

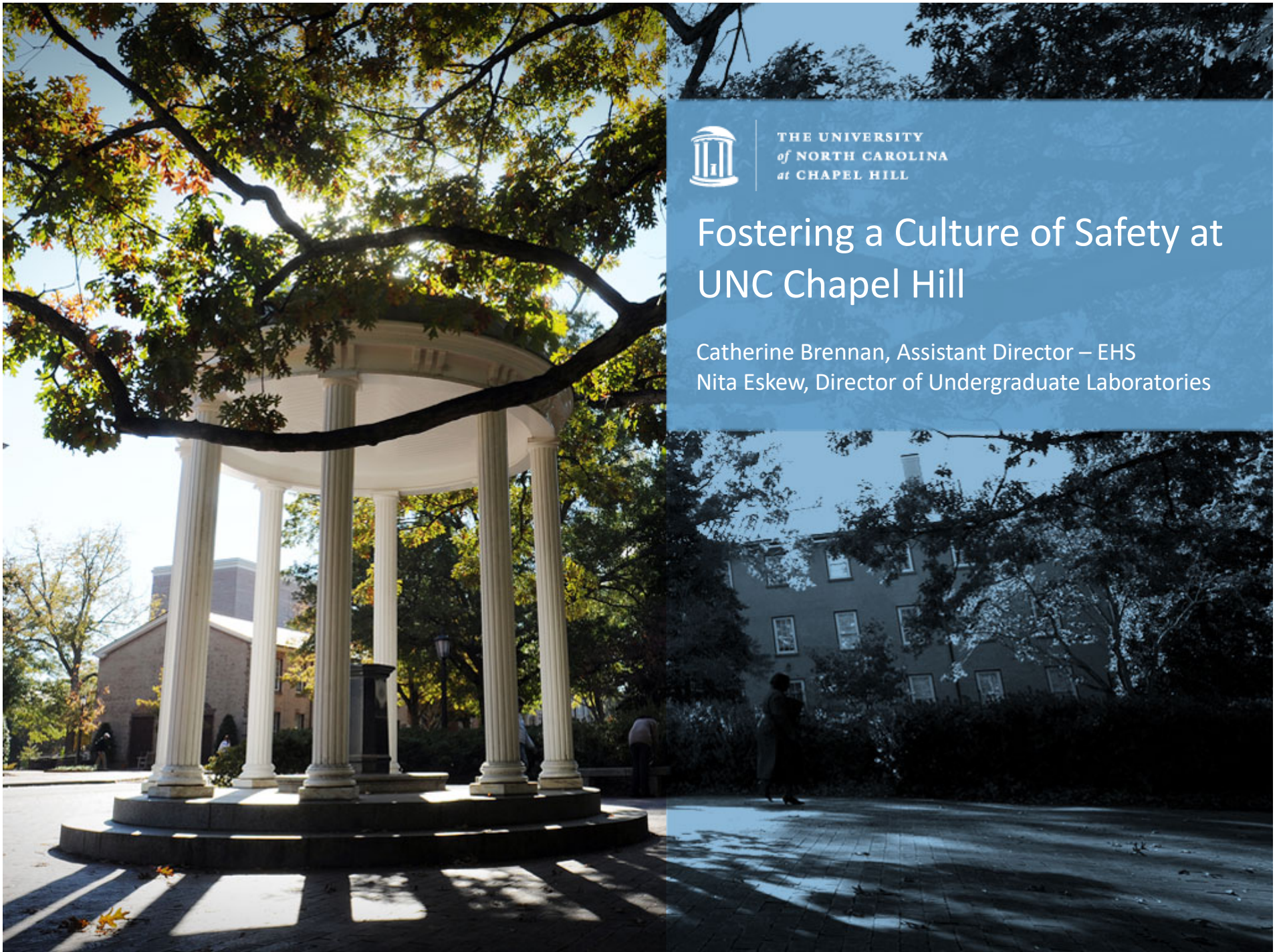


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Fostering a Culture of Safety at UNC Chapel Hill

Catherine Brennan, Assistant Director – EHS

Nita Eskew, Director of Undergraduate Laboratories



UNC Chapel Hill

- Approximately 30,000 students and 18,000 staff (FT, PT, Temp)
- 6th top ranked university in the US for federal funding (\$632 million annually)
- \$1.05 billion of sponsored research from all sources annually (11th largest US research university in research volume and annual expenditures)
- 2 Nobel Laureates
 - Aziz Sancar: co-recipient of **2015 Nobel Prize in Chemistry**
 - Oliver Smithies: co-recipient of 2007 Nobel Prize in Physiology or Medicine

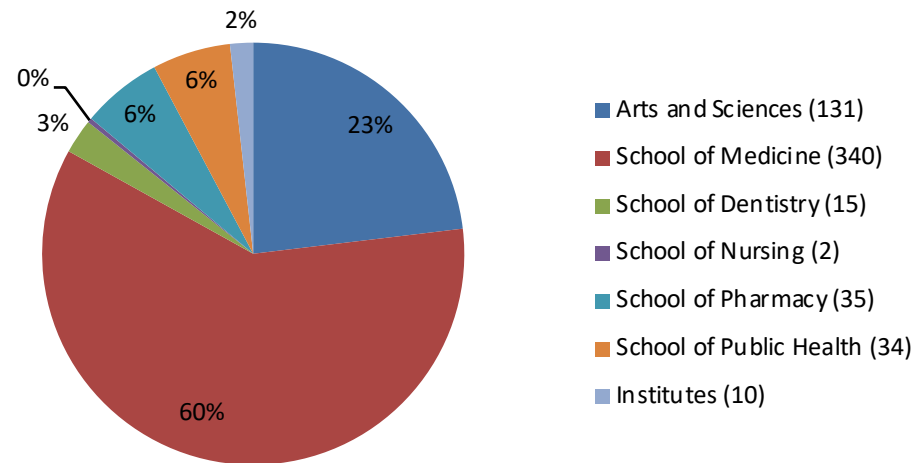


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UNC-CH Lab Researchers

- 567 Principal Investigators under Chemical Hygiene Plan
- 4607 registered lab workers
- 3545 unique lab rooms on campus

Lab PI Distribution (567)



UNC-CH Chemical Hygiene Plan

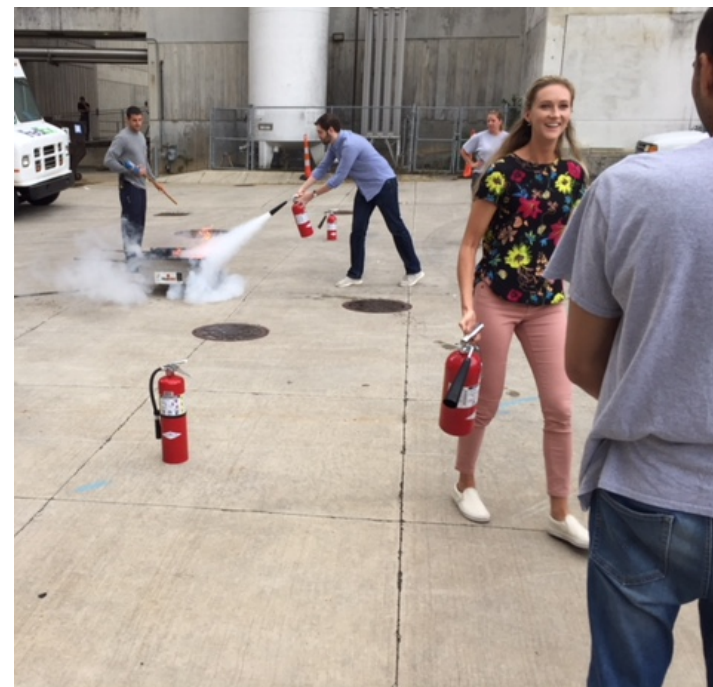
- Laboratory Safety Manual
 - University reference for CHP
 - EHS oversees and updates
- Laboratory Safety Plan
 - PI specific
 - Required to be updated at least annually
 - Review by all lab staff
- Chemical Inventory
 - PI specific
 - Integrated into lab safety plan - updated annually
 - All hazardous chemicals listed by room location



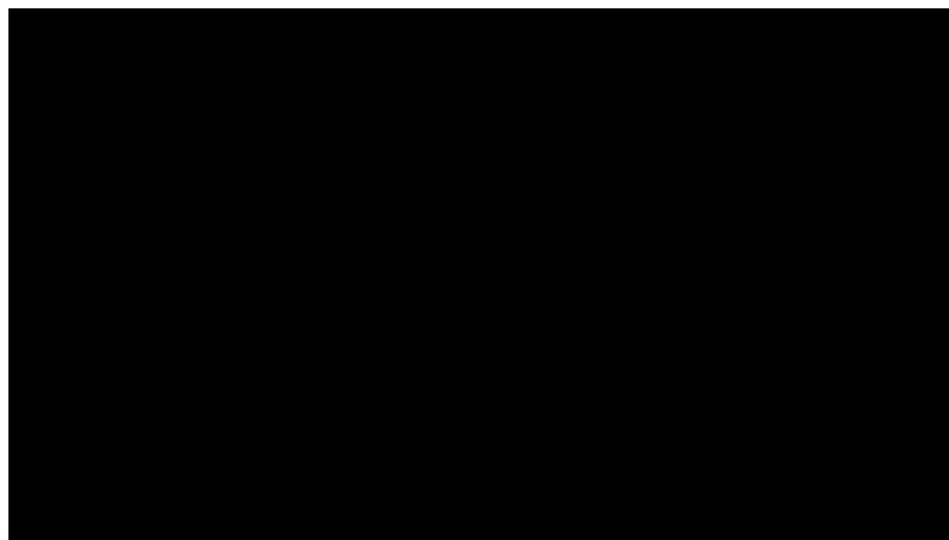
Safety Culture



- UNC Chemistry and UNC EHS closely collaborate to instill culture of safety
- EHS Participates with Chemistry on:
 - Chemistry Teaching Assistant (TA) training
 - Live fire extinguisher training
 - Chemical Safety Lecture covering R.A.M.P.
 - Chemical/Lab Safety Graduate Level Course
 - Chemistry Department Safety Committee
- Chemistry Department participates with EHS on:
 - University Laboratory & Chemical Safety Committee



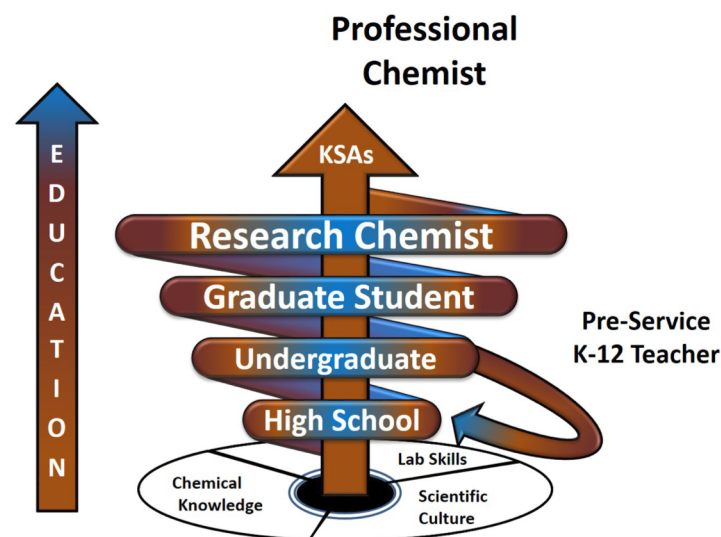
UNC Chemistry



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Safety Culture

- *The University of North Carolina at Chapel Hill Chemistry Department is committed to teaching and fostering a Culture of Safety.*
- This starts with the first undergraduate course in Chemistry and continues throughout the entire educational process to PhD.



Graphic Ref: S. Sigmann, (2018) Chemical Safety for the 21st Century – Fostering Safety Information Competency in Chemists, *J. Chem. Health Safety*, 25 (3), pp. 17-29.





Week of TA Training

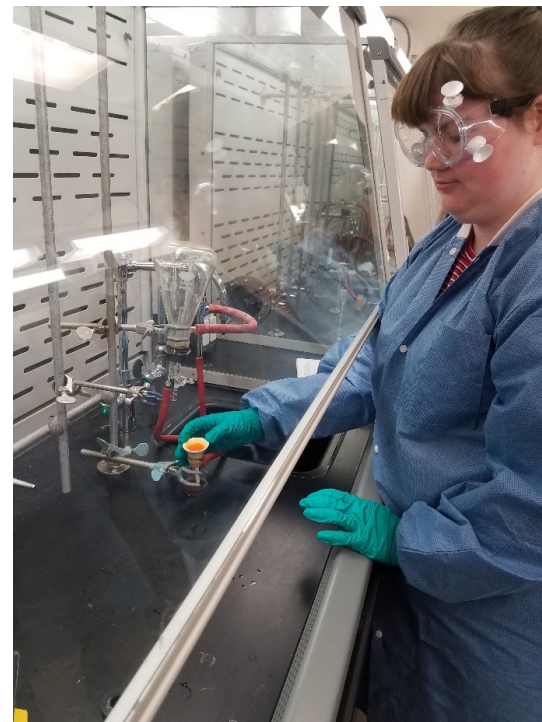
- Approximately 70 TA's per semester
 - Fire extinguisher
 - Chemical hygiene and safety
 - Counseling and Psychological Services
 - Active shooter
 - TA guidelines and contract
 - Course training
 - Hands-on experimental training



Student Training



- Approximately 5000 students per year
 - Introductory session
 - Safety quiz
 - Lab manual
 - Lab Safety Contract
 - Regular reinforcement



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Student Lab Manual



- Safety is incorporated into each undergraduate lab manual
- Use of highlighted safety boxes throughout manual
- Identification of required safety equipment and how to obtain SDS information

SAFETY

Do not wipe the syringe needle with a Kimwipe or tissue. The syringe needles used in GC are beveled and sharp. If a syringe is not used or handled properly you risk being stuck by the needle, even if you are wearing gloves.



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PPE and Waste Handling



- Lab manual information
- TA instruction and enforcement

WASTE DISPOSAL (Part 1)

All organic waste products must be discarded into the labeled waste container.



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Recycling and Waste Minimization



- Nitrile gloves and disposable lab coats
- Scale of experiments



DID YOU KNOW?

The UNC Undergraduate Chemistry Laboratories have diverted **6,126 pounds** of glove waste from the landfill by participating in RightCycle!

WHAT IS RIGHTCYCLE?

RightCycle is the first large-scale recycling program for non hazardous lab glove waste. RightCycle will turn your used gloves into the raw materials to create eco-friendly consumer products and durable goods.



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Accident Investigation

- Internal accident forms to be completed by TA and submitted to Supervisor.
- Forms are posted on Sakai so all TAs and EHS can review and be aware of incident.
- EHS performs further investigation if warranted.



Summary



- Working together across platforms to establish lab safety culture.
- Starting when students first arrive at Carolina and continuing throughout their education.
- Lab safety culture is not just a departmental goal or EHS goal but a University goal!



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Contacts

Cathy Brennan
Environment, Health & Safety
919-843-5331
crbrennan@ehs.unc.edu

Nita Eskew
Chemistry
919-962-4796
neskew@email.unc.edu



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