
- Practical discussions on compliance and best practices

Designed for beginners and those seeking a refresher, this course simplifies complex regulatory requirements, making RCRA more accessible and applicable to your institution.

Using Real Leading Indicators to Demonstrate the Value of EHS

Kathy Malone

The difference between Lagging Indicators and Real Leading Indicators RLI's is that Real Leading Indicators can change the future. They require ACTION, not passive counting. Since the actions taken around Real Leading Indicators can reduce the number and severity of future incidents, they can be used to make an oblique calculation of EHS value. You probably have very good templates used to calculate the cost of an incident. (We will compare some of these as part of this workshop). An estimate of the potential value of your Real Leading Indicator program to your EHS system can be done by using those templates, cross referencing them to the number of Real Leading Indicator RLI actions/mitigations taken, then (optionally) multiplying by a factor for the likelihood of a repeat incidents. If Safety activities can be split into Reactive, Administrative, and Proactive, just tracking the percent of time spent on Proactive activities compared to the sum of Reactive and Administrative is an illuminating metric. Cross reference it to the reduction in incidents as Proactive/Real Leading Indicator RLI activities are ramped up, and potentially see the value of your EHS program skyrocket.

In this workshop, we will conduct the following activities:

- Define the difference between Lagging Indicators and Real Leading Indicators
- Have attendees share what their most significant Real Leading Indicators are
- Brainstorm options for a process to assess the likelihood (risk) that a particular hazard will turn into an incident across other locations within attendee's facilities that have a similar hazard (location, amount, type of use, type of user, etc.) . Compare the ability of the electronic EHS systems in use by the attendees to provide the necessary data to perform this assessment
- Compare the ability of the electronic EHS systems in use by the attendees to track the results of the previous activity and to prioritize follow-up
- Compare templates for calculating the cost of an incident
- Plug Real Leading Indicator activities into the cost templates and sum the outcome
- Brainstorm Action Plans for implementation at their facility among the attendees

We will also anonymously have attendees estimate the percentage of their and their staff's time spent on Reactive, Administrative, and Proactive activities and will share the result.



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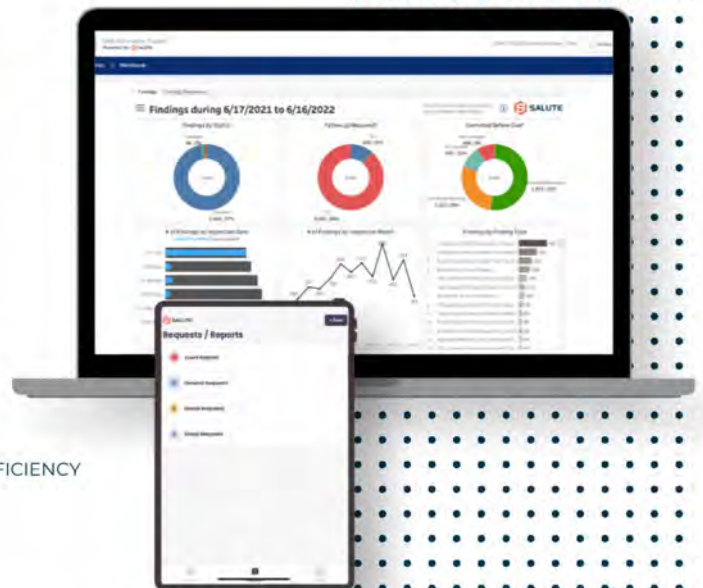
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TECHNICAL SESSIONS

July 20 - 8:40am - 9:25am

Addressing Reproductive Health Concerns in Research Laboratories

Mita Juristyarini

Safety professionals are often the first point of contact when researchers express concerns about pregnancy-related risks in laboratory environments. Many chemical and physical hazards found in research labs are recognized in reproductive-health safety guidance as potential risks during pregnancy or overall reproductive health. However, SDSs may provide limited information on developmental or fetal toxicity, requiring safety staff to rely on supplemental resources.

Because pregnancy disclosure is typically voluntary and policies differ widely, safety professionals must balance confidentiality, hazard communication, and accommodations. Common concerns include how to advise individuals about potential exposures, how to help principal investigators as supervisors modify tasks, and how to maintain academic and research progress safely. Flexible options can reduce exposure while still supporting training and productivity.

This session highlights approaches for identifying relevant hazards, conducting practical risk assessments, communicating options, and supporting expectant or potentially expectant researchers while meeting legal, ethical, and safety expectations.

Building Beyond Compliance: Safety Training that Works

Sydney Johnston

Reinventing laboratory safety training means moving beyond passive compliance toward true competence. This session highlights how Iowa State University designed a hands-on workshop series that brings safety concepts to life and equips researchers with practical transferable skills. By identifying gaps in traditional training, collaborating across departments, and designing real world, immediately applicable exercises, the Laboratory Safety team created a flexible, five part, hands-on workshop series that engages researchers at every level, from new students to experienced faculty. Attendees will gain insights into the planning and implementation process, the challenges encountered, and the outcomes and feedback that shaped the

program. They will leave with a practical, adaptable model for developing or enhancing their own hands on safety training programs and sparking a culture where researchers take genuine ownership of safe laboratory practices.

Changing Image: Creating a New Culture of Safety

Jacob Broderick

Environmental Health and Safety (EHS) programs in academic and research environments are often perceived as primarily compliance-driven and enforcement-focused. At the University of Maryland, Baltimore (UMB), EHS leadership recognized that this perception could create barriers to meaningful engagement, shared ownership of safety, and long-term cultural change. In response, UMB's EHS program undertook a deliberate effort to reposition itself as a collaborative partner that supports the institution's goals while maintaining regulatory compliance. Central to this effort has been intentional engagement with our customers—including faculty, staff, students, and researchers—and strengthened collaboration with campus partners such as Facilities and Operations, Environmental Services, Ethics and Compliance, and Emergency Management. By emphasizing early involvement, open communication, and consultative problem-solving, EHS staff have worked to build trust and demonstrate value beyond regulatory oversight. These partnerships allow EHS to better understand departmental needs and align safety solutions with operational realities. Outreach has played a key role in increasing UMB EHS visibility and approachability. Activities such as intradepartmental meetings, tabling events, lab walkthroughs, targeted communications, and hosted presentations have allowed EHS to meet customers where they work and tailor messaging to specific audiences. These efforts have reinforced EHS's role as an accessible resource and advocate for safe research and operations. UMB EHS also redesigned its training programs to improve engagement and relevance. Training was restructured to include interactive elements, as well as updated graphics and more pertinent information. Feedback collection has been integrated into UMB EHS operations through surveys, post-inspection follow-ups and discussions, and informal conversations. This feedback informs continuous improvement efforts and demonstrates EHS's commitment to listening, transparency, and accountability.

Finally, UMB EHS updated its inspection program to emphasize consistency and clear communication. Process improvements transformed inspections into collaborative, educational interactions focused on process improvement, information

sharing, and corrective action, rather than punitive outcomes. This presentation will highlight strategies, lessons learned, and practical approaches that other institutions can apply to modernize EHS programs, strengthen partnerships, and positively reshape the perception of EHS across campus.

Creative Strategies for Scenario-Based Lab Safety Training

Peggy Lei

Laboratory safety training is critical for regulatory compliance, yet it is often perceived by researchers as tedious, disconnected from daily work, and focused on information recall rather than meaningful behavior changes. This session presents examples of custom, scenario-based, and gamified training strategies designed to foster critical thinking and problem solving through realistic laboratory situations. By embedding creative, interactive, multimedia, and storytelling elements into online learning, we have reimagined compliance training as an engaging, learner-centered experience. The presentation will showcase multimedia training products including interactive modules, animated videos, and comics derived from recent incidents and “lessons learned.” These materials place learners in familiar contexts where they are given choices, agency, and opportunities to observe consequences. Branching scenarios allow learners to make mistakes in a psychologically safe environment and reflect on downstream impacts, shifting the learning focus from “What is the correct answer?” to “What is the safer action, and why?” The session will also explore how storytelling and visual narratives can communicate risk psychology and human factors, helping learners connect emotionally and cognitively with safety concepts. Examples of cross-disciplinary collaboration with subject matter experts and student employees will illustrate how creativity and art can enhance training in compliance- and STEM-heavy environments, thus supporting learner engagement and knowledge transfer.

Developing Industrial Hygiene & Safety Elements at a University to Incorporate an Indoor Air Quality (IAQ) Mold/Water Damage Response Program

Mark Hlebichuk

Indoor Air Quality (IAQ) Programs, are part of a well-rounded Health and Safety Department. They protect our university assets (students, staff, equipment and structures), and will help ultimately lower liabilities and costs. IAQ programs at universities would seem commonplace, but they are not. Some institutions are under staffed or possibly unaware of the complexities or ramifications of improper handling of building IAQ, Water Damage, Mold Remediation, and/or drug residue decontamination. Not to mention how unsafe IAQ conditions can impact a university's reputation and enrollment. The handling of these issues often unfairly left for facilities/maintenance, custodial, and housing departments to fend for themselves often using inconsistent, incorrect or outdated methods. Or, the project is thrown on insurance/risk management to hire expensive outside consultants to handle. Decision makers may

likely be unaware of the current industry legally enforceable best practices and standards, may be putting the institution at risk. And, as buildings age, and media prevails, IAQ/mold awareness will continue to peak amongst students, staff and public. Insurance deductibles will continue to raise until the initial expense of relying on outside contractors will force the internal handling of smaller projects as a practical and cost-effective evolution. Start with a little training on standards such as the Institution of Inspection, Cleaning and Restoration Certification (IICRC) S500 (water damage) and S520 (mold). Then planning & communication between departments can be used to assess and consolidate equipment and personnel resources. And finally, allocation of funding for acquisition of minimal monitoring instrumentation and remediation equipment. With focus and moderate effort your institution can become more proficient and safer in this area, and have significantly less liability and cost, while protecting and improving your school's assets and ‘safe’ reputations. Discussion includes the development of a program and procedures, integration of departments, determining legal and operational response thresholds. We discuss Instrumentation, and equipment, plus examples of implementation, sampling and data interpretation (when is it contaminated, when is it clean).

OSU's Approach to Fire and Life Safety Issues Attributed to Human Behavior

Gerald Petre

Data collected through our building review program indicates that the majority of fire and life safety issues are caused by human behavior. In the last 4 years we have provided additional education to students, faculty, and staff to raise awareness of the commonly overlooked issues that can be prevented. We have implemented fire safety education, conducted a thorough review program with facility managers, engaged in face-to-face discussions with facility managers and staff as well as oversight of all planned and corrective maintenance performed on fire and life safety systems. Fire safety is not solely the responsibility of the safety department; it requires a collective effort from all faculty and staff. Common fire and life safety issues are caused by human occupant behavior and building maintenance/repair. Some examples of human behavior that can cause fire and life safety issues are propping doors open when they are intended to be normally closed, improper storage of materials and equipment, and blocking fire safety equipment. The increased use of electrical equipment can pose a fire safety risk. In our homes no one thinks twice about using an extension cord, power strip or power strip plugged into another power strip or extension cord when they do not have enough electrical outlets, or a space heater when their room is cold. Maintenance/repair work can cause issues like improper holes and/or penetrations in rated and non-rated walls, running wires through fire dampers, not restoring ceiling panels or ceiling structure to as-built condition, and not replacing junction box covers or filling in open breaker slots in distribution panels. The presentation will provide examples of commonly identified issues, programs used to provide oversight and how we have worked with building occupants and maintenance personnel to better understand how to change their behavior and prevent fire and life safety issues

and promote safe working environment. We will also provide statistics on how the number of identified issues at Oklahoma State University has decreased over the years by providing education and guidance to building occupants and maintenance personnel.

Safety & Compliance for a Dynamic Campus Utility Department

Sean Speed

Texas A&M University has a sizeable Utilities & Energy Services (UES) group to handle potable water production & distribution, waste water treatment, power generation and distribution, solid waste & recycling, building automation and energy management, and heating and cooling of campus. With so many disciplines comprising the workforce, the safety needs for this group are varied, as are the compliance requirements. This presentation will touch on those varied needs, from Personal Protective Equipment options to training requirements depending on position description. Environmental compliance is another concern for any utility group and management of those requirements will also be covered.

The Unknown Risks of Having A Rail Line Adjacent to Your Campus

Andrew Lawson

The known risks and challenges of having a rail line near your campus are clear. From derailments, to hazardous materials incidents, to other known risks and challenges, these issues are understood and become part of our daily lives and risk registry. Come join us as we discuss how the rail line adjacent to Carnegie Mellon University's campus presented new challenges for EHS in October 2025. Spoiler Alert: You will learn all about a "Dump Train."

July 20 - 9:35am - 10:20am

CSI Isn't Just on TV: Environmental Forensics and Uncharted Challenges in University EHS

Cheri Hildreth, Tamece Knowles

Environmental forensic investigations at research-intensive universities often resemble real-world versions of the popular "CSI" forensic narrative – complex, ambiguous, and unfolding without a clear script. Far from routine or narrow in scope, university EHS professionals are called upon to solve complex, high-impact problems in uncharted territory—integrating the fields of science, engineering, medicine, public health, law, and risk communication with professional judgement in ways that are both intellectually challenging and professionally fulfilling.

This presentation will explore several unusual environmental forensic projects from different universities across the country that required EHS professionals to move well-beyond standard checklists and regulatory playbooks, applying forensic reasoning to environments where research, teaching, public access, aging

infrastructure, and external utilities intersect. These projects were successfully navigated through interdisciplinary collaboration, creative problem-solving and a willingness to think outside of the box – illustrating why university EHS work is among the most complex and rewarding in the profession. Plans for a future CSHEMA webinar to cover these environmental forensic projects in more detail are underway. Ultimately, the presenters are planning to curate a publication of many more unusual projects from universities across the country that demonstrate the value of EHS on our campuses and may serve as a recruiting tool for future EHS professionals.

Developing a University Policy for Service Animals in Research and Teaching Laboratories: Process, Challenges, and Implementation Strategies

Erica Gonzaga

Universities are increasingly asked to accommodate service animals in research and teaching laboratories, yet historically there has been very little guidance, precedent, or standardized resources to guide safe and compliant decision-making in these specialized environments. As a result, institutions must navigate accessibility requirements alongside chemical, biological, radiological, and physical hazards with limited external reference points. This session outlines the collaborative process used to develop the University of Florida's Service Animals in Labs Policy, designed to balance laboratory safety with ADA obligations and research integrity. The presentation will outline the policy's guiding principles, including hazard assessment, mitigation hierarchy, and alignment with federal and state accessibility requirements. The session will also address practical ongoing challenges regarding rollout, communication, and enforcement capabilities. By the end of the session, EH&S professionals will gain actionable tools and templates for creating or refining their own campus policies. This presentation provides a model process adaptable to diverse institutional structures, enabling universities to meet accessibility requirements while upholding laboratory safety.

From Compliance to Curriculum: How Becoming Faculty Changed My View of Safety

Gloria Ruiz

After years as a safety professional, I transitioned into academia as an Assistant Teaching Professor. This change permanently altered my perspective on safety in both academia and beyond. Moving from an enforcement role to an educational role revealed new challenges and opportunities for promoting safety culture. In this presentation, I will explain how my perspective evolved from focusing solely on compliance to blending teaching and safety. I will discuss how faculty status changes the dynamics of safety conversations, how academic priorities influence safety decisions, and strategies for integrating safety into teaching. Attendees will gain insights into the differences between operational safety and academic safety, the importance of collaboration between faculty and safety professionals, and practical ways to embed safety as a core value in education. Understanding these shifts can help institutions strengthen safety culture and prepare students for professional environments where safety is essential.

Safety Culture- Research Hazard Assessment

Patricia Delaney

An initiative has been established at BSU mandating all faculty involved in scientific research to submit comprehensive information regarding the hazardous materials in use, accompanied by a detailed description of the related processes. The aim of this program is to implement an additional layer of compliance, ensuring that faculty and their students are equipped with essential safety information, including guidelines for personal protective equipment (PPE) and safety protocols. A formal document, which has undergone review and approval by the Science and Art Safety Committee, has been developed to facilitate this process. Additionally, a fillable Adobe document has been created to enhance the efficiency of these assessments. The program is overseen by the Director of Environmental Health and Safety and the Chemical Hygiene Officer (EHS/CHO). This program earned an award at the 2025 CSHEMA conference for Small Colleges Innovation Award for Safety Culture.

Safety is for Everyone, Not Just Students and Staff

Angie Vreugdenhil

At Duke University, research labs open their doors to various types of visitors, volunteers, visiting research scholars, and students in scientific outreach programs. The labs gain scientific exposure, and visitors learn new techniques and gain experiences that extend beyond traditional career paths, resulting in a mutually beneficial relationship. This group of non-employees, however, falls outside of the employee-focused safety training, onboarding processes, and oversight frameworks, creating a critical gap in institutional risk management. For many years, Duke University had a Minor and Non-Employee Safety Policy accompanied by a form emailed to the Occupational Environmental Safety Office (OESO), for OESO staff to assess inherent risk(s) of the proposed activities and specify mitigating controls. This process had been sustainable in the past, but the post-pandemic return of visitors to the lab environment resulted in a significant increase in non-employee risk assessment requests in 2023–2024. The number of submittals began to overwhelm already-full schedules. Around the same time, an internal compliance review exposed gaps in visitor registrations across different programs, highlighting the need for a more efficient and comprehensive review process. To address this, we initially worked to align and clarify policies and expectations with other institutional programs and partners by clearly outlining duties, activities, and experiences that are allowed to be performed by non-employees and/or minors. Second, to address the increased volume, we developed an application to ensure that OESO completes risk assessment reviews efficiently and consistently. Instead of re-inventing the wheel, we used Quali Build software, through which submitted forms enter into an automated approval workflow of our own design. Hosts fill out a digital form that is integrated with our institution-wide employee directory, enabling seamless email notifications and automated updates along the path to approval. The form also includes reminders of policy requirements within each section

and allows our team to add both standardized requirements and custom recommendations, which are automatically shared with the labs. Our Quali Build application improved our consistency in translating requirements into actionable steps for anyone hosting visitors, as well as drastically reducing the approval turnaround time for processing these requests. Streamlining lab safety compliance for visitors is a win for everyone involved.

Safety Signs: Make Them Suck Less

Eric Huhn

In the complex landscape of a global research university, effective hazard communication must transcend language barriers. While the Globally Harmonized System (GHS) provides a framework for chemical hazards, it often falls short in capturing the unique physical hazards prevalent in engineering environments—such as high-voltage equipment, rotating machinery, and powerful lasers. This session details a comprehensive project to overhaul lab door signage, moving away from “wordy” legacy signs toward a visual-first, pictography-based system. We will explore the design principles used to categorize hazards, the process of standardizing icons for physical risks, and how this shift has improved safety culture and compliance across a diverse campus population.

Evolution of a -80°C Freezer Program

Courtney Kerr

Supporting research gives EH&S a tremendous opportunity to add value, particularly in biomedical research, where scientists rely on -80°C freezers to safely store samples and other research materials. Without proper maintenance, these freezers waste energy, become increasingly unreliable, and risk failing at their most important job: keeping science cold. Over time, this program has grown from modest beginnings into a model of operational excellence. In this session, we'll explore:

1. The different types of cold storage available to researchers and how each drives scientific discovery.
2. How to build and manage a robust temperature monitoring program that preserves sample integrity and gives researchers peace of mind.
3. Steps to design and implement an effective emergency cold storage plan, so that critical samples stay protected even in unexpected situations.
4. The evolution and benefits of proactively maintaining freezers to safeguard research investments.

The Most Dangerous Place on Campus

John DeLaHunt

Is the counterweight rigging system in a legitimate theatre the most dangerous piece of equipment on a college or university campus? This session argues that it is—and that the theatre may therefore be the most hazardous space in higher education when its risks are not properly understood and managed. Counterweight rigging systems combine significant suspended

loads, complex mechanical components, overhead work, and human error potential in a dynamic, time-pressured environment. When they fail—or are misused—the consequences can be immediate and severe. Yet these systems are often operated by students, supervised by faculty with varied technical backgrounds, and maintained under constrained budgets. This presentation provides a clear, practical overview of how counterweight rigging systems work from bottom to top and back. We will discuss the physics of balance and imbalance, common failure modes, and why “runaway” conditions occur. Fire and life-safety code considerations will be addressed, including relevant requirements affecting stage rigging, curtains, and fire protection features. Inspection, testing, and maintenance practices will be reviewed in detail, with emphasis on what risk managers, EHS professionals, and facilities leaders should expect from competent inspections. We will outline common deficiencies found on campuses, documentation gaps, and warning signs that a system requires professional evaluation. The session will also examine key guidance from the most recent edition of the Stage Rigging Handbook, the foundational reference for institutions that own and operate counterweight systems. Participants will leave with a clearer understanding of industry standards and practical governance steps. Finally, we will consider the four primary uses of a theatre space and analyze the distinct risk profiles associated with each. From informal rehearsals to high-profile performances, risk exposure shifts depending on supervision, experience level, production complexity, and schedule pressure. Throughout the session, real-world case examples will illustrate how well-intentioned people can create unnerving outcomes when systems, training, and oversight do not align. This program is designed for safety professionals, facilities leaders, theatre managers, and administrators who want to better understand—and better manage—the risks inherent in campus stage rigging systems.

Introducing: CampusOptics Form Exchange

Brandon Phipps

Join us for an overview of Form Exchange, a new feature available exclusively to CampusOptics clients. Form Exchange allows institutions to browse a growing library of proven inspection, incident, assessment, and compliance forms contributed by trusted partner organizations and quickly deploy them within their own CampusOptics environment.

During this session, we will highlight a variety of EH&S programs that can be rapidly launched using Form Exchange and share examples of how contributing institutions are leveraging these forms to streamline operations, improve consistency, and reduce administrative effort. We will also introduce AI Form Creation, a new capability that allows clients to upload existing PDF forms and automatically convert them into CampusOptics inspection and incident types using AI-powered parsing technology. We hope you are able to attend!

July 20 - 2:10pm - 2:55pm

An Interdisciplinary Approach to Lithium-Ion Battery Safety

Nicole Sanders, David Kalafut, Vinay Premnath

What do e-scooters and bikes, phones, tablets, laptops, and electric cars have in common? All of these devices are found on campuses and are typically powered by lithium-ion batteries. Lithium-ion batteries are long-lasting, rechargeable, and an increasingly integral part of daily life on campus. However, students, faculty, and staff need to be aware of associated risks. Fires caused by lithium-ion batteries are a growing concern on college campuses. These fires arise from a process called thermal runaway that can be triggered when batteries are mishandled or damaged. In this presentation, researchers from UL Research Institute's Chemical Insights, Electrochemical Safety, and Fire Safety will present data emerging from their interdisciplinary research projects. They will discuss how lithium-ion batteries work, the process by which thermal runaway occurs, and potential exposure risks from thermal runaway fires. Attendees will learn actionable, research-based strategies for risk prevention and mitigation that they can bring back to their campuses.

Building a Statewide Higher Education Safety Council: A Model for System-Level Impact

Jacqueline Roquemore, Teresa Belback

Although higher education institutions face similar regulatory, compliance, and operational challenges, environmental health and safety (EHS) professionals often address them independently due to the absence of a structured framework for cross-institution collaboration, which can result in duplicated efforts, inefficient use of resources, and suboptimal outcomes. While informal networking and regional partnerships exist, most states lack a chartered framework that unites institutions across sectors with defined governance, shared priorities, and sustained engagement. In 2022, Virginia's higher education EHS community responded to an inquiry from the Department of Human Resource Management (DHRM) about interest in creating a statewide safety council. By August, the Virginia Higher Education Safety Council (VHESC) was chartered, bringing together safety leaders from public four-year institutions and community colleges. Membership was soon expanded to include private colleges, reflecting the principle that collaboration benefits all institutions.

Since its formation, VHESC has grown to include 20 community colleges, 15 public four-year institutions, and four private colleges, representing a diverse range of institutional sizes and missions. The council serves as a platform for sharing resources, developing consistent approaches to safety challenges, and amplifying EHS advocacy. Working groups have addressed issues including makerspace safety, training standardization, and accident investigation practices. The council has also informed statewide discussions on centralized training needs across all

state agencies, contributing to infrastructure that benefits both public and private institutions. VHESC's structure, governance, and measurable achievements demonstrate the value of unified EHS leadership and provide a replicable model for other states.

Enhancing Engineering Safety via Support and Project Safety Analysis (PSA) Synergy

Abdulhaqq Ibrahim, Mario Gomez Hernandez

Texas A&M University's Environmental Health and Safety (EHS) department applies a proactive Engineering Safety framework that integrates Project Safety Analysis (PSA) with direct technical support to enable safe, compliant, and efficient research operations in complex engineering environments. PSA is a structured, front-end risk-management process designed to identify hazards early in the project lifecycle, evaluate potential risk scenarios, and implement layered controls; engineering measures, administrative procedures, and appropriate personal protective equipment (PPE) before systems are commissioned or experimental work begins.

When embedded within day-to-day engineering support, PSA becomes more than documentation; it functions as a practical mechanism for design influence, operational readiness, and continuous risk reduction. This presentation describes the synergy between PSA facilitation and specialized Engineering and Chemical Safety support delivered to high-hazard engineering research, student-led initiatives, and facility operations. EHS contributions include safety-by-design guidance for laboratory layout and equipment installation, review of experimental setups and operating procedures, compressed gas management, incident investigation support, and alignment with applicable federal/state requirements and recognized best practices. The model emphasizes traceability from hazard identification to safeguards, ensuring controls are technically justified, maintainable, and aligned with operational realities. A case study from the NanoFab laboratory within the Frederick E. Giesecke Engineering Research Building (GERB) illustrates this approach in a high-consequence context involving pyrophoric, reactive, corrosive, flammable, and toxic gas systems. Each gas family presented distinct hazard profiles requiring differentiated control strategies. EHS conducted a detailed hazard analysis, benchmarked industry practices, reviewed case studies and relevant literature, engaged vendors and peer institutions, and developed gas-specific recommendations for fire protection and suppression within gas cabinet installations. In several instances, EHS advised replacing standard water-based sprinklers with specialized suppression approaches for designated enclosures to address chemical compatibility and scenario-specific hazards, consistent with NFPA 55 intent and applicable compatibility considerations. The outcome demonstrates how a PSA-driven collaboration paired with disciplined engineering judgment can directly influence research infrastructure decisions, improve compliance, and strengthen operational resilience. This work reinforces a central premise: when safety expertise is integrated

early and continuously, it becomes an enabler of research excellence, protecting people, property, and the environment while supporting innovation at scale.

From Compliance to Confidence: Visualizing Fume Hood Containment on a University Budget

Tricia Hahn, Alex Albright

Following a major system upgrade impacting 23 fume hoods last summer, our institution needed a timely, cost conscious verification of containment performance before students returned for fall classes. Although the HVAC work remained under warranty, traditional assessments based on face velocity provided little insight into the real question: Were the hoods actually offering expected containment under real operating conditions? This session describes how we transitioned from uncertainty to evidence-based confidence by adopting a performance focused testing grounded in dynamic containment observations. Using methods that conform to ASHRAE 110 principles, we evaluated hoods under real working conditions including opening doors, walking by, operating multiple hoods simultaneously, and varying sash positions. These assessments revealed operational vulnerabilities unobservable by using face velocity measurements alone. In one three hood laboratory, individual hoods appeared compliant when evaluated independently. However, when all three sashes were open, one lost containment, prompting a simple, effective SOP that now mitigates the risk. Another combination sash hood demonstrated containment loss during vertical sash use but not horizontal sash use, reinforcing the importance of understanding hood specific behavior. These performance insights drove practical, low-cost mitigations. Concerned with performance of aging hoods, we used containment data, not age, to guide lifecycle planning, ultimately preserving capital and providing documented justification. Having our own testing capability enabled faster testing after HVAC adjustments, allowed for increased evaluation frequency, and reduced dependence on face velocity over functional containment.

From Franken - Systems to Streamlined Solutions

Michelle Thompson

As our campus chemical inventory system reached end of life and campus IT discontinued support, we began a comprehensive modernization effort to improve data quality, interoperability, and the overall user experience. After reviewing commercial systems and finding none that met our functional and integration needs, we elected to rebuild in-house, starting with the hazardous waste database, then tackling the chemical inventory system, and modernizing our laboratory safety database. This process revealed a broader need for a unified, intuitive access point for campus users, leading to the development of a new EH&S

dashboard. The dashboard now connects users to all major EH&S systems and allows PIs to manage personnel, view inspection reports, update hazard information, access building and room data, monitor online training, and receive important announcements. This session will share our development approach, key decisions, and lessons learned while redesigning multiple interconnected EH&S systems to better support research operations and campus safety.

Leading the Way: Building a Proactive Safety Culture in Higher Education

Otu Inyang

In today's complex academic and research environment, fostering a proactive safety culture goes beyond compliance — it demands collaboration, leadership, and shared accountability across all departments. Creating a resilient institution requires more than reactive safety protocols — it demands a proactive, integrated culture that spans environmental health and safety (EHS), risk management, and operational continuity. This session will explore how colleges and universities can break down departmental silos to establish a unified safety culture grounded in EHS compliance and risk awareness. Through cross-departmental collaboration, safety leadership development, and transparent communication practices, institutions can build systems that not only prevent incidents but also enhance a cohesive and resilient safety culture that protects not just facilities, but the people who live, learn, visit, and work within them. Using real-world examples from higher education settings, this presentation will outline strategies for embedding EHS into daily operations, engaging safety partnership, and leveraging data to inform risk control decision-making. EHS professionals, risk managers, and institutional leaders committed to advancing campus-wide safety resilience will gain actionable insights on fostering accountability, sustaining compliance, and aligning safety efforts with broader goals of continuity of operations.

Providing Labs a Voice: How Safety Benefits from Creating a Lab Manager's Forum

Ryan Lisk, Bruce Brown

Laboratory safety depends on more than policies, inspections, and training—it depends on listening and communicating. This session explores how Safety/EHS partnered with institutional stakeholders to create a Lab Manager's Forum that serves as a two-way communication channel, an early indicator of emerging risks, and a scalable platform for engagement. Attendees will learn how leveraging existing lab conversations can strengthen safety culture, improve situational awareness, build partnerships, and help EHS get ahead of issues before they become incidents.

AI That Holds Up Under Audit: Practical Applications for Campus EHS

Stephenie Langston

Artificial intelligence is rapidly making its way into EHS software, but for campus safety professionals, the question isn't whether AI is coming—it's whether it can be trusted. Can you explain how it reached a recommendation? Will it create records that stand up to an audit? How do you accelerate work without compromising professional judgment or regulatory compliance?

This session explores what responsible, purpose-built AI looks like for higher education EHS programs. Rather than replacing safety professionals, modern AI should eliminate administrative burden, accelerate routine work, and surface insights that help practitioners focus on higher-value decisions—all while keeping the qualified professional firmly in control.

Using real examples from the SafetyStratus platform and Ideagen Mazlan AI, we'll demonstrate how AI can assist with drafting incident investigations and root cause analyses, summarizing lengthy reports into actionable insights, interpreting chemical labels and images to simplify inventory management, identifying trends across incidents and inspections, and coordinating corrective actions through completion. Throughout the session, we'll examine the governance principles that matter most in academic environments: transparency, explainability, data security, and human oversight.

Attendees will leave with a practical framework for evaluating AI in EHS software and a clear understanding of where AI adds value, where human expertise remains essential, and how the two work together to improve campus safety without sacrificing accountability.

Sneezing and Wheezing: Evaluating and Controlling Laboratory Animal Allergens

Brent Cooley, Alexis Parker-Vega

Laboratory animal allergens (LAA) are a common health problem among animal research workers and those that support these operations. Epidemiologic studies show that up to one third of those exposed to laboratory animals will develop symptoms of animal allergies, such as rhinitis and conjunctivitis, and 1 in 10 of those exposed may develop asthma. Evaluating and monitoring LAA can present challenges as there are no NIOSH or OSHA approved sampling methods, and the lack of consistent quantitative sampling data can result in difficulties in selecting appropriate controls. This session will review efforts by the University of California to adopt a consistent LAA sampling methodology, identify high-risk exposure activities in vivarium husbandry, and implement appropriate control mechanisms based on quantitative sampling data.

July 20 - 3:05pm - 3:50pm

After the Fact Permitting: Old Problems, New Headaches

Jennifer Laine

College and university campuses are continually evolving, and much of the behind-the-scenes work required to complete major projects often goes unnoticed. Project managers frequently oversee critical infrastructure systems, such as generators, petroleum storage tanks, and water systems, that are essential to keeping campuses operational. Oftentimes, these projects advance without proper consultation with the environmental compliance team. When this occurs, after-the-fact permitting can add significant complications to an already challenging regulatory process. In keeping with Murphy's Law, unpermitted projects are often discovered at the least convenient time. This presentation will explore how unpermitted activities are identified, the difficulties associated with locating historical project information necessary for permit applications, and the challenges of working with regulatory agencies to resolve after-the-fact permitting. Real-life examples and lessons learned will be shared to help institutions navigate and prevent similar issues.

An Innovative Safety Training - Game Based Learning Method

Margaret Smallbrock, Kevin Dolge, Patrick Ceas, Joe Udelhofen

At South Dakota Mines, Carleton College, and St. Olaf College, we've pioneered an innovative approach to safety training by integrating game-based learning methods that captivate diverse audiences across a spectrum of abstract topics and have helped our employee supervisors become willing partners in creating new training scenarios. Our use of interactive games transforms conventional safety training into a dynamic, adaptable experience that significantly boosts both retention and practical application for participants, whether they are staff or student workers. Through collaborative efforts, we've shown how this flexible framework can be tailored to suit various contexts and needs, emphasizing the importance of creativity and teamwork in the learning process. The game-based approach includes a variety of interactive elements, problem-solving challenges, and competitive quizzes, all designed to actively engage trainees. By simulating real-world situations in a controlled and fun environment, trainees can safely experiment and learn from their mistakes, leading to a deeper understanding and improved safety practices. The adaptability of our framework enables its application to a wide range of topics beyond safety, making it a versatile tool in any educational setting. Our aim in this presentation is to inspire EHS personnel to draw lessons from our experience and adapt these game-based strategies to enhance their own training programs. We encourage institutions to leverage this model, customize it to their specific needs, and foster a culture of continuous learning and improvement.

Applying Safety Science Concepts to Your Programs

Sara Souza

This interactive session will offer tools to assess safety culture at your organization, and identify practical strategies to improve your programs. Beyond compliance checklists, what questions can you be asking that promote learning from mistakes, as well as learning from everyday successes? We'll look at the value of reviewing near misses, practicing response to mock emergency scenarios in low-stress settings, and the relevance of psychological safety in all that we do as safety professionals.

Beyond the Matrix: Rethinking PPE for Modern Academic Labs

Mary Lindstrom

Personal protective equipment (PPE) selection in academic labs is often reduced to a generic matrix that's easy to publish but hard to use. This session treats PPE as a system, linking campus-level policy, EHS guidance, and task-based assessments with how people see risk and make choices. We'll explore the main categories of PPE used in university labs and consider factors that influence when, how, and by whom they are used, including practical issues such as fit, comfort, sizing, and who pays for PPE. This interactive session will also invite participants to compare approaches across institutions, identify common pain points, and leave with concrete ideas to strengthen PPE programs in their own lab environments whether they are just starting out or already have a robust program.

From Data to Decisions: Using AI to Evaluate and Strengthen Injury Prevention Programs in Higher Education

Diana Cox, Veronica Nelson

EHS leaders often invest significant amounts of time and resources into injury prevention programs, and yet injuries persist. When traditional metrics show that programs are "in place," the lingering question becomes: What are we missing? This session explores how artificial intelligence can help bridge the gap between prevention intent and prevention impact by uncovering patterns that are difficult to detect through manual review or standard reporting. Drawing on a collaborative case example from the University of California system, presenters will demonstrate how AI-driven analysis of injury data revealed unexpected risk concentrations and cost drivers, enabling leaders to rethink prevention strategies and resource allocation. In one example, analysis of slip-related injuries across multiple locations showed that targeted preventive interventions were cheaper than the long-term cost of injuries and insurance, prompting a shift from reactive response to proactive, data-informed prevention planning. Rather than replacing professional judgment, AI served as a decision-support tool, helping EHS teams ask better questions of their data and evaluate whether existing programs were addressing the right risks in the right places.

Recognizing Everyday Excellence in Safety

Lakshmi Attigala

Cultivating a strong safety culture requires more than policies, inspections, and training. A proactive safety culture can be strengthened by consistent, visible recognition of positive safety behaviors. To promote good safety practices, the Laboratory Safety group in the Department of Environmental Health and Safety (EH&S) at Iowa State University (ISU) launched a Safety Recognition Program to celebrate “everyday excellence” in research laboratories. This newly implemented program incorporates “Areas of Excellence” that highlight an exceptional safety culture, creative problem-solving, and/or proactive hazard mitigation, as identified by the EH&S staff during annual safety inspections. Early outcomes of the program indicate that it has strengthened engagement across diverse research environments, encouraged more open conversations about safety challenges, and increased collaboration between researchers and EH&S staff. Additionally, the program creates opportunities for academic college leadership to engage directly with recognized researchers, strengthening communication and connection within the college. By recognizing everyday safety practices and highlighting proactive safety measures, this program not only reinforces desired safety behaviors but also fosters a more connected and engaged research community at ISU. This initiative emphasizes the value of structured recognition as a practical way to advance a strong safety culture.

Stay Calm, Act Fast: Five Steps to Handle Cardiac and Bleeding Emergencies

Barbara Kinter, Sarah Gillen

In moments of crisis, even highly capable professionals can freeze, unsure how to respond when a colleague collapses or a medical emergency unfolds. Stay Calm, Act Fast: Five Steps to Handle Cardiac and Bleeding Emergencies is a practical, highly interactive session designed to equip workplaces with the confidence, skills, and systems needed to respond effectively to sudden cardiac arrest and life-threatening bleeding emergencies. Sudden cardiac arrest remains one of the leading causes of death in the United States, with more than 350,000 cases occurring annually and survival rates under 10%. Yet immediate action by nearby lay responders—calling 911, performing hands-only CPR, and using an automated external defibrillator (AED)—can double or even triple survival. At the same time, heightened awareness of workplace violence and traumatic injury has made bleeding control an essential life-safety skill. This session addresses both realities through a clear, memorable five-step framework that emphasizes calm decision-making and decisive action. Participants will learn how to manage the panic response that often accompanies emergencies, activate emergency services, and use workplace safety tools already at their disposal. Through hands-on practice with CPR manikins, AED trainers, and bleeding control equipment, attendees will gain real-world experience performing hands-only CPR, operating an AED, and applying tourniquets to stop severe bleeding. The session also integrates the latest American Heart Association CPR and AED guidelines

and discusses legal and operational considerations relevant to employers, including Good Samaritan protections and workplace preparedness planning. Designed for a broad audience with no prior medical training required, this session benefits both frontline staff and organizational leaders. In addition to individual lifesaving skills, attendees will leave with concrete takeaways: guidance on essential first aid and AED equipment, strategies for staff training and readiness, and a practical checklist to assess and improve emergency preparedness within their own organizations. By combining evidence-based instruction, experiential learning, and organizational best practices, Stay Calm, Act Fast empowers participants not only to respond effectively in a crisis, but to foster safer, more prepared workplaces where immediate action can save lives.

Toxic Wind Blowback in Fume Hood Buildings

Victor Neuman

A data set of more than 4000 Fume hoods tested with Ashrae 110 showed more than 5% of them suffered from toxic blowback. This safety hazard involves chemical exhaust from Fume hoods is blown sideways by a cross wind. This dangerous chemical laden exhaust can then be drawn into the outside air intake for rooftop air-conditioning units. From there, the dangerous chemical vapors are spread throughout the Lab building. Each of the 4000 Fume hoods was tested at one moment in Time. If there was no wind that day, there was no chance of blowback. In addition, blowback can only be measured when the wind is from a specific direction that leads to the Exact rooftop air-conditioning unit serving the room where that specific Fume hood is located. It has been estimated that more than 30% of the Fume Hoods tested in this data set will show toxic blowback over the course of a whole year. Unfortunately, there are no rules of thumb or codes which are easily followed to prevent this safety hazard. ANSI Z9.5-2022 Laboratory Ventilation shows in Appendix 3 the detailed procedure for analyzing the hazards. I have been a coauthor since before it was first published. I know of only 3 consulting firms that can accurately perform this analysis. What are some of the steps that can be taken to make existing Lab buildings safe from this problem? The easiest and cheapest solution is to dramatically increase stack height on existing Fume hood exhaust fans Z9.5 requires a minimum stack height of 10 feet above the adjacent roof. This is not enough to ensure safety but protects roof workers. Taller stacks are rarely allowed because they are ugly. The most accessible solution is to dramatically increase fume hood exhaust fan volume. This is easily done on the lab building in design by manifolding multiple Fume hoods and Lab rooms together. For an existing Lab building the solution involves interruption to the use of the Fume hood and Time and Money to make changes. The existing Fume hood exhaust fans that have this problem average 1000 CFM of exhaust. While no rule of them can be depended on, volumes of more than 20,000 CFM are more dependably safe. Fortunately, large exhaust fans use less electricity per CFM than small exhaust fans. This gives the University access to funds that are available for energy Retrofit projects.

July 21 - 10:00am - 10:45am

Approved Storage of Hazardous Materials

Megan Hall

Chemical storage, use, handling, and dispensing are regulated by several agencies, including Fire and Building Codes. The International Fire Code (IFC), adopted by 42 states, has detailed guidance on how hazardous materials shall be stored within and outside of buildings. In general, it is considered safest when hazardous materials are stored within approved cabinets or enclosures appropriately designed for the materials being stored.

The IFC allows for increases in Maximum Allowable Quantities (MAQs) for many types of hazardous materials due to the added safety of storing hazardous materials in approved storage. This “approved storage” credit allows for doubling of the MAQs for certain chemical classes.

While approved storage of hazardous materials clearly improves safety, there is some ambiguity in the IFC regarding how to apply the “approved storage” credit to hazardous material storage. Possible interpretations will be reviewed and discussed. Examples will be provided.

Diversifying Surveys Across Campus at Oklahoma State University - Workplace Surveys

Val Freeman

In most college campuses the Environmental Health and Safety (EHS) programs take their responsibility for laboratory and chemical safety very seriously, but many campus injuries occur during routine maintenance that happen all over campus and in areas where chemical hygiene is not the focus. At OSU, most facility shops, makerspaces, greenhouses, computer laboratories, and theatre design shops would be evaluated by either a team of chemical hygienists who specialize in laboratories or only evaluated based on statistical data showing increases in injuries in those spaces. OSU has now developed a workplace survey program that utilizes a laboratory safety specialist, an occupational safety specialist, an environmental specialist, and a fire and life safety specialist to evaluate the kind of spaces that need to have oversight but would not be under the OSHA laboratory standard. A checklist was developed that emphasizes occupational and fire and life safety requirements while retaining chemical safety components for spaces that continue to use and store hazardous chemicals. The next step was gaining access to these spaces that had previously been reviewed only by a laboratory safety team or not overseen at all besides reactionary reviews due to injuries. OSU EHS partnered with safety personnel in facilities management to be able to track and survey all the shops, garages, and other workspaces for facility employees. The workplace survey group also teamed up with laboratory safety to track the makerspaces, design shops, department dedicated shops, and computer laboratories that would be better surveyed by this program. As a result, the workplaces where many injuries have occurred are being overseen on a regular basis by a team

that can better identify the hazards that are present, and EHS can be more proactive with preventing injuries before they occur. The laboratory safety team is also allowed to focus on more research-based laboratories and rely on the occupational safety and fire and life safety specialists to help with all other spaces.

Leveraging the Power of AI for Lab Safety

Andrew Pemberton

While AI is a hot-button topic, opinions vary widely on its usefulness. Some have over-relied on it resulting in inaccuracies and reputational harm, while others have been able to use it to great success. This talk will focus on the ways AI can be utilized in lab safety to augment one's capabilities while being aware of the drawbacks and limitations of the technology. This talk will present a case study where AI was used successfully to aid in completing a chemical inventory.

Ototoxic Chemical Exposures, Toxicology, and Workplace Applications

Mike Albert

Protecting workers' hearing in loud environments is a major challenge—and incurred damage can mean operational disruptions, fines, and potentially permanent hearing injury. Fortunately, there are technologies and protocols available to ensure your team members are protected. Managers now have hearing guidelines for individual fit testing, determining personal attenuation, selecting the best high-tech hearing protector, the types of fit testing methods available, and more. In addition, more and more is being realized about the dangers of ototoxic chemicals—which can have a drastic effect on hearing loss. Ototoxic chemicals, like lead, solvents, and kerosene-based fuels, are a newer designation of substances that damage the hearing organs with or without associated noise exposures. On top of hearing threshold shifts, ototoxic chemicals can afflict victims with balance and speech clarity problems.

Science, Safety and Scuba: A Comparison of Scientific Diving with Maximum Containment (BSL-4) Research and How Training and Operational Standards Apply, or Should Apply, to Both.

Lizzie McNamee, Anna Elzanaty

Few institutions have formal dive safety programs, and others allow the oversight of scuba diving for science to be left to the researcher. What institutions fail to recognize is that there is a significant difference between recreational diving and scientific diving, the elevation of risk when task loading occurs, and that there is layered liability when the employer-employee relationship extends into activities such as diving. In 1985, OSHA created the Scientific Diving Exemption (CFR 1910 Subpart T), recognizing this job task as a sector of occupational diving separate from commercial diving. The American Academy of Underwater Sciences (AAUS) expanded on the OSHA guidelines to create a set of consensus standards that continue to evolve along with the

technology and was recognized by OSHA as the standard setting agency for scientific diving in the United States. This has led to an incredibly high safety record among the safety community. In this presentation, we draw the parallels between the highest level of biological safety - BSL4 - and AAUS Scientific Diving. We will discuss complementary safety disciplines in everything from initial training to supervision and day-to-day safety to emergency procedures. Informed by the Chief Safety Officer at Boston University's NEIDL, one of two BSL4 programs operated by a university in the United States, we'll take a deep dive into risk including assessment, mitigation and management. We will also look at the parallels with other safety programs applying lessons from each and, finally, will look at program oversight in an academic environment. Field safety, specifically scientific diving, remains an emerging field within the CSHEMA community. By drawing parallels to well established safety programs, we hope to highlight the work that has already gone into supporting scientific diving safety in academic institutions as well as provide a resource for those institutions looking to start or build their programs.

Stop Managing Safety & Start Leading It: How Bold EHS Leaders Drive Influence, Alignment, and Real Change

Denise Pappas

Let's be honest compliance doesn't inspire anyone. It gets checked, documented, and forgotten. Meanwhile, the real risks, the ones tied to culture, communication, and leadership gaps keep showing up. This session is a wake-up call for EHS professionals who are done being seen as the "rule enforcer" and ready to step into real leadership. Because the truth is: the most effective EHS leaders aren't just managing programs they're shaping behavior, influencing decisions, and driving institutional priorities. In higher education, where autonomy runs deep and alignment is optional at best, leadership isn't about authority—it's about influence. And influence requires a completely different playbook. This session will challenge attendees to rethink how they show up as leaders and equip them with practical strategies to elevate their impact immediately. We'll break down how to move from reactive problem-solving to proactive leadership, how to communicate risk in a way that actually gets attention (and funding), and how to position EHS as essential to the institution's mission not just a regulatory obligation. You'll learn how to cut through resistance, engage stakeholders who don't report to you, and lead initiatives that stick even in decentralized, resource-constrained environments. More importantly, you'll walk away with the mindset shift required to stop waiting for a seat at the table and start owning it. Because here's the bottom line: if EHS leaders don't step up and lead boldly, they will continue to be managed by the very systems they're supposed to influence. This isn't about doing your job better. It's about redefining your role entirely.

Visual Chemical Safety Revisited - How Does AI Change the Picture?

Kathy Malone

At the 2022 CSHEMA Annual Conference, I did a half day workshop on Visual Safety Data Sheets. That was at the dawn of AI, which has become much more powerful and much more useful to EHS professionals, especially around Chemical Safety. The need for a better, more visual method of showing chemical hazards to chemical users is as needed as before. There are 2 components to this. First, on the user side, there are chemical users who don't read, for whom the language of the Safety Data Sheet SDS is not their native language, or who have learning challenges. For these people, the printed Safety Data Sheet SDS is not the best method of conveying chemical safety information. Second, on the Safety Data Sheet side, there are still challenges in the documents. Missing information such as a radical lack of constituent information is perhaps the most common, although contradictory information is also not uncommon. Even too much information can be problematic (a 19 page SDS? what does an exclamation point pictogram mean? the "exploding heart" pictogram? In this workshop, we will revisit Visual Chemical Safety again, based on Safety Data Sheets, exploring the new capabilities that AI can provide to help resolve both challenges. The workshop will have the attendees split into 3 or 4 groups, each of which will work with a Large Language Model LLM for the exercises, and will share their results with the rest of the group. The activities to be conducted by each group will include:

- Having the LLM find the current SDS for several chemicals
- Having the LLM compare different and previous versions of the SDS for the same chemical and summarize the differences
- Having the LLM import structured data that will be used for subsequent activities. Brief introduction to the ANSI X12 848 Transaction Set for the structured exchange of SDS information will be introduced, and will be compared to other proprietary import schema that may be used by EHS software used by attendees
- Having the LLM create a SDS Quality Score. Discussion of what the criteria for creating such a score should be (let the LLM contribute to the discussion)
- Review the results and see how human review and interaction is still needed
- Discuss potential followup as a community group/COP

What Scientists Wish Biosafety Officers Knew and What Biosafety Officers Wish Scientists Knew

Glen Alberts

Effective biosafety programs depend on shared understanding between scientists and biosafety professionals, yet persistent gaps in perspective often undermine risk management and laboratory culture. Scientists may view biosafety controls as misaligned with experimental reality, while biosafety professionals may lack visibility into scientific nuance and operational constraints.

Presented from the rare dual perspective of a practicing biologist and biosafety professional, this session examines common friction points through anonymized, real-world case examples. Topics include experimental design misunderstandings, communication breakdowns during risk assessment, and how assumptions on both sides can unintentionally increase risk.

July 21 - 11:25am - 12:10pm

Data-Driven Decision Making: what the LionSafe Risk Assessment Reveals About Research Safety

Diann Stedman, Peter Muldoon, James Crandall

In 2025–2026, Penn State launched the LionSafe Risk Assessment (LRA), a self-guided, institution wide hazard assessment designed to modernize and unify safety practices. The LRA evaluates more than 50 hazard categories and generates a customized safety requirements report for each research or academic work area. This streamlined, data driven approach provides clarity, consistency, and improved hazard visibility across diverse work environments and serves as a guided, institution-wide hazard assessment designed to modernize and unify safety practices. More than 500 LRAs have been completed by the research community during the staged rollout, supported through coordinated kickoff meetings, department level outreach, and active engagement from Environmental Health and Safety (EHS). Early outcomes demonstrate increased awareness of safety expectations, improved accuracy in hazard identification, and strengthened alignment between research teams and EHS. LRA data is already informing program improvements across chemical safety, biosafety, PPE hazard assessment, and work specific training guidance. These insights help EHS identify high risk trends, refine program resources, prioritize inspections, and streamline communication with research groups. The implementation process has also highlighted key challenges, including refining conditional logic, improving report usability, and balancing standardization with the unique needs of research disciplines. This presentation will share the rollout strategy, stakeholder engagement approaches, lessons learned, and examples of how LRA derived analytics are shaping institutional decision making. By illustrating the practical impact of LionSafe's early data and the operational benefits of a universal hazard assessment tool, this session offers a model for institutions seeking to enhance research safety culture, improve consistency, and build a proactive, data driven safety ecosystem in which derived analytics are shaping institutional decision-making.

Double Agents: Safety Professionals Embedded at the Intersection of EH&S and Research Communities

Devin Leonard, Anna Gioseffi

Embedded safety professionals serve an essential role in academic safety, providing tailored safety support directly to the research communities which they serve. The University of Florida recently introduced seven Embedded Safety and

Compliance Officers (ESCOs), which fill the role of embedded safety professionals while being employed under the main Environmental Health and Safety office. These ESCOs report directly to Environmental Health and Safety (EH&S) leadership and indirectly to Associate Director's of Research at the college level. Across UF's large and diverse campus, seven ESCOs were selected to serve colleges where research safety needs were greatest. This hybrid model- functioning both under the direct oversight of EH&S and the specific colleges which they serve- poses a number of unique strengths and challenges which are not common to embedded safety professionals employed directly by the colleges. Strengths of this type of arrangement include direct communication with EH&S, allowing for rapid bidirectional flow of information, and having a robust relationship with the research community which builds trust and collaboration between researchers and EH&S. ESCOs are also able to more deeply learn the specific challenges and needs of their college, enabling them to advocate for their college's interests in EH&S strategic planning. While overall these new positions have been very well received by the research community and have reduced some administrative burdens within the EH&S Research Safety office, these ESCOs have also faced some additional challenges due to the dual report of their position. For example, each ESCO has had to individually navigate the specific nature of their position according to their college's environment, resources, and culture. While some colleges have had very close involvement with their ESCO, offering financial support and enthusiastic collaboration, ESCOs in other colleges have had less immediate buy in and have needed to customize their approaches to suit a less integrated relationship. Despite the variety of challenges faced by individual colleges, the ESCO community at UF also operates collectively and collaboratively to overcome these hurdles by sharing experiences and strategies to fulfill common goals. Overall, UF has seen a number of benefits after installing these ESCOs across campus, though some challenges remain. There is no "one size fits all" ESCO, and the uniqueness of this position demands constant adaptation and evolution to best serve the research community and build a robust and collaborative culture of safety.

Not Your Usual EHS training - Role Playing for the Win!

Amy Orders, Hans Neilson

In today's work environment, safety and health professionals often find themselves navigating not only technical requirements but also the complexities of human interaction—especially during times when communication may feel strained or emotionally charged. For new and mid-career professionals, developing the ability to deliver clear, respectful, and constructive guidance is as essential as understanding regulatory standards. This training emphasizes the interpersonal skills needed to succeed when conversations become difficult, whether you're addressing safety concerns, working through corrective actions, or collaborating with teams under stress. Participants will learn practical techniques for maintaining composure, building trust, and communicating with empathy—and role playing several scenarios! By strengthening both technical competence and communication finesse, safety and health professionals will be better equipped to

foster safer workplaces, encourage open dialogue, and support a culture where everyone feels respected, heard, and committed to shared well-being. This session is will provide ready to use scenarios for future use elsewhere!

Occupational Health as Strategy: Protecting People, Powering Performance

Matthew Hamm

Whether you serve a small college, a major research university, an academic medical center, or a corporate research enterprise, a well-structured Occupational Health Program is essential to protecting your workforce, supporting research operations, and maintaining regulatory compliance. Yet many institutions struggle with fragmented services, unclear governance, reactive risk management, and limited integration between Environmental Health & Safety (EHS), Human Resources, and clinical services.

This session will provide a practical, systems-based roadmap for building or strengthening an institutional occupational health framework. Participants will explore core program components—including exposure surveillance, medical monitoring, immunization programs, respirator clearance, fitness-for-duty evaluations, return-to-work coordination, and management of biological, chemical, and physical hazards. We will also discuss governance structures, data integration, documentation standards, and alignment with OSHA, CDC, and NIH expectations. Through real-world examples and scalable models, attendees will learn how to move from a reactive, compliance-driven approach to a proactive, risk-informed occupational health strategy that supports employee well-being, research continuity, and institutional resilience while saving on total costs. Whether you are launching a new program or refining an existing one, this session will provide actionable strategies to strengthen collaboration across departments, clarify accountability, and build a sustainable occupational health infrastructure. Participants will leave with a framework they can adapt immediately to their own institutional environment, regardless of size or complexity.

Optimizing Lab Safety: Risk-Based Chemical Hazard Classification

Johanna Andryszewicz, Janina Willkomm

University research laboratories create significant challenges for health and safety management and traditional safety approaches may not be fully effective. These laboratories contain diverse hazards across wide-ranging academic disciplines and a trainee-dominated learning cohort within a dynamic and innovative research environment. An effective laboratory hazard classification system using a risk-based approach is essential for optimizing the deployment of limited resources in university settings. By systematically categorizing chemicals based on inventory records and GHS hazard information, institutions can better identify hazards, prioritize inspections and tailor disposal initiatives where they will have the greatest impact. The

University of Calgary EHS Lab Safety team developed a chemical hazard classification framework resulting in a Risk Matrix, which effectively categorizes labs as Low, Moderate or High Risk. The development of the methodology, enhancements to operational efficiency and positive program outcomes are discussed, while identifying opportunities for continuous improvement.

Proactive PFC management, Lessons Learned in Campus Wide Inventory/Disposal of PFCs

Tom Syfert, Adam Roberge

Peroxide Forming Chemicals (PFCs) are often overlooked and have unfortunately caused many injuries recently at several universities. The University of South Carolina (USC) completed the 10-month process of enhancing our PFC policy which included: identifying, logging, training individuals, testing, and neutralizing 1000 containers across campus and through many departments. Some Principal Investigators (PIs) were receptive to the hands-on training and took an active role in PFC management. Motivating other researchers was less productive (like herding cats) and other methods were incorporated to ensure the PFC risk was reduced, and our disposal target was met. At the end of 10 months, we reduced over 1000 potential containers to only 54 that needed remote opening, neutralization, and stabilization. We will discuss implementing PFC inventory/management, hands on training experiments, PFC segregation/disposal guidelines, and strategies for Management/PI buy in.

Verify Then Trust: Accepting a New Fire Panel as an Embedded EHS Professional

Anthony Murph

SSC Services for Education identified the need to upgrade the fire alarm control panel serving the Alkek Building, home to the Texas A&M Institute for Biosciences and Technology (IBT), and formally notified Texas A&M Environmental Health and Safety (EHS) of the required system modernization. Fire alarm systems protecting complex academic and research environments are typically tested and commissioned within one to two weeks; however, this project evolved into a 213-day lifecycle from installation through final acceptance. This presentation will explore the technical, regulatory, and operational challenges encountered throughout the extended commissioning process, including system deficiencies, iterative repairs, phased upgrades, and comprehensive acceptance testing aligned with applicable NFPA standards. Particular focus will be placed on maintaining life safety and research continuity within an occupied biosciences facility while coordinating multiple vendors, contractors, and stakeholders. Attendees will gain actionable insights into risk management, documentation strategies, vendor accountability, and communication frameworks that support successful delivery of fire protection system upgrades in higher-education environments.

From Purchase Order to Chemical Intelligence: Why Procurement Integration Matters.

Daina Huntington

Universities invest heavily in procurement systems, inventory platforms, and safety programs, yet the information flowing between them is often disconnected. As a result, Researchers, Lab Operations, EHS Teams and Risk Management spend valuable time manually entering data, reconciling records, and managing compliance risks, reactively.

This session explores how having the right tools can help create a more connected and safe university by transforming purchasing data into inventory-ready chemical intelligence.

Attendees will learn:

- Why procurement data is often difficult to use for chemical inventory and compliance
- How procurement integration reduces duplicate data entry, administrative burden, and risk
- The unique benefits for Researchers, Lab Operations, EHS, and Leadership
- How procurement APIs connect purchasing systems with inventory and safety platforms
- Practical examples of turning procurement records into standardized, enriched chemical data

The session will also provide a behind-the-scenes look at how procurement integrations work and why connected procurement is a critical component of a modern high-research activity university.”

With Love, Your Friendly Neighborhood Industrial Hygienist

Kelsey Griffith

When you hear the term “industrial hygiene”, do you think of rigorous safety standards, or does it sound like a fancy name for a car wash? Did you know that ergonomics, ventilation, indoor air quality, and chemical exposures all fall into the realm of industrial hygienists? In this presentation, learn how to incorporate industrial hygiene into your campus safety offerings and help engage students, faculty, and staff. Combine engineering, administrative, and personnel controls to create safe environments! Get rid of your pain in the neck (no, not your nosy coworker)! Make weird smells someone else’s problem by identifying them and recommending remediation! Your friendly neighborhood industrial hygienist, Kelsey Griffith, will show you the processes that she uses at the University of Texas at Dallas to increase awareness and accessibility to industrial hygiene and (hopefully) make it fun, to boot.

July 21 - 2:15pm - 3:00pm

Assessment of Inhalation Risks Associated with Off Gassing from 3D Printing Dental Resins

Qian Zhang

Photopolymer resins are widely used in dental applications as feedstocks for vat photopolymerization 3D printing to produce dentures, crowns, surgical guides, and other dental parts. Dental resins typically contain irritating or sensitizing components that pose risks during dermal exposure, however, inhalation risks tend to be overlooked due to the lack of data on the off gassing from dental resins. Staff and occupants in dental schools or clinics spend extended hours in these environments with 3D printers loaded with dental resins, where they may face exposure-related health concerns when handling resins or sharing the same spaces with 3D printers daily. This study characterized volatile organic compound (VOC) emissions from eight commonly used resins in a dental school using micro-scale chambers and standard-based chemical emission testing methods. This fast-screening approach allowed us to obtain VOC emission profiles from each resin, which were used for inhalation exposure assessment and further identifying potential risks. Chemicals of concern listed in existing risk tables from regulations and guidance documents for indoor environments were identified, and their exposure levels were estimated using an indoor exposure model. In this study, exposure levels were assessed for personal exposure representing a person loading or handling resins, and area exposure representing a person staying in a dental lab with various resin 3D printers. The potential inhalation hazards will be discussed based on exposure scenario, inhaled VOC property, and hazard category or index.

Evaluating the Effectiveness of Targeted Sharps Safety Interventions at the Abigail Wexner Research Institute

Sumit Ghosh

Sharps safety is essential for preventing cuts, lacerations, and needlestick injuries particularly in research environments where sharp instruments are routinely used and may involve exposure to biological hazards. This study evaluates the impact of a comprehensive sharps-injury prevention program that integrates substitution strategies, engineering controls, administrative measures, and targeted employee education through workshops and training.

Methods

The Abigail Wexner Research Institute (AWRI) implemented a multi-component safety initiative emphasizing equipment modifications, staff training, and active engagement. Sharps-injury data from 2019–2025 were analyzed to determine the program’s effectiveness. Key interventions included a revised cryostat/microtome policy, hands-on safety workshops, and deployment of safer cutting tools and devices.

Results

From 2022 to 2023, overall sharps injuries decreased by 35% (20 to 13 incidents), with OSHA-recordable injuries declining by 70% (10 to 3). From 2024 to 2025, overall incidents dropped by an additional 28% (21 to 15), accompanied by a 67% reduction in OSHA-recordable cases (3 to 1). Notably, cryostat- and microtome-related injuries were eliminated entirely in 2023.

Conclusion

AWRI's targeted, multi-layered sharps-safety program resulted in substantial reductions in total and OSHA-recordable injuries. These findings highlight the effectiveness of combining administrative policy enhancements, equipment improvements, and hands-on training to strengthen safety culture in research settings.

Excel Tool development for Laboratory Chemical Management

Karen Jackson

The OSHA Lab Standard requires labs utilizing hazardous chemicals to have documented Standard Operating Procedures (SOPs) as part of a complete Chemical Hygiene Plan (CHP). Part of my work involves assisting researchers in determining which of their chemicals require SOPs and helping them create appropriate SOPs. This can be a challenge for labs possessing a multitude of chemicals. This talk will explore a developed Excel-based tool to help sort a chemical inventory and determine which SOPs are needed. After the Excel file was developed, 2-hour meetings were scheduled with the PI or lab staff to walk them through the Lab Specific CHP section by section. The Chemical Excel file was based on the updated inventory they provided to Lab Safety for entry into the new Scisshield inventory system. The sections were split to match the Chemical Hygiene Plan's listing of chemicals. There were some great outcomes that weren't expected to come from the Excel file. Labs could now use university-provided educational materials to sort most chemicals by referring to their individualized Excel sheet. Labs now had a quick reference utilizing university-provided educational materials to determine which chemicals needed individualized SOPs and which could just have guidance (class SOP) information. Since Acute toxicity chemicals were included in the PHS list, it was a simple matter for the labs to look up those specific chemicals to determine which needed to be further delineated onto an Acute toxicity list. (This will be an add-on for the future Excel sheet.) Since Inorganic and Organic corrosives were combined in the same list (per the lab-specific CHP), it provides a quick reference for them to look up the chemicals on the list to see whether they had Carbon (Inorganic vs. organic) or were acids or bases, to determine compatibility for storage. (This will be an add-on for the future Excel sheet.) This allows a cross-reference with the inventory entered in Scisshield to ensure the information is entered correctly. It has helped to identify wrong CAS numbers, wrong safety data sheets, and wrong names for chemicals in the system, since the Excel sheets are developed after they submit their chemical inventory for loading.

From Audit to Action: Driving Safety Transformation

Elizabeth Henry

Turning compliance into culture: How GTRI transformed an audit into a blueprint for safety excellence. When an internal audit sparks organizational change, it can redefine an institution's safety culture. At the Georgia Tech Research Institute (GTRI), the 2025 Laboratory Safety Audit became a catalyst for shifting from a compliance-based approach to a performance-driven safety framework. This session explores how GTRI transformed audit findings into a roadmap for proactive reform, investing over \$270,000 in sustainable, innovative practices. Attendees will discover how GTRI modernized safety processes, strengthened inspection protocols, enhanced training systems, and built accountability—while fostering collaboration with key stakeholders to create a lasting culture of safety. The presentation highlights actionable strategies for higher education safety professionals, emphasizing transparent governance, data-driven decision-making, and continuous improvement. By treating audit findings as opportunities rather than obligations, GTRI demonstrates how integrated communication, advanced data tracking, and strong leadership partnerships can build resilient safety systems that thrive beyond compliance. Join us to learn how GTRI's journey—from audit to action—can inspire meaningful, lasting change in your own institution. Together, we'll uncover practical steps for leveraging audits as strategic tools for operational excellence and cultural innovation.

Implementation of Agriculture Field Safety

Sam Stoxen

The University of Minnesota has a large agriculture program. Agriculture ranks at the top of the Department of Labor Statistics for workplace injuries and fatalities. In this talk I will discuss some of the steps we have taken to improve safety in agriculture settings. This includes expanding safety resources as well as ramping up training to comply with EPA regulations. My talk will detail our efforts to improve lab specific field safety plans and a push for better pesticide application record keeping. I will share lessons learned and plans for future program improvements.

Innovative Environmental Compliance Strategies at UC Berkeley: Integrating Stormwater Management and Remediation with Institutional Priorities

Alicia Bihler

UC Berkeley has developed two alternative compliance programs that address environmental regulations while advancing institutional priorities. This presentation examines how universities can redesign compliance approaches when traditional methods prove inefficient or misaligned with campus goals. The stormwater program addresses Berkeley's regulatory challenge: municipal permits require no net increase in runoff, but the space-constrained campus needs to accommodate significant new development. Traditional compliance requires each project to install its own treatment facilities, consuming valuable land.

Berkeley instead created a campus-wide Stormwater Credit Bank. This approach consolidates maintenance, reduces infrastructure redundancy, and frees developable land. The centralized facilities integrate with other priorities, such as Strawberry Creek restoration, climate adaptation, and educational opportunities. The remediation program involves contamination at Richmond Field Station's tidal marsh and adjacent areas. The technically acceptable solution—capping contaminated soil in place—would cost less than excavation but would require permanent maintenance, habitat mitigation payments, and face community opposition. UC Berkeley proposed an alternative: excavate the contaminated upland transition zone and construct new tidal marsh and ecotone habitat. This approach creates restoration co-benefits that align with regional conservation priorities and grant funding opportunities. Both programs demonstrate specific conditions where alternative compliance can become achievable: regulatory flexibility is present within the existing framework, alternative approaches can meet or exceed environmental protection standards, institutional priorities align with new approaches, and funding mechanisms can be identified for incremental costs. Key implementation factors include early regulatory agency engagement, executive support secured through clear communication and alignment, technical documentation demonstrating equivalence or superiority to standard approaches, and phased funding strategies. Challenges include longer project timelines compared to standard compliance, need for creative funding models, coordination across multiple campus departments, and managing stakeholder engagement and expectations during multi-year project implementation. UC Berkeley's experience provides a practical framework for evaluating when alternative compliance approaches warrant the additional complexity.

Lab Check-ins: Strengthening EHS & Research Relationships

Kaleela Kadir

Comprehensive laboratory inspections can be daunting for the researchers. Lab inspections are typically scheduled with a lab member and can last for 45 minutes to 1 hour. An extensive checklist is used to ensure compliance with safety requirements. In some cases, researchers might feel the need to "prepare" for inspections prior which can defeat the purpose as EHS is trying to get a realistic picture of safety compliance in each lab. The Lab Check-in program was developed to increase lab visits and improve compliance. Lab Check-ins are a low-stake assessment visit focusing on emergency equipment functionality, housekeeping standards, chemical storage practices, and adherence to safety guidelines. Lab check-ins helped enhance hazard recognition, update signage, and foster a positive relationship and safety culture between researchers and EHS during these visits.

This session provides key insights for EHS professionals seeking to increase their outreach and improve safety compliance within higher education institutions.

Two Buildings, Two Pathways: Operationalizing EHS in New Construction and Institutional Merger Environments

Connor Cordray, Shalaka Kotkar

Environmental Health and Safety (EHS) programs are frequently challenged to scale operations in response to institutional growth, new construction, and organizational mergers. While these transitions share the common goal of establishing consistent safety culture and compliance frameworks, the operational realities differ substantially depending on whether EHS engagement begins during facility planning or after research programs are already established. This abstract describes the experience of an academic EHS department assuming responsibility for two research facilities under markedly different conditions: a newly constructed laboratory building integrated into institutional planning processes from early design phases, and an existing research building incorporated following an organizational merger. The comparison highlights differences in risk assessment approaches, stakeholder engagement, safety culture development, infrastructure readiness, and compliance alignment. Attendees will gain practical tools for evaluating readiness in new facilities, conducting gap analyses in inherited environments, and building trust while standardizing safety expectations across diverse research settings.

July 21 - 3:10pm - 3:55pm

A Multi-Disciplinary Team Approach is Best at Solving the Actual Problem

Jonathan Klane, Alex Albright

Fume hoods involve a set of several factors that influence their performance. The three primary ones are room or building air, hood air flow, and the users' actions both inside and outside the hood. Within these primary factors there are many sub-factors.

Some include make-up air, pressure differentials, duct bends/elbows, air treatments, humidity, doorways and openings, paths of travel, experiment, equipment, process, sash height, user mechanics or reaching in, hazards, etc.

Various disciplines are needed to fully understand the overall hood performance and how it functions (or not). Some can be EHS lab professionals, IHS, facilities HVAC staff, building systems managers, the researchers, PIs, embedded safety professionals, outside experts, HVAC evaluators, etc.

The speakers will present a variety of lab-related problems for the learners to solve. The speakers will act as different disciplines and contribute their specific knowledge, skills, and attitudes toward solving the problem. The learners will have an opportunity to ask questions at certain junctures in the case scenarios. A path to solving the problem will become apparent.

Case 1 — The University That Passed on Paper

Primary factor: Hood airflow vs. actual containment

Hoods had passed annual face velocity tests, but they failed containment tests. How did the team solve it?

Case 2 — The Baffle That Changed Everything

Primary factor: Hood airflow (internal aerodynamics)

Containment tests showed poor hood performance, albeit with some inconsistencies no one understood. Face velocities seemed okay. How did a team go about using critical reasoning to figure it out?

Case 3 — Seeing Is Believing

Primary factor: User actions (sash behavior and risk perception)

EHS fatigued of researchers not getting hood use concerns and risk perceptions. How did a new member of their overall team help convince everyone what was going on and resolve the head-banging and butting?

Behind the Curtain: AI and the Dangerous Illusion of Compliance

Robert Day

AI and automation are increasingly embedded in online safety, compliance, and certification training used across higher education. While these systems promise efficiency and scalability, they also introduce a growing and often overlooked risk: training records that appear compliant but fail to demonstrate genuine human participation, understanding, or accountability. In campus environments where training documentation is routinely relied upon after incidents, inspections, or legal challenges, this gap can undermine institutional defensibility. This session examines how automated participation, proxy completion, and disengagement can quietly erode the integrity of mandatory training programs supporting campus safety, EHS, laboratory operations, contractor onboarding, and annual certifications. Rather than focusing on individual misuse, the discussion highlights systemic design and oversight gaps that allow weak or invalid evidence to be generated, retained, and trusted. Attendees will explore why common controls—such as completion tracking, time-based metrics, and one-time identity checks—often fail to surface these risks until scrutiny is unavoidable. Drawing on real-world observations from regulated and safety-critical environments, the session reframes training systems as assurance mechanisms rather than administrative requirements. It examines how assumptions about training integrity propagate across safety, HR, legal, and compliance functions, and how reliance on misleading records can amplify exposure during incident investigations, regulatory review, or litigation. Participants will be introduced to a practical, vendor-neutral approach for evaluating the integrity of training and certification workflows. The focus is on asking the right governance-level questions, identifying weak signals of assurance, and clarifying responsibility between institutions and third-party platforms. Attendees will leave with actionable insight

they can apply to strengthen oversight, improve documentation quality, and increase confidence that training records genuinely support campus safety and risk management objectives—before those records are tested under pressure.

Beyond the Threshold: Managing Biological Toxins in Academic Labs

Allyssa Baptista

Working with biological toxins in academic laboratories requires a coordinated approach to biosafety, security, and regulatory compliance, even when activities are limited to exempt quantities of select agent toxins or to non select toxins. For many Environmental Health and Safety (EHS) programs, particularly at institutions without a formal biological toxin use program, it can be difficult to know how to evaluate new toxin related proposals, define institutional responsibilities, and support research groups effectively.

This session will outline practical, scalable strategies for managing toxin use in higher education, including clear definitions and regulatory thresholds for exempt quantities of select agent toxins, the respective roles of Institutional Committees, EHS offices, and campus leadership, and risk assessment and mitigation approaches tailored to academic research environments. Attendees will be introduced to tools and resources they can adapt to build or strengthen toxin management programs at their own institutions.

By the end of the session, participants will be better able to distinguish compliance expectations for exempt select toxins versus other biological toxins, perform basic risk assessments, implement practical safety and security practices, and enhance safety culture around biological toxin use in academic settings. This presentation will be relevant to biosafety officers, embedded safety professionals supporting labs that work with biological toxins, and safety leaders seeking to establish a basic toxin use program or improve an existing one.

Controlled Substances and Drug Contraband: A Deep Dive into Regulatory Requirements to Establish Institutional Compliance

Carrie Colbert

Knock, knock, Campus Safety”. Have you ever considered how contraband on campus should be managed from a legal perspective? From marijuana to stimulants, illegal drug use is on the rise year after year in institutions across the country. This is a question that should be on your EHS team’s minds. How drugs and drug paraphernalia are managed once they are your responsibility and how they are ultimately disposed of can put your institution at risk. On the other side of the coin, the legal use of controlled substances for academic and scientific purposes has occurred for decades, particularly in animal studies, psychology, and neuroscience. With its use, the regulations surrounding controlled substances have become more defined and nuanced as well. Whether you are looking to

establish an institutional policy and compliance strategy or are curious about what has changed in the regulations, this technical session will provide insight into not only the methods for proper management but also disposal avenues for controlled substances

Fume Hood MythBusters: Why Face Velocity Isn't Enough for Safety

Chip Albright

Labs can be dangerous places, and chemical fume hoods are among the most important safeguards in a laboratory. However, fume hoods are also some of the most misunderstood safety devices. Many institutions rely solely on face velocity measurements as a proxy for hood performance, assuming that a certain feet-per-minute airflow means the hood is “safe.” Nothing could be further from the truth. Face velocity simply tells the speed of air at the hood opening – it does not guarantee that hazardous vapors are actually being contained. True safety depends on containment, and containment is all about controlling turbulence and airflow patterns inside the hood. This session will debunk common myths surrounding fume hood performance and demonstrate why focusing only on face velocity can lead to a false sense of security. We will explore the proper ways to verify a fume hood’s containment, including both qualitative methods (smoke visualizations, airflow tracers) and quantitative tests (tracer gas containment testing per ASHRAE 110). Real-world data and case studies will be presented – including insights from an 18-year Chemical Safety Board study that found over 80% of major lab accidents happened at academic institutions – underscoring the critical need to “get it right” with fume hoods on campus. Attendees will learn how factors like hood design, the overall lab ventilation system, and user behavior can make or break containment, even when face velocity readings appear acceptable. We will discuss how regular containment testing and better training of researchers can mitigate these risks. By the end of this talk, participants will have a clearer understanding of what it takes to ensure their fume hoods truly protect people, ultimately making laboratories safer one hood at a time.

How Fayetteville State University Built a Campus-Wide Culture of Cardiac Preparedness

Gina Rodriguez, Andrea Cortez

Sudden Cardiac Arrest is a leading cause of death on college campuses, yet many institutions struggle to implement AED programs that are scalable, sustainable and meaningfully integrated into campus culture. In this session, Andrea Cortez, Environmental Health & Safety Professional at Fayetteville State University (FSU) will share how her team designed and launched a campus-wide cardiac safety initiative that pairs large-scale AED deployment with community engagement and hands-on training. As a public Historically Black College and University (HBCU) serving a diverse student population, FSU recently

deployed more than 70 Avive Connect AED®s across campus as part of a strategic effort to modernize emergency preparedness and strengthen lay person response. Cortez will walk attendees through the planning, stakeholder alignment, procurement, and operational considerations involved in implementing a technology-enabled AED program at scale. She will discuss how connected AED technology supports remote readiness, reduces administrative burden on EHS teams, and improves coordination with emergency responders during a cardiac emergency. Beyond device deployment, the session will highlight FSU’s participation in North Carolina’s RACE-CARS trail, a landmark statewide initiative focused on improving cardiac arrest outcomes. As a host site for a large campus CPR/AED Training event, FSU leveraged student leadership, nursing programs, and public safety partners to build a culture of preparedness. Attendees will learn how integrating education and community outreach into an AED strategy can increase awareness, confidence, and willingness to act during emergencies. Through practical lessons learned and real-world examples, this presentation will offer a roadmap for higher education professionals seeking to elevate campus cardiac safety. Participants will leave with actionable insights on building cross-departmental collaboration, scaling AED programs efficiently, and using community engagement to amplify impact.

How to Make Friends and Influence People: Building Partnerships that Advance Campus Safety

Robin Izzo

EHS professionals in higher education are often expected to influence behavior, decisions, and institutional priorities without relying solely on positional authority. Whether advising senior leadership, collaborating with faculty, or guiding staff and students, our effectiveness frequently depends on relationships, trust, and credibility rather than enforcement alone. In a climate where we are fighting more than ever for limited resources, having a seat at the table where decisions are made is more important than ever. This session explores the critical role of relationship-building and influence in academic EHS leadership and management. Drawing on real-world experiences from campus settings, we will focus on practical “soft skills” and strategies that help us create and sustain meaningful partnerships with key stakeholders across the institution. We will examine how influence is built over time through consistent engagement, shared goals, and a clear understanding of others’ priorities. Topics will include strategies for earning and maintaining a seat at the table where decisions are made; staying relevant in environments with competing institutional pressures; and aligning EHS initiatives with the broader mission, values, and strategic goals of colleges and universities. The session will also address ways to remain visible and connected beyond moments of crisis or compliance by intentionally cultivating professional relationships, communicating value, and demonstrating how EHS supports teaching, research, and campus operations.

The Dirt on Campus Edible Gardens

Leanne Wright, Lei Ilan-Garcia

Edible gardens are increasingly popular on university campuses as part of sustainability, food security, and experiential learning initiatives. While these projects offer clear educational and community benefits, they may also introduce environmental health and safety (EHS) risks when potential soil contamination are not fully considered. This presentation describes EHS actions taken and lessons learned following the installation of edible gardens at two separate locations on a northern Virginia university campus. Garden sites are often selected for convenience or visibility, with limited evaluation of prior site use. On urban and suburban campuses, soils may contain contaminants from former buildings, demolition activities, nearby roadways, or naturally occurring constituents. Edible gardens may also attract volunteers from off-campus, including vulnerable populations such as youth and older adults, increasing the importance of understanding exposure pathways related to soil contact and ingestion of produce. Although home soil testing kits are readily available, their reliability is limited, underscoring the need for institution-led assessment using validated methods. This presentation will provide an overview of how our EHS department conducted a structured evaluation that included gathering historical land use information through interviews with long-tenured staff and review of archived facilities management drawings. Likely contaminants of concern were identified based on site history and regional soil characteristics, with consideration given to both direct soil exposure and plant uptake pathways. Composite sampling strategies and site maps were developed to manage costs while maintaining data quality. Soil samples were analyzed by an accredited laboratory, with targeted resampling performed as needed. Based on laboratory results, EHS developed site-specific recommendations and risk-based actions. The presentation will also discuss challenges encountered, including gaps in soil standards for certain contaminants, limitations of composite sampling, communicating technical results to campus stakeholders, and developing practical recommendations for borderline or elevated results below established regulatory thresholds.

July 22 - 10:10am - 10:55am

Celebrate Good Times, Come On!

Zoe Harris

And if you didn't sing along in your head, shame on you. Anyways, on to the celebration: Kirkwood Community College is celebrating 5 years of EHS July 2026! Before July 2021, there was no EHS department. While there were a few safety initiatives in place, there was no department dedicated to the cause leaving faculty or staff unfamiliar with safety to be the "experts". By building relations with employees, writing SOPs (and re-writing SOPs) and help from the wonderful CHEMA community, Kirkwood now has an EHS department with an active voice and presence on campus. Whether you are building from scratch or working to revamp your EHS department, this presentation will provide tips, tricks, and directions to help navigate the intricacies of building and promoting an EHS department.

Compressed Gas Cylinder s Safety Guidelines

Scott Nelson

Compressed and liquefied gases are routinely used in laboratories, shops and various other operations at universities. Compressed gas is a generic term used for describing compressed gases, liquefied compressed gases, refrigerated liquefied gases (cryogenic fluids) and dissolved gases. Gas cylinders and Dewars containing compressed gases must be handled with caution at all times, and especially during transport. Assume all cylinders and Dewars contain gas under pressure. Treat all gases as hazardous chemicals. These guidelines provide information on their safe use and apply to all University personnel and students who handle or use compressed or liquefied gases or systems.

EHS beyond the Labs: Making Chemical Safety, Management, and Disposal Accessible for Commonly Overlooked Departments

Sarah Wannemuehler

When we think of chemical/hazardous materials safety, management, and disposal programs at higher education institutions, we typically think of the chemistry and biology departments and their research labs. However, many of these same institutions have entire departments that can be overlooked when implementing and training on EHS programs. The Fine Arts & Theatre, Engineering & Maker Spaces, and Facilities, Maintenance & Grounds departments all handle hazardous materials in their daily operations. Materials used in these departments require the same management, handling, and disposal considerations as their counterparts in chemistry and biology labs. By enhancing the accessibility of EHS programs to these departments, you can promote personnel safety, ensure compliance, and support sustainability across the campus. This can be achieved by providing tools for inventory management, clear and concise training materials, and written procedures covering all aspects of chemical safety, management, and disposal, all of which should be readily available to department leadership, faculty, and all generators of hazardous waste.

Enhancing Laboratory Safety Through a Comprehensive and Collaborative Inspection Program

Ying Liu

A structured and collaborative laboratory safety inspection program is essential to maintaining regulatory compliance and fostering a strong culture of safety across academic departments. This presentation outlines our comprehensive approach to laboratory inspections, beginning with the development of a standardized, risk-based inspection checklist aligned with regulatory requirements and institutional policies. The checklist was designed to ensure consistency, improve documentation, and address key safety elements including chemical hygiene, hazardous waste management, emergency preparedness, and engineering controls. We will highlight inspection findings across multiple departments, identifying common trends such as labeling deficiencies, chemical storage concerns, and

gaps in training or documentation. The program emphasizes partnership with faculty, researchers, and laboratory staff to not only identify deficiencies but also provide practical solutions and corrective action guidance. A key focus of our initiative has been strengthening the management and oversight of chemical fume hoods, eyewash stations, and emergency showers campus-wide. We improved tracking and annual performance testing of chemical fume hoods, enhanced communication regarding failed certifications, and streamlined repair and re-inspection processes. Through follow-up verification and continuous process improvement, our inspection program has led to measurable improvements in compliance rates and hazard mitigation. This presentation will share lessons learned, practical tools, and strategies for building a sustainable inspection program that supports both regulatory compliance and a proactive laboratory safety culture.

Fume Hood Commissioning Challenges and How the Laboratory Ventilation Management Plan Assures Proper Performance

Thomas Smith, David Brummitt, Clarissa Lynch

Fume hood ventilation systems are among the most complex and resource-intensive engineered controls in laboratory facilities. Despite careful design and installation, post-installation testing frequently reveals deficiencies that affect containment, safety, and energy performance. Field experience across academic and research institutions shows that many newly installed fume hoods initially fail to meet performance expectations described in ANSI/ASSP Z9.5-2022. Common causes include improper installation, inaccurate airflow setpoints, unstable supply-to-exhaust tracking, disruptive room air currents, sensor calibration errors, and poor variable-air-volume (VAV) response at the hood, laboratory, or system level. These issues often emerge during commissioning or annual verification, delaying occupancy, increasing corrective maintenance, and reducing confidence in laboratory ventilation performance. The Laboratory Ventilation Management Plan (LVMP) provides a structured, lifecycle-based framework to prevent and resolve these challenges through coordinated design review, commissioning validation, and ongoing performance verification. By integrating ventilation risk assessment, standardized testing, and continuous monitoring, the LVMP establishes how laboratories achieve and sustain effective airflow control from construction through long-term operation. Case examples from new construction and operating laboratories demonstrate how LVMP-aligned practices identify root causes of commissioning failure, improve system stability, and support both safety and energy objectives. The session also illustrates how lifecycle performance management creates the foundation for quantitative validation of laboratory ventilation performance, enabling institutions to move beyond assumed safety toward demonstrable containment and reliability.

Navigating Environmental Compliance: Progress and Challenges on a Large University Campus

Amit Nair

Environmental permitting and compliance at the University of Utah requires coordination across a large and diverse campus that includes academic instruction, extensive research operations, major clinical and hospital facilities, and significant supporting infrastructure. As the Environmental Health & Safety (EHS) Department continues strengthening campus-wide environmental programs, we are working to navigate this complex and decentralized environment while meeting regulatory expectations for air quality and stormwater. The work is ongoing, challenges remain, and we aim to share the progress and successes achieved so far. Across campus, activities within academic buildings, research laboratories, clinical operations, and facilities projects generate a wide range of regulated environmental impacts. Air quality compliance requires managing numerous emission-producing sources across decentralized units, while stormwater compliance depends on oversight of outdoor operations, infrastructure work, and construction that may affect runoff quality. Addressing these responsibilities in a dynamic environment requires accurate information, consistent processes, and strong engagement with operational partners. The EHS Department emphasizes broad collaboration with academic departments, research leadership, U of U Health, Facilities Management, Planning and Design, and Utilities. Regular communication has improved visibility into upcoming activities, supported earlier identification of compliance needs, and encouraged more coordinated decision-making across the institution. Standardized guidance and practical tools have contributed to increased consistency, even as new challenges continue to emerge. This session will highlight strategies, tools, and lessons learned as the University of Utah's EHS Department advances its environmental compliance framework. Attendees will gain practical insights into navigating large organizational systems and strengthening environmental stewardship through collaborative, incremental progress.

Revisiting Our Old Friend HAZWOPER, a Deeper Look at University Requirements

Dennis Terpin

In response to University based hazardous environments, the difference between a safe outcome and a critical failure often hinges on planning that happens long before an emergency begins. This session explores the real-world application of OSHA's HAZWOPER standard and how it applies on university campuses. Through the lens of pre-planning, hazard recognition, emergency response coordination, and recovery. Drawing from decades of experience, Dr. Dennis Terpin outlines common breakdowns in emergency management such as untested plans, unclear leadership roles, Lithium battery car fires, composite fire aircraft fires, and insufficient resources—and provides guidance for building a response system that is both proactive and adaptable to changing conditions. Participants will gain a structured

understanding of how to assess risks using tools like vulnerability analysis, exposure estimation, and the DECIDE process. The session also clarifies distinctions between incidental releases and HAZWOPER-triggering incidents, and discusses proper selection and training of first responders, including awareness-level personnel, operations-level responders, and hazardous materials technicians. Whether you're responsible for preparedness, compliance, or response execution, this session will help you build a foundation for safer and more effective decision-making under pressure.

Safety Without Barriers: Designing Digital Content for Real-World Accessibility

Hannah Ramsey, Kristen Guan

Designing accessible safety content benefits everyone, from individuals experiencing “auditory, cognitive, neurological, physical, speech, and visual” limitations to people experiencing certain situational limitations. By staying current with accessibility standards, we ensure that all learners can receive and fully understand crucial safety content. This session will demonstrate effective strategies for designing, formatting, and auditing accessibility of digital safety content—such as Word files and PDFs—in alignment with the Web Content Accessibility Guidelines (WCAG) 2.1 Level AA. Formatting digital content according to these guidelines makes the information available to all. Topics covered will include: use of text styles, headers, alternative text, proper color contrast, list formatting, etc. Participants will engage in hands-on activities that allow them to experience common accessibility formatting barriers firsthand and practice applying accessibility design and auditing techniques in real time. In addition to gaining practical skills to create and adapt accessible digital content, participants will leave with a curated list of tools and resources they can apply immediately.

July 22 - 11:15am - 12:00pm

Biosafety Made Simple

Ekaterina Semenyuk

Biological research evolves rapidly and increasingly intersects with other STEM disciplines, often in unexpected ways. As research programs expand and diversify, institutions may find themselves needing a biosafety program they never anticipated. To adapt effectively, safety professionals may need to quickly develop the ability to:

- Recognize biohazards and prioritize risks
- Identify and implement low-effort, high-impact controls
- Align biosafety practices with practical solutions
- Identify key cost drivers for effective budget management
- Keep pace with a changing regulatory landscape
- Maintain communication and continuity across the lab or project lifecycle

This presentation will outline a practical, scalable approach to building and sustaining biosafety programs that balance risk, resources, and regulatory expectations. These strategies are applicable to institutions at all stages, from smaller organizations launching biosafety programs to larger, established programs seeking to remain resilient and adaptable amid regulatory, financial, and scientific change.

Defining the Value of the EHS Professional in Higher Education

Stephen Larson

Institutions of higher education are facing financial challenges that force senior business officers such as a VP Finance to ask important questions and make hard choices. The Director and the professional and technical staffs of EHS Departments must be prepared to explain the value they add to the organization each day. First, each staff member must be expert in their field and always current and able to speak and write authoritatively. Second, any position that can be outsourced in an effective and cost saving manner should be and led by the Director not outside forces. For example, if there are available hazardous waste technicians that can be hired on the outside, do so. Third, understand how every task links to the ability of others in the organization to do their work safely. It is important to be needed on a daily basis for others to work safely. This is best achieved by providing safety training to the entire workforce and conducting safety(educational-type) inspections of at least all high hazard operations. Fourth, in academic world, degrees and certifications are the bread and butter of higher education- so continuing education through the Doctoral degree or equivalent and recognized certifications-CIH, CSP, CHP, RBP is required. Finally, the Director must report to the most senior Operations person in the organization or as close as possible. EHS professionals breakdown borders and cross silos and audit other peoples work. No one wants to be audited so do not expect to be welcomed. Stephen will share his experiences both failures and successes using specific but unidentifiable incidents.

Educational Institutions as Special Event Venues

James Rainer

College and university campuses are well-accustomed to hosting large, regularly scheduled athletic events. Football, basketball, and baseball games are generally routine—though still complex—operations that institutions understand and manage with confidence. However, as the cost of building and operating athletic venues continues to rise, particularly for facilities that may only be used a handful of times each year, many institutions are exploring ways to generate additional revenue and increase utilization. This need is even more pressing today given the rapidly evolving and uncertain financial landscape surrounding collegiate athletics. Texas A&M has been host to several larger and non-typical special events over the last three years.

From Paper to Electrons Moving Into the Future, Whether We Like It or Not

Alicia Duprey-Gatrell

The move from paper, email, and other analog methodologies to a digital platform for EHS recordkeeping can be challenging. Crafting program documentation and electronic platforms that work for both researcher and EHS needs while reducing the overall research overhead burden can be difficult. The bigger challenge is changing the culture of compliance in the overall institution. This session will provide an overview of the process that the University of Utah started 5 years ago moving the institution into a fully digital safety management system for EHS related documentation and program management. It will discuss the challenges, triumphs, complaints, and successes encountered along the way and some of the unique approaches and solutions.

Integrating Laser Safety Oversight into the Procurement Process

Otu Inyang

The acquisition of Class 3B and Class 4 lasers present inherent safety, regulatory, and operational risks if not properly controlled prior to purchase and deployment. Historically, laser systems could be acquired using institutional credit cards, which bypassed established safety review processes and limited the Laser Safety Program's ability to assess hazards, ensure regulatory compliance, and maintain an accurate inventory of laser devices on campus. This gap created potential exposure to safety incidents, incomplete documentation, and adverse audit findings. To address these concerns, the Laser Safety Program implemented a centralized purchasing control that prohibits the acquisition of lasers via credit card and requires all laser purchases to be processed through the University's Procurement system. In support of this change the University of Texas at Arlington updated the purchasing credit card procedure to explicitly prohibit the purchase of Class 3B and Class 4 lasers, or any item containing a Class 3B or Class 4 laser or laser component. This policy revision formally codifies laser purchasing controls and reinforces institutional compliance expectations. In addition to procurement controls, the Laser Safety Program implemented a post-purchase monitoring process for Amazon and other marketplace transactions. Purchase reports are reviewed using keyword-based filters (e.g., laser, optical, diode, nanometer, and related terms) to identify items that may contain laser components. Identified purchases are evaluated by the Laser Safety Officer to determine laser classification, applicability of ANSI Z136.1-Safe Use of Lasers requirements, and the need for corrective action or follow-up. Under the revised process, proposed laser purchases are reviewed by the Laser Safety Officer prior to approval to evaluate laser classification, intended use, engineering and administrative controls, personal protective equipment, and training requirements in accordance with ANSI Z136.1-Safe Use of Lasers. This layered approach integrates safety oversight into both pre-purchase and post-purchase review, improving accountability, inventory accuracy, and compliance with institutional policy and national laser safety standards.

Nitrous Oxide Safety: Hazard Recognition, Assessment and Mitigation Strategies in Dental Spaces

Charisma Lattao, Spencer Chichester

In this session, we will describe the properties, clinical applications, and health risks associated with occupational N2O exposure. Identify N2O occupational exposure pathways in dental clinic spaces and interpret exposure limits. Provide an overview of sampling and monitoring techniques for exposure assessments. Demonstrate the use of IH Mod 2.0 Monte Carlo modeling software and direct-read N2O sampling method to assess how critical parameters, including ventilation rate and air movement, affect N2O airborne level and clearance rate.

Using EHS Contractors and Peer Reviews for Program Development

Amy Orders, Janet Eggum

As Environmental, Health, and Safety (EHS) programs expand in complexity—with evolving regulatory requirements, rising stakeholder expectations, and increased organizational scrutiny—many institutions are turning to external EHS contractors and structured program review models to strengthen program development. When applied strategically, these tools can fill expertise gaps, validate existing processes, streamline program modernization, and create defensible documentation that withstands regulatory or audit pressures. This session explores an evidence-informed framework for integrating contracted expertise and cross-organizational peer reviews into a cohesive EHS program development strategy. It emphasizes how organizations can achieve higher levels of compliance, accountability, and operational efficiency by blending internal knowledge with external perspective. Case examples illustrate successful models of contractor engagement, program review formats, and risk-based prioritization.

July 22 - 1:20pm - 2:05pm

The Hunt for Picric Acid

Jennifer Laine

Legacy Chemicals pose a significant challenge at universities. Professors are notorious for stockpiling chemicals in the off chance that one day they might need them. Sometimes, the chemical left sitting at the back of the cabinet could become an explosive nuisance. "The Hunt for Picric Acid" will detail the University of Miami's efforts to identify and remove this potentially explosive legacy chemical before any dire consequences occur. The presentation is an exciting case study about the actions taken by the Hazmat and Chemical Hygiene team at the University of Miami.

Chemical Hygiene Plan in Daily Practice

Ivet Hernandez, Beth Welmaker

Chemical Hygiene Plans (CHPs) are foundational to laboratory safety programs in higher education, yet their effectiveness depends on how well they are integrated into daily laboratory operations. This presentation focuses on practical, scalable strategies for moving a CHP from a compliance document to an active operational tool that supports research, teaching, and institutional risk management. Drawing on experience within a university Environmental Health and Safety (EHS) program, this session examines how CHPs can be operationalized across diverse academic laboratories through alignment with standard operating procedures, training frameworks, and routine EHS engagement activities. Emphasis is placed on embedding chemical hygiene expectations into onboarding, laboratory inspections, hazard assessments, and ensuring consistency while allowing flexibility for varied research environments. The presentation also addresses common challenges faced by EHS programs in higher education, including decentralized laboratory oversight, inconsistent adoption of safety practices, and limited faculty and researcher engagement. Practical solutions are shared for strengthening collaboration between EHS professionals, principal investigators, and departmental leadership to promote shared ownership of chemical safety responsibilities. Designed for CSHEMA members, this session highlights lessons learned, implementation tools, and communication strategies that support sustainable CHP integration, regulatory compliance, and continuous improvement. Attendees will leave with actionable approaches to enhance chemical safety culture, improve program effectiveness, and align CHP implementation with institutional research missions.

From Data to Decisions: Leveraging Information Systems to Strengthen Safety Operations at UNLV

Robert Deaver, Paul Garcia

Effective safety programs rely not only on technical expertise and regulatory knowledge, but also on the ability to efficiently track work, share information, and coordinate activities across teams. At the University of Nevada, Las Vegas (UNLV), the Risk Management & Safety (RMS) department supports a wide range of safety functions, each with distinct operational needs, data requirements, and workflows. Historically, these activities were supported by a combination of disconnected tools, manual processes, and unit-specific tracking methods, limiting visibility, consistency, and cross-functional collaboration. To address these challenges, UNLV RMS developed and implemented a centralized suite of RMS Tools designed to support core safety operations while improving transparency, accountability, and information sharing across the department. These tools include budget information sharing by unit, asset tracking for hardware and specialized equipment, and a growing collection of forms and data collection tools supporting activities such as safety concern reporting, SOP management, permit management, and internal workflows. This presentation will explore how RMS Tools was designed to align technology with real-world safety

workflows, enabling staff to move work forward more efficiently while maintaining accurate, accessible records. Attendees will learn how centralized systems improve tracking of resources, standardize data collection, reduce duplication of effort, and provide leadership with clearer insight into program activity and needs. The session will also highlight the role of collaboration, user feedback, and incremental development in driving adoption across diverse RMS units. Participants will leave with practical examples and strategies for using integrated tools to strengthen internal communication, support compliance, and enhance the overall effectiveness of safety programs, without sacrificing flexibility or user-centered design.

Real-Time Particle Monitoring as a Quality Improvement Tool for Construction Projects

Milton Griggs

Healthcare settings often require construction activities for many reasons including changing practices, upgrades, and unforeseen accidents. These construction projects are dirty activities. It is well known that dust is a potential source of infection for patients. As a results, all construction projects are contained in what is known as an Infection Control Risk Assessment (ICRA) barrier. To ensure that the dust remain behind the barrier, the air pressure within the construction area is negative to the rest of the patient areas. This is achieved using a machine that draws air into the construction area, passes it through a HEPA filter, and then vents it back into the patient area. American Society for Health Care Engineering (ASHE) has written a guide how healthcare should manage construction activities through the ICRA process. ASHE recommends that if the air being drawn into the barrier is vented back into patient care area, that it must be HEPA filtered and that particle counts should be taken to ensure the HEPA filter is working properly and the barrier itself is not contributing to dust in the area, especially in highly sensitive areas. Over the past two years, the ORs have undergone two construction projects requiring ICRA barriers. A particle counter was used to verify the ICRA barriers integrity was met during the projects.

Using a handheld particle counter, 3 consecutive measurements with 1 minute durations were made:

1. Outside the hospital,
2. Inside the hospital, but in an area where the ICRA barrier is not located,
3. In the area where the ICRA barrier is located but far enough away to ensure that the air is not being affected by the barrier,
4. Outside the ICRA barrier,
5. Direct measurement at the exhaust.

These measurements were taken before the ICRA barrier was to be built, after the barrier was built, and once a week while the barrier was still up. If the measurements were outside the norm, then adjustments were made to the barrier to bring it back to norm. Data showed most of the time the ICRA barrier and the exhaust was okay, however there were several times counts were

outside the norm and adjustments were made, measurements re-taken to verify. Particle counts is useful tool to verify construction activities behind ICRA barriers are contained and not affecting patient quality and outcomes.

The Most Dangerous Tasks on Campus (Both Usually EHS Operations)

John DeLaHunt

Argued: Hazardous materials emergency response and hazardous waste bulking are the most dangerous activities that occur on a College or University campus. Both are typically the domain of the EHS office, which sets up an immediate conflict of interest - who is the safety office's safety office? This presentation will review codes and standards applicable to activities like these, describe code- and standard-compliant means and methods to perform the tasks safely, and make suggestions for business cases for doing the work safely.

July 22 - 2:15pm - 3:00pm

Experience How Group Story Sharing Helps Fix Fume Hood Challenges

Jonathan Klane, Alex Albright

Stories are effective tools for sense and meaning making as well as survival. They contextualize, are intuitively understood, easier to encode and recall, provide differing views and perspectives, resolve conflicts, and help us relate and bond. Sharing stories facilitates this across org's, groups, and teams. Fume hoods challenges often need or benefit from hearing several stories that can be synthesized into a coherent narrative that explains the situation. Often this points the way or path toward an effective solution. Using several different scenarios and challenges, the speakers will engage in storytelling from different characters' perspectives. At the end of each scenario of story sharing, the learners will try to solve the fume hood challenge.

Scenario 1 — “We Trusted the Numbers”

Characters: EHS Director, Fume Hood Specialist, Lab Manager

The EHS Director says, “Our hoods are all good”. The Specialist's containment test shows otherwise. And the Lab Manager received odor complaints. So, what's the story?

Scenario 2 — “Show Me”

Characters: Veteran Researcher, EHS Compliance Officer, Fume Hood Specialist

A Researcher ignores EHS. The EHS Officer is frustrated by the futility. And the Specialist runs a new test startling everyone. What's the complete story?

Scenario 3 — “It's Not the Hood”

Characters: Facilities Manager, Fume Hood Specialist, Graduate Student

Facilities is tired of responding to reports and it all seems fine. The Specialist runs several tests that check out until the last one no one thought of. The Grad Student explains their actions at the heart of it. What is the story of the lab - people and things?

Open-Source, On-Premises Laboratory Telemetry: Enhancing Safety and Operational Resilience

Richard Blair

Research laboratories routinely operate equipment that requires ongoing oversight to ensure proper function and adequate consumable levels. In most academic settings, this responsibility falls to researchers engaged in day-to-day experimental work. That arrangement works...until it doesn't. Monitoring can lapse when attention shifts, when laboratories sit unoccupied, or when access is restricted during emergencies or evacuations. In those moments, maintaining situational awareness without increasing personnel exposure becomes essential. Continuous laboratory telemetry gives principal investigators and research staff real-time visibility into key parameters such as temperature, pressure, vacuum performance, cryogen levels, and overall equipment status—without requiring someone to be physically present. Early awareness of abnormal conditions allows faster response to equipment failures and reduces unnecessary exposure risks, improving both safety and operational continuity. Commercial monitoring platforms exist, but many rely on cloud infrastructure and subscription models that introduce recurring costs and external data custody. For research groups working within constrained or fluctuating budgets, locally hosted systems can offer a practical alternative. Keeping telemetry data inside institutional networks supports data sovereignty, avoids vendor lock-in, and maintains monitoring capability independent of third-party services. This presentation describes the implementation of a scalable, open-source laboratory-monitoring framework built on the Home Assistant platform. Commercial Wi-Fi and Bluetooth sensors are combined with custom hardware integrations for specialized applications. The system emphasizes local control, minimal recurring expense, and straightforward maintenance. This approach is not intended to replace certified or compliance-required monitoring systems where they are mandated. Instead, it complements existing safety infrastructure by strengthening day-to-day operational awareness and providing early indication of developing problems. Case examples will illustrate how continuous, locally controlled monitoring improved equipment reliability, identified malfunctioning systems, and reduced unnecessary operating costs. By lowering both financial and technical barriers, open-source monitoring makes practical, resilient laboratory oversight accessible to a broad range of research groups.

Performance and Security Assessment of X-ray Irradiators as a Replacement for Cesium-137 Sources in Industrial Sterilization: A Brazilian Case Study Informed by the Goiânia Legacy

Joao Claudio Batista Fiel

The pursuit of alternatives to high-risk radioactive sources, such as Cesium-137 (Cs-137), is a cornerstone of modern nuclear security. This paper evaluates the technical performance and superior security profile of X-ray irradiators as substitutes for Cs-137 sources in medical device industrial sterilization. The analysis is contextualized by the Brazilian imperative, stemming from the severe 1987 Goiânia radiological accident, which demonstrated the catastrophic, long-term consequences of losing control over this isotope. Through a case study of a transitioning Brazilian facility, critical parameters such as dose uniformity, penetration, operational throughput, and life-cycle cost are compared. Concurrently, a qualitative and quantitative security assessment contrasts the inherent risks of a permanent source like Cs-137 (theft, dispersal, need for robust physical protection) with the “stop-button” security paradigm of X-ray technology. It is concluded that X-ray irradiators meet or exceed the technical requirements for gamma radiation sterilization while eliminating the radiological risk at its source, thereby mitigating the threat of a Radiological Dispersal Device (RDD). The paper argues that accelerating this transition, especially in countries with a history of incidents like Brazil, is not merely a technological evolution but a national security obligation and a practical application of lessons learned.

Six Years of Progress: Designing, Implementing, and Evolving a High Reliability Lab Closeout Program at UF

Erica Gonzaga

Laboratory transitions are inevitable in a dynamic research environment, yet they remain one of the most overlooked sources of risk on a university campus. At the University of Florida, a serious incident in which a facilities services employee was exposed to a hazardous chemical in an abandoned laboratory revealed critical gaps in how vacated research spaces were managed. This event became the catalyst for developing a comprehensive lab closeout program designed to protect personnel, safeguard property, and ensure regulatory compliance. Over the past six years, UF's Environmental Health & Safety team has transformed that initial response into a campus-wide system that now supports thousands research labs. The program has evolved from a basic checklist into a structured, policy-driven process that integrates digital workflows, departmental accountability, and verification steps. Continuous improvement efforts—guided by stakeholder feedback, incident data, and lessons learned from early implementation—have strengthened the program's consistency, transparency, and user experience. This presentation will walk attendees through the full lifecycle of UF's lab closeout program: its origin story, policy development, implementation challenges, and the iterative refinements that have shaped it into an institutional program. Topics will include designing a closeout workflow, building partnerships

with facilities and academic units, establishing compliance mechanisms, and leveraging feedback to drive program enhancements. Whether your institution is developing a closeout program from the ground up or seeking to strengthen an existing process, this session offers actionable strategies rooted in real-world experience and six years of continuous evolution.

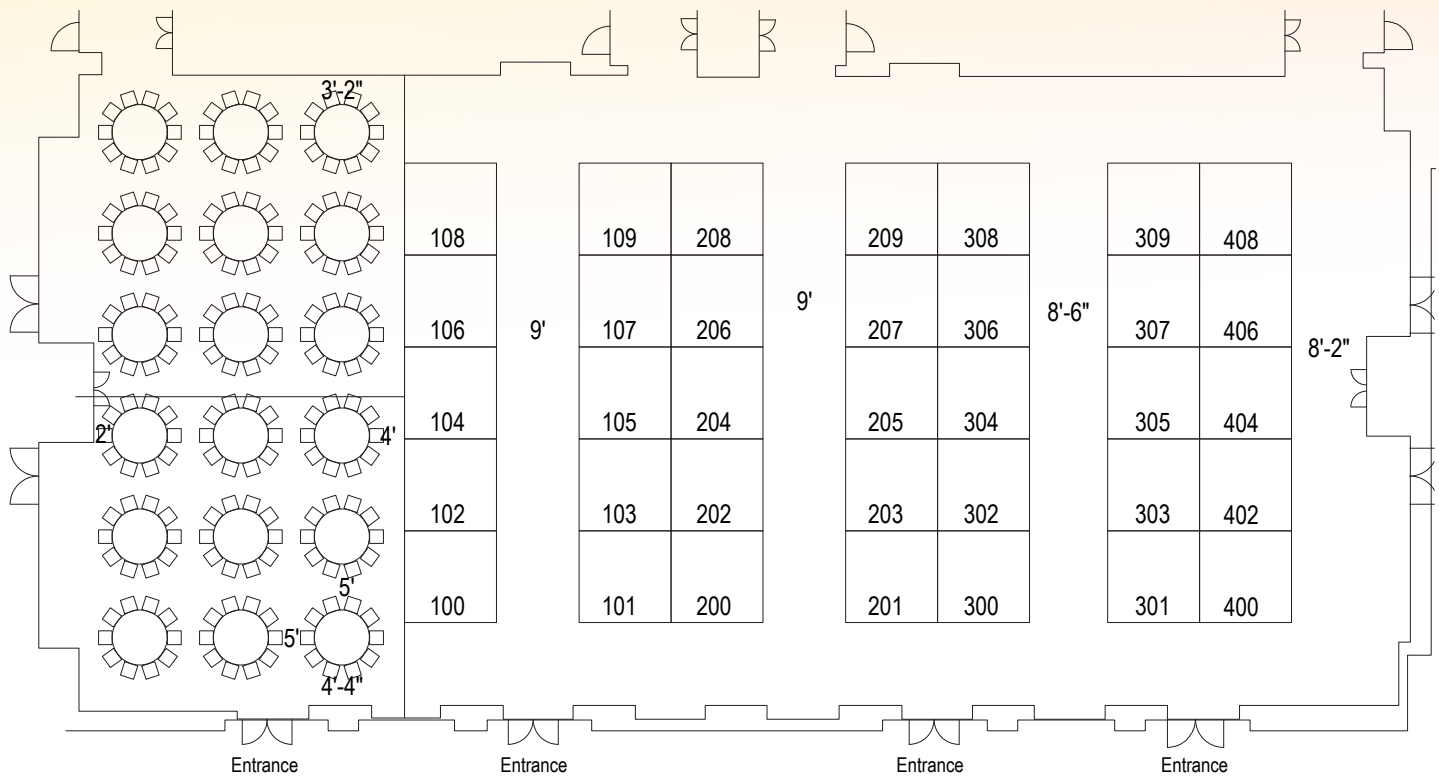
Strengthening Safety Culture Through Purdue's Integrated Safety Plan

Mita Juristyarini, Michael Silanskis

Purdue University's Integrated Safety Plan (ISP) helps departments create safer workplaces and follow environmental health and safety rules. The program encourages each unit to have an active safety committee, share safety information quickly, and complete annual self-audits. These audits help departments find safety problems early, fix them, and keep improving in safety practices. As the ISP program grows, Purdue EHS continue to update the tools to make safety work easier and more effective. One recent improvement is the updated ISP Self-audit Checklist. The new version is designed with a clearer flow: it begins with general safety questions that apply to all work areas and then moves into more detailed questions about specific facilities, such as labs, shops, or specialized spaces. This structure helps the ISP units understand the big picture first and then focus on the unique safety needs of each type of space. The form also provides a section to document any safety deficiencies and corrective actions.

This presentation will share practical lessons from the ISP implementation.

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