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"Why am I muted?"

Don't worry. Everyone is muted except the Presenter and the Host. Thank you and enjoy the show.



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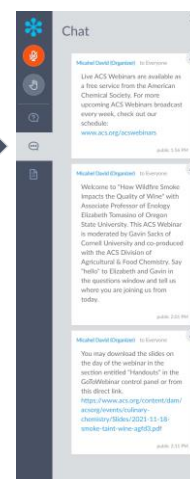
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Chat
Announcements and hyperlinks from our team



2

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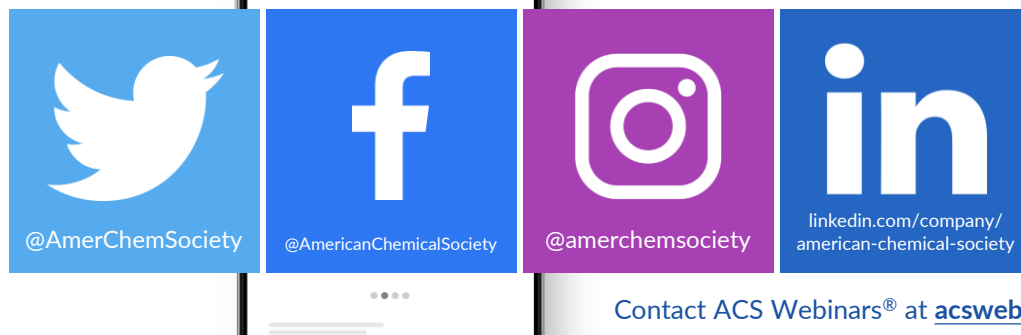


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A science podcast by the American Chemical Society about things small in size but BIG in impact.



Sam Jones, PhD
Science Writer & Exec Producer



Deboki Chakravarti, PhD
Science Writer & Co-Host

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◆ Industry Matters Newsletter

ACS Member-only weekly newsletter with exclusive interviews with industry leaders and insights to advance your career.

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Connect, collaborate, and stay informed about the trends leading chemical innovation

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6

A Career Planning Tool For Chemical Scientists



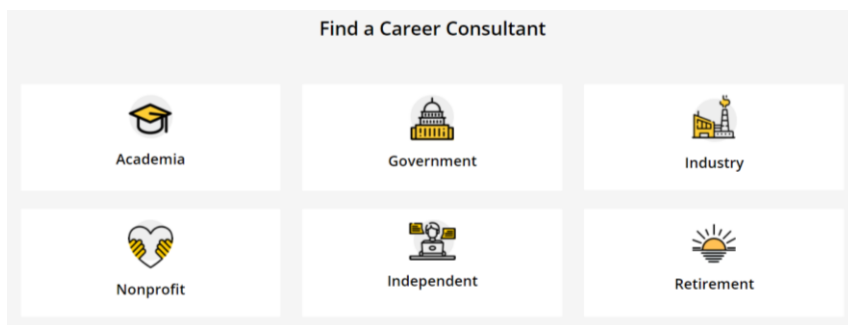
ChemIDP is an Individual Development Plan designed specifically for graduate students and postdoctoral scholars in the chemical sciences. Through immersive, self-paced activities, users explore potential careers, determine specific skills needed for success, and develop plans to achieve professional goals. **ChemIDP** tracks user progress and input, providing tips and strategies to complete goals and guide career exploration.

<https://chemidp.acs.org>

7

7

Career Consultant Directory

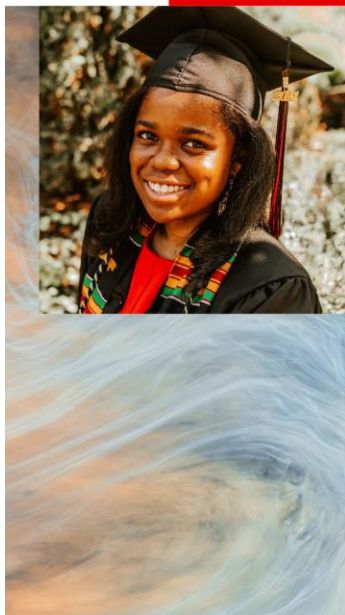


- ACS Member-exclusive program that allows you to arrange a one-on-one appointment with a certified ACS Career Consultant.
- Consultants provide personalized career advice to ACS Members.
- Browse our Career Consultant roster and request your one-on-one appointment today!

www.acs.org/careerconsulting

8

8



ACS Scholar Adunoluwa Obisesan

BS, Massachusetts Institute of Technology, June 2021
(Chemical-biological Engineering, Computer Science & Molecular Biology)

“The ACS Scholars Program provided me with monetary support as well as a valuable network of peers and mentors who have transformed my life and will help me in my future endeavors. The program enabled me to achieve more than I could have ever dreamed! Thank you so much!”

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The Office of Diversity, Equity, Inclusion & Respect (DEIR) is the central hub at the American Chemical Society that coordinates, supports, and guides all efforts by staff, members, and governance toward Strategic Goal 5, “Embrace and Advance Inclusion in Chemistry.” The Office of DEIR at ACS is committed to empowering everyone, irrespective of lived experience and intersectionality of identities, to fully participate in the chemistry enterprise. The Office of DEIR welcomes comments, suggestions, and questions around issues of diversity, equity, inclusion, and respect from members at any time. Please do not hesitate to reach out to the Office through this form.

Please do not hesitate to reach out to the Office of DEIR at diversity@acs.org

<https://fs7.formsite.com/acsdiversity/ACSMemberFeedback/index.html>



10

10

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11

ACS Career Resources



Professional Development & Education

<p>ACS Professional Education Charter and training opportunities from leading experts to help you learn and advance your career.</p>	<p>ACS Leadership Development A suite of flexible, free and online courses for growing your leadership skills in today's global economy.</p>	<p>ACS Institute An online learning center that offers a virtual collection of learning and training resources taught by leading experts.</p>
<p>Virtual Classrooms Brought to you by ACS Career Pathways™, free online courses offer useful expertise to help you reach your next goals.</p>	<p>ACS Webinars Hundreds of webinars presented by subject matter experts in the chemical enterprise.</p>	<p>Career Events Free webinars and networking opportunities for mid-career chemistry professionals.</p>
<p>ACS 4th Campaign Free events where students can meet with top researchers, hear your story from ACS editors and get career tips.</p>	<p>Facilities for Faculty Workshop An annual meeting for professionals focused on research in faculty positions in the chemical enterprise.</p>	<p>Career Kick-Starters Workshop A one-day career development workshop for graduate students and postdoctoral fellows.</p>

Managing Your Career

<p>ACS Career Pathways™ Helping building your career through design careers in industry, higher education, government and beyond for yourself.</p>	<p>Career Consultants Personalized consulting services to help you make strategic career decisions and find success in your job search.</p>	<p>ChemIDP™ ACS' Personal Development Plan tool for graduate students and postdoctoral fellows.</p>	<p>Résumé Review Experts help you review a résumé and to offer advice to support your job search habits.</p>
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<https://www.acs.org/content/acs/en/careers/developing-growing-in-your-career.html>

Register for a 2022 Virtual Office Hour

7 APR	How to Write a Resume ○ April 7, 2022	5 MAY	Careers in Government ○ May 5, 2022
2 JUN	Entrepreneurship ○ June 2, 2022	7 JUL	Networking ○ July 7, 2022
4 AUG	Is Grad School Right for Me? ○ August 4, 2022	1 SEP	Leadership and Soft Skills Development - What You Need to Advance in Your Career ○ September 1, 2022

<https://www.acs.org/content/acs/en/careers/personal-career-consulting.html>

12

12



Tues., May 17, 2022 | 1:00pm–2:00pm ET

From There to Here: My Asian American Journey

Co-produced with the Office of Diversity, Equity, Inclusion & Respect, ACS



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13

13

LST Workshop Promo

ACS CHAS Peer Led Workshop:



Empowering academic researchers to strengthen safety culture



Led by Amanda Chung, University of California, Irvine
Hossain Shadman, University of Memphis

Sunday, 26th June 2022 from 2PM – 6PM ET

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14

14



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WILL BEGIN SHORTLY...**

👋 Say hello in the
questions window!



15

15



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Careers in Chemical Safety for Chemists



WHITNEY R. HESS, PhD

Assistant Director, Safety
Systems and Programs,
Massachusetts Institute of
Technology, MIT.nano



JOSEPH PICKEL, PhD

ESH&Q Coordinator, Fusion
and Fission Energy and
Sciences Directorate, Oak
Ridge National Laboratory



DEBBIE DECKER, CHO

Past Chemical and Laboratory
Safety Officer, University of
California, Davis (Retired)



RALPH STUART, CIH, CCHO

Membership Chair, Division of
Chemical Health and Safety,
American Chemical Society

This ACS Webinar® is co-produced with the ACS Division of Chemical Health and Safety and ACS Committee on Chemical Safety.

16

16



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

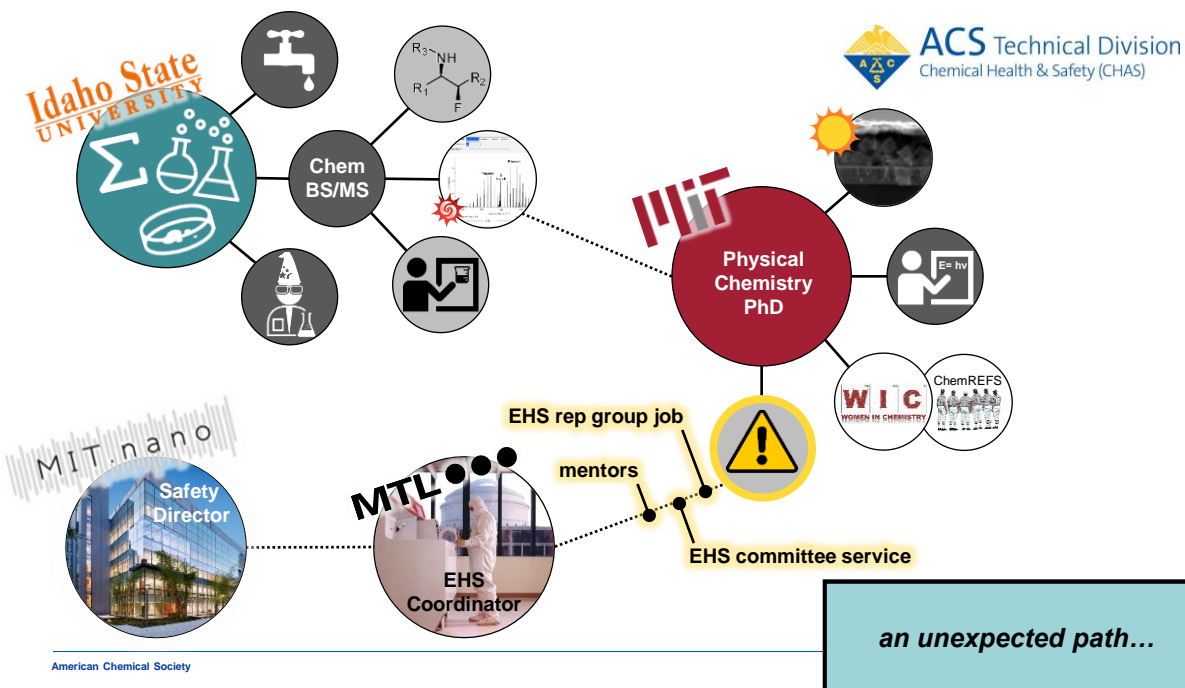
Which of these aspects of laboratory EHS do you feel MOST knowledgeable about?

- Where our lab wastes go after they leave the lab
- What will happen in case of an emergency in the lab
- What safety equipment is available to me in the lab and how it is best used and maintained
- What government regulations apply to the work in our laboratory and how we demonstrate compliance with these

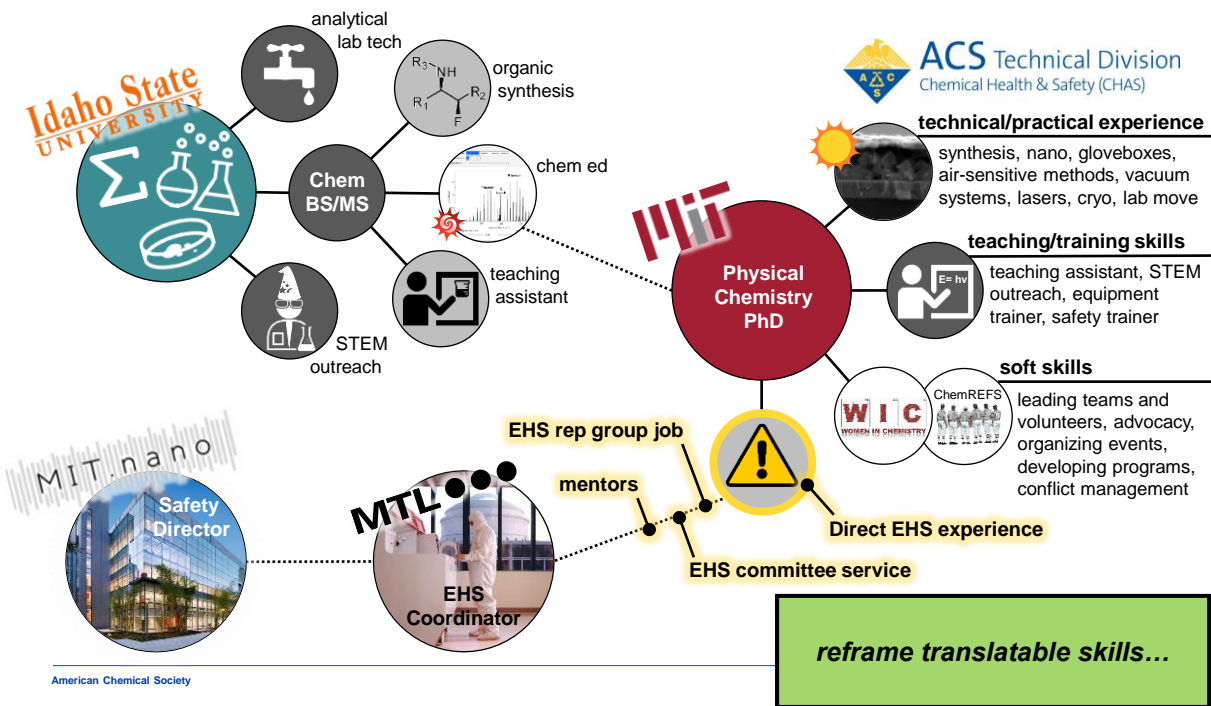
* If your answer differs greatly from the choices above **tell us in the chat!**

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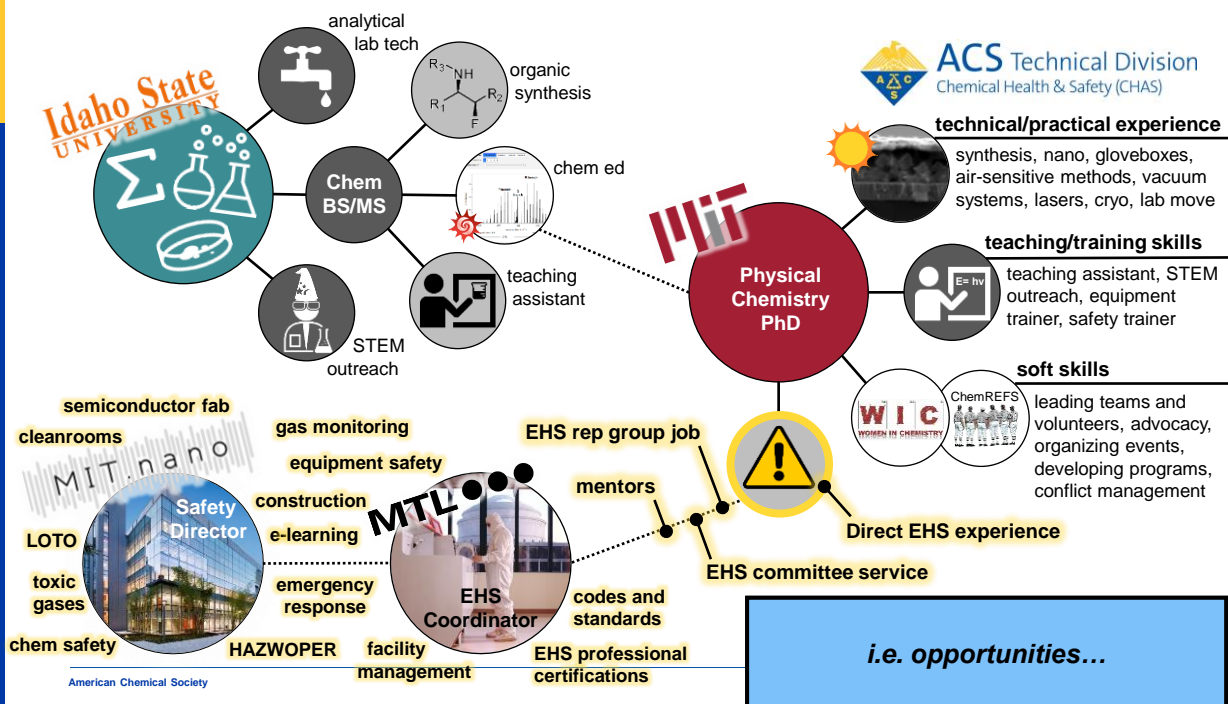
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18



19



20

1 *Be reflective of your whole self when considering your career path.*

2 *Chemistry provides a technical foundation to build upon, so be confident in the unique skills you would bring to an EHS position.*

3 *Continue to foster a scientific mindset in your approach to EHS.*

A few parting thoughts...

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21



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

Do you feel comfortable discussing EHS concerns with people outside the laboratory?

- Yes, I am confident that I can explain to anyone why my work is safe for myself and for the environment
- Somewhat, I find that people are not easily convinced that laboratories are safe places to work
- No, people who don't work in my lab are not qualified to understand safety aspects of our work

* If your answer differs greatly from the choices above **tell us in the chat!**

22

22

Career Path



Chemical Sciences

Center for Nanophase Materials Sciences



ES&H (Individual Contributor)

- Laboratory Space Manager
- Chemical Management
- Environmental Protection / Waste
- Nanomaterials!



Facilities / Operations

ES&H and Operations Management

- Division research support
- Directorate level operations support (+ training, facilities, IT)
- Laboratory / Enterprise level program management (hazard analysis, ELN, ...)



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The views and opinions expressed in this discussion are the speakers and do not necessarily reflect the views or positions of any organizations referenced in the discussion

23

23

Certifications – what do you need?



NATIONAL REGISTRY OF CERTIFIED CHEMISTS

- Chemical Hygiene Officer
- Industrial Hygiene Chemist
- Clinical Chemist / Technologist
- Toxicological Chemists / Technologist
- Environmental Analytical Chemist
- Cannabis Chemist (coming soon)

Balance – Certification / Education / Experience!

A sampling of courses available:

- CIH / CSP prep courses
- How to be a more effective Chemical Hygiene Officer
- Safety Leadership in the Chemistry Enterprise
- Laboratory Waste Management
- Empowering academic researchers to strengthen safety culture
- Foundations of Chemical Safety and Risk Management (FREE)

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24

My ESH&Q Team (and where do chemists fit in?)



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25

25

Professional Development – Engagement is Key!

- **National involvement through meetings**
 - ACS National and Regional Meetings
 - Division of Chemical Health and Safety
 - Campus Safety, Health, and Environmental Management Associate (CSHEMA)
- **Local Involvement (cross-disciplinary!)**
 - ACS East Tennessee Section
 - Tennessee Valley Section of AIHA
- **Organizational/Field Specific**
 - Communities of practice / EFCOG
 - Regional APLU, SASEF, ...
- **Share Knowledge**
 - ACS Journal of Chemical Health and Safety
 - Read
 - PUBLISH!!!
 - List-serv: Division of Chemical Health and Safety (DCHAS-L)
- **Continuous Education**
 - Safety: move beyond the standard (Reactive chemicals, human performance, ...)
 - Management / Leadership

Get out and see how others run their labs!

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26

26

Career Progression



How do skill / qualification requirements change as one progresses from SME/IC to management?

Early Career

- Narrow(er) focus
- Expectations to understand other areas are limited
- Fundamental knowledge and capabilities
- Focus on “Hard” Skills

Later Career

- Broad focus
- Awareness of topics beyond your expertise!
- Interpersonal and collaborative capabilities
- Systems thinking!
- Focus is on “Soft” Skills

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27



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

Who is your primary resource for EHS aspects for your laboratory work?

- The manager of my lab understands and shares what I need to know about EHS in the lab
- I have built a productive relationship with the EHS staff in my organization
- I rely on discussions with peers to identify and address EHS issues that arise
- I rely on my chemical intuition to manage EHS concerns

* If your answer differs greatly from the choices above **tell us in the chat!**

28

28

Career Path – Beginning in Industry



Explosive Technology, Inc. Fairfield, CA



- Energetic Materials Chemistry
- Quality Assurance
- Failure Analysis
- Training

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29

29

Career Path – Transition to Academia



SACRAMENTO STATE

UC DAVIS



- Chemical Hygiene Officer
- Industrial Hygienist
- Plan Review Specialist
- Safety Manager
- Subject Matter Expert



UC DAVIS

DEPARTMENT OF CHEMISTRY

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30

Industry vs. Academia

Q: What is the difference between the role of an EHS professional in industry and academia?

- Responsibility
- Accountability
- Liability



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31

31

Different Safety Professional Roles

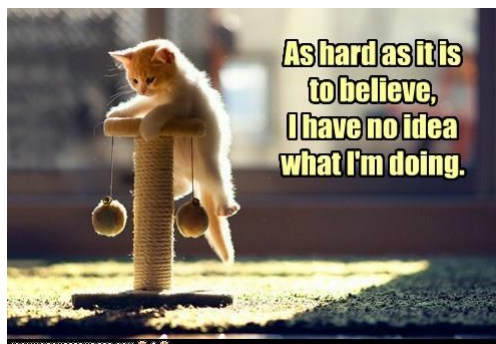
Q: How do responsibilities differ if you are hired to work as an embedded safety professional within a department vs the EHS team directly?

Campus EH&S team is focused in large part on campus-wide policy and initiatives

Embedded safety professionals are focused, primarily, on representing the best interests of their department or unit.



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32

32

EH&S Professional



Q: Describe how chemists might move into an EHS professional role. That is, how does a chemistry education relate to:

- * **chemical hygiene officer** - understanding the regulatory framework of the laboratory standard
- * **embedded safety professional** - understanding what the scientific needs are and the hazards/risks of those needs
- * **industrial hygienist** - understanding how chemicals can move about in the workspace and migrate into the breathing zone or physical contact with a worker
- * **research/lab safety specialist** - understanding how researchers/scientists do their work and what level of risk workers might be accustomed to
- * **hazardous waste management** - understanding how chemicals behave when in contact with each other and how wastes are generated
- * **safety engineer** - understanding what the scientific needs are and the hazards/risks of those needs
- * **leadership/management roles** - understanding how research gets accomplished

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33

33

Where to Start?

Q: What can they start doing while in school to increase their chances of securing a safety-related job?

Make the acquaintance of safety professionals at their institution.

Look for internships or opportunities to volunteer for safety-related projects.

If they're doing research, take on safety duties in their lab.

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34

34



Audience Survey Question

ANSWER THE QUESTION ON THE INTERACTIVE SCREEN IN ONE MOMENT

Which of these statements best describe your understanding of the professional qualifications of laboratory Environmental Health and Safety (EHS) staff.

- Only EHS professionals can fill the EHS role adequately
- Chemists can fill EHS roles but they are at a disadvantage to credentialed EHS professionals in those situations
- Chemists have an advantage over traditional EHS professionals because they know the science better
- Only chemists can perform EHS work for chemistry research activities adequately

* If your answer differs greatly from the choices above **tell us in the chat!**

35

35

LST Workshop Promo



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Chemical Health & Safety (CHAS)

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36

36



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ABOUT TO BEGIN!**

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37

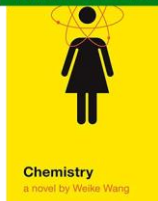
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40

40