

CHEMISTRY COLLEGE OUTREACH SEMINAR

The Department of Homeland Security (DHS) Science and Technology Directorate (S&T) Chemical Security Analysis Center (CSAC) is the nation's only federal studies, analysis, and knowledge management center for assessing the threats and hazards associated with an accidental or intentional large-scale chemical event or chemical terrorism event in the United States. CSAC has developed a seminar for college students that demonstrates:

- The value of real-world chemistry solving some of today's most challenging problems
- The value of DHS S&T to the nation
- The value of a federal science, technology, engineering, and mathematics (STEM) career



Analysis in the Chemical Security Lab.

TOPICS

The seminar presents CSAC chemical initiatives that benefit the nation. CSAC employs 33 staff with over 800 years of combined experience and more than 58 degrees in 10 different subject areas. The seminar presents current CSAC endeavors:

- Opioid Threat Prioritization – what opioid compounds do we need to be prepared for in the future?
- Opioid Master Question List – what does science know to help responders perform their duties?
- Jack Rabbit program – how can we better prepare the nation for a catastrophic chemical release?

- Technical assistance – where can federal, state, and local emergency response staff get answers for their immediate, and specific, chemistry questions?
- First responder cyanide detection – what can we do to improve medical outcomes for cyanide exposed victims?
- Explosive threat and consequence – how can planners prepare for an explosion when they can't plan on where, what, when, how, how much, could explode – or for the number of dead and injured?
- Food and beverage contamination – how can planners prepare for and defend the food supply?
- Chemical Current News Report – how can I keep up with chemical news worldwide?
- Non-Traditional Agent (NTA) library – where can qualified researchers find indexed, vetted, and comprehensive NTA technical information?
- Chemical Agents Reactions Database – where can law enforcement and qualified researchers get chemical synthesis information to fight chemical related crimes?
- Sustainable chemistry efforts – how can the United States advance toward sustainability goals?
- Chemical Security Laboratory – what chemistry research is CSAC doing to fill critical data gaps and develop chemical security initiatives?

DHS INTERN PROGRAM

CSAC sponsors student interns through the DHS Professional Opportunities for the Student Workforce to Experience Research (HS-POWER) program. [U.S. Department of Homeland Security Education Programs \(orau.gov\)](https://www.dhs.gov/education-programs/orau)