ACHARYA INSTITUTE OF GRADUATE STUDIES

(NAAC Re-Accredited with "A+" and Affiliated to Dr. Manmohan Singh Bengaluru City University)

Soladevanahalli, Bengaluru-560107

DEPARTMENT OF CHEMISTRY

Report Submission: 10/02/2026

Semester:	ODD	**Academic Year:**	2025 – 26	**Venue:**	Mechanical Seminar Hall, Acharya Institutes
Event Date:	03/02/2026 to 05/02/2026	**Time:**	9am to 5pm	**Duration:**	24:00 HRS

Type of Event: Workshop

Event Name: Three Days Indo-Us Symposium on Hazardous Materials Management Course

Target Audience:	All students and Faculty	**Number of Participants:**	66

Objectives:

1. **Innovation & Best Practices.** To facilitate the integration of cutting-edge approaches and innovative solutions into hazardous materials management, ensuring that all principles and practices align with the highest industry standards.
2. **Emergency Response & Crisis Planning**. To equip participants with the skills to develop and execute effective emergency response plans, ensuring rapid containment and risk mitigation in the event of an accidental hazardous material release.
3. **Sustainability & Waste Minimization.** To champion the "4R" principles (Reduce, Reuse, Recycle, and Recover) and implement sustainable disposal methods that prioritize environmental protection and the prevention of long-term contamination.

Program Introduction: Acharya Institute Graduate Studies (AIGS) proudly hosts the Indo-US Symposium on Hazardous Materials Management, uniting global experts to advance sustainable practices and innovative safety solutions. The program focuses on three core pillars: Innovation and Best Practices, Emergency Response and Crisis Planning, and Sustainability and Waste Minimization. Attendees will engage in high-level knowledge exchange and

networking to explore cutting-edge trends and shape the future of international environmental stewardship.

Theme of the Event: Innovative Approaches to Sustainable Hazardous Materials Management. The event integrates cutting-edge technologies and best practices to ensure effective material handling and risk mitigation. By prioritizing sustainability principles, the symposium aims to protect the environment through advanced management strategies.

Resource person:

1. **Dr. R. Viswanath, Ph.D., CHMM, REM:** Team US Fulbright Scholar, Founder & President of ACHMM-India Chapter.
2. **Robert A. West, CHMM, REM, CEM:** US Team Coordinator, Former Chairman of HMM and HMS.
3. **Kendra Schroer, M.CP, CHMM:** Principal at KOS Environmental, US Team on-site Facilitator.
4. **Ines R. Triay, Ph.D.:** Interim Dean, College of Engineering and Computing, Florida International University.
5. **Dr. Erica J. Marti, Ph.D., M.Ed.:** Associate Professor, University of Nevada, Las Vegas.
6. **Paul Hausman, MSPH, CHMM:** President/Chair of AHMP; Global EHS Compliance Manager at Verizon.
7. **Kathy Nunez, MELP, BS, CHE:** Sustainability Engineer at Tyson Foods.
8. **Kelsey L. Forde, CIH, CSP, CHMM**: Owner/President of Parvati Consulting.
9. **Timothy Stirrup, CSP, CHMM, REM:** Partner & Principal at Parvati Consulting
10. **Stephen Bennett, ARM:** Consultant in Safety & Health.

Detailed Report:

The Department of Chemistry at Acharya Institute of Graduate Studies (AIGS) successfully hosted specialized workshop focused on "Hazardous Materials Management Overview" on February 3, 2026. The event was meticulously organized by **Dr. Shakeel Nawaz S.,** and **Dr. Satishkumar K. B.,** the Department of Chemistry, with invaluable support and guidance provided by Principal **Dr. Gurunath Rao Vaidya,** The event commenced with a registration period at 09:00 AM, followed by a formal Inauguration ceremony by lightning the candle by Chief guest **Justice Subhash B. Adi**, Former Judge of the Karnataka High Court, **Dr. Bhagirathi V,** Director – Academics, Acharya Institutes, **Dr S R Subramanya**, Professor, National University, San Diego and Missourie University, Guest of Honour, **Y. A. Narayanaswamy**, Indian politician from the Bharatiya Janata Party (BJP) who served as the Member of the Karnataka Legislative Assembly set a professional tone for the day's intensive learning schedule.

DAY 1: 03/02/2026, Tuesday (Hazardous Materials Management Overview)

Morning Sessions: Foundations and Chemistry

The academic proceedings began with **Dr. Rampur Vishwanath**, who provided a comprehensive overview of the course and established clear expectation settings for the participants (10:15AM – 10:45AM). Following this, **Tim Stirrup** led Module Hazardous Materials Chemistry, diving into the chemical properties and reactive nature of various hazardous substances (10:45AM - 11:30AM). After a brief networking coffee break, the focus shifted to human health with **Bob West**, who presented Module 2: Toxicology, detailing how hazardous exposures affect biological systems (11:45AM – 12:30PM).

Afternoon Sessions: Management and Safety Standards

Following the lunch break, the workshop resumed with **Kathy Nunez** presenting Module 3, which focused on the critical task of Defining Hazardous Materials according to regulatory frameworks. (1:15PM – 2:00PM) This was followed by **Paul Hausman**, who delivered Module 4 (2:00PM – 2:45PM), covering the fundamental Principles of Hazardous Materials and Environment Management, emphasizing sustainable and compliant handling practices. After a short tea break, the final leg of the workshop addressed practical safety and identification:

Module 5: Hazardous Chemical Worker Safety – Presented by **Kelsey Forde**, focusing on PPE and onsite safety protocols (3:00PM – 3:45PM). Module 6: GHS and Container Labeling – Conducted by **Paul Hausman**, providing essential insights into the Globally Harmonized System for classification and labeling of chemicals (3:45 – 4:30PM).

DAY 2: 04/02/2026, Wednesday (Mainstream Issues of Hazardous Materials)

Morning Sessions: Logistics and Practical Scenarios

The second commenced with a focused review of the foundational concepts covered on Day 1, ensuring all participants were aligned for the advanced topics ahead. The first formal session, Module 7, was delivered by **Kendra Schroer**, who provided expert insights into the complexities of Safely Transporting Hazardous Materials, highlighting the legal and physical requirements for transit (9:30AM – 10:30AM). To transition from theory to practice, **Tim Stirrup** and **Kelsey Forde** facilitated a Table Top Transportation Scenario Exercise in Module 8. This interactive session challenged students to apply their knowledge to real-world logistics crises (10:30AM – 11:15AM). Following a brief coffee break, the duo continued with Module 2, detailing Facility and Source Investigation, where they explored the rigorous technical processes of sampling, chemical analysis, and regulatory reporting (11:30AM – 2:15PM).

Mid-Day Sessions: Emerging Contaminants and Waste Treatment Before the lunch break, **Erica Marti** introduced a high-priority contemporary topic in Module 3: PFAS as an Emerging Contaminant. The session shed light on the persistent nature of "forever chemicals" and the evolving scientific response to their presence in the environment (12:15PM – 1:00PM).

The afternoon resumed with **Kathy Nunez** leading Module 4 (1:45PM – 2:30PM), which focused on Select Waste Processes, Treatment Technologies, and Recovery. This session provided a deep dive into the engineering solutions used to neutralize hazardous waste and the growing importance of resource recovery in industrial chemistry. Evening Sessions: Crisis Management and Emergency Preparedness The final segment of the day prioritized safety and administrative response: Module 6: Hazardous Material Safe Handling and Emergency Preparedness – **Stephen Bennett** shared critical protocols for minimizing risk during active handling and the immediate steps required during a breach (2:30PM – 3:15PM).

Module 7: Incident Command/Contingency Planning – The workshop concluded with a high-level session by **Ines Triay**, who outlined the structural hierarchy of incident command and

the necessity of robust contingency plans for institutional safety (3:30PM – 4:15PM).

DAY 3: 05/02/2026, Thursday (Challenges of Managing Hazardous Materials)

Morning Sessions: Strategic Planning and Site Security

The final day of the three-day workshop at AIGS began with a reflective review of the previous day's discussions on mainstream industrial issues. Transitioning into advanced management challenges, **Bob West** led Module 8 (9:30AM – 10:30AM), a high-stakes Table Top Site Incident Planning Exercise. This simulation required participants to design comprehensive response strategies for onsite emergencies, testing their critical thinking under pressure.

The focus then shifted to the physical and operational integrity of industrial facilities. **Stephen Bennett** conducted Part 1 of Module 1: Chemical Site Safety and Security, focusing on infrastructure protection (10:30AM – 11:15AM). Following the coffee break, **Tim Stirrup and Kelsey Forde** took over for Part 2, discussing advanced surveillance, access control, and the prevention of unauthorized chemical diversions (11:30AM – 12:15PM).

Afternoon Sessions: Specialized Waste and Radioactive Management

Before lunch, **Dr. Rampur Viswanath** delivered a timely session on Module 3: Plastics Impacts and Controls, addressing the global challenge of microplastics and the chemical hazards associated with polymer degradation (12:15PM – 1:00PM). The afternoon resumed with a collaborative deep dive into technical mitigation: Module 4: Techniques to Manage PFAS Waste – **Erica Marti** and Bob West teamed up to present cutting-edge remediation technologies for polyfluoroalkyl substances (1:45PM – 2:30PM).

Module 5: Management and Disposal of Radioactive Materials – **Ines Triay** provided a masterclass on the stringent protocols required for handling nuclear and radioactive waste, emphasizing long-term environmental isolation (2:30PM – 3:15PM). Module 6: Electronic and Lithium Waste Management – Following the tea break, **Paul Hausman** addressed the modern crisis of "E-waste," specifically focusing on the volatile nature of lithium-ion battery recycling and disposal (3:30PM – 4:15PM).

Grand Finale: Round Table and Cultural Celebration

The academic portion of the workshop culminated in a vibrant Round Table Discussion, where students engaged in a final Q&A with the diverse panel of international and local experts. This was followed by the Closing Ceremony, where certificates were awarded to the participants for their successful completion of the course.

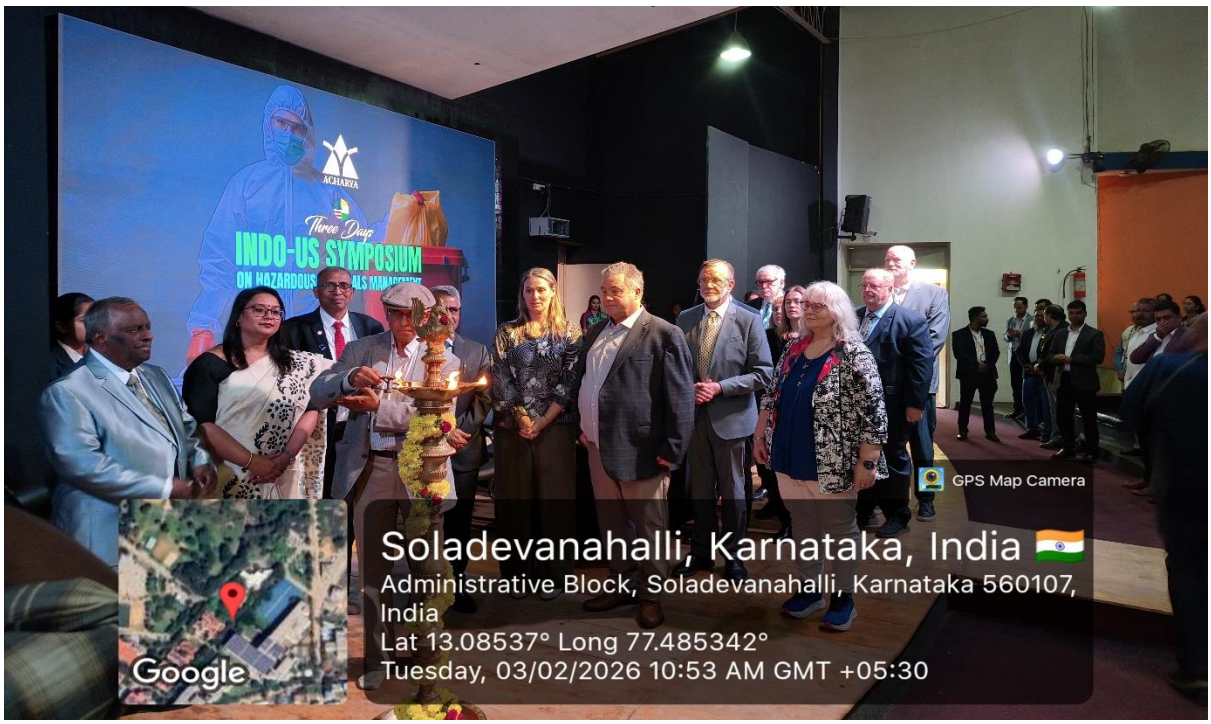
The event reached a high-spirited conclusion with a Cultural Programme themed "Indian Culture – Unity in Diversity." Students and faculty showcased the rich heritage of India through various performances, symbolizing the harmony between scientific progress and cultural roots. The workshop ended with a vote of thanks and a group photograph, marking the completion of an enriching three-day journey into the world of hazardous materials management.

PROGRAM SCHEDULE	
Day-1 (03/02/2026, Tuesday)	
Time	**Speaker**
08:00 am - 09:30 am	Registration
09:30 am - 10:15 am	Inauguration
10:15 am - 10:45 am	Overview of Course and Expectation Setting – Dr. Rampur Viswanath
10:45 am - 11:30 am	Module 1- Hazardous Materials Chemistry – Tim Stirrup
11:30 am - 11:45 am	Coffee Break
11:45 am - 12:30 pm	Module 2- Toxicology–Bob West
12:30 pm - 01:15 pm	Lunch Break
01:15 pm - 02:00 pm	Module 3- Defining Hazardous Materials- Kathy Nunez
02:00 pm - 02:45 pm	Module 4- Principles of Hazardous Materials and Environment Management- Paul Hausman
02:45 pm - 03:00 pm	Tea Break
03:00 pm -03:45 pm	Module 5- Hazardous Chemical Worker Safety – Kelsey Forde
03:45 pm - 04:30 pm	Module 6- GHS and Container Labeling – Paul Hausman

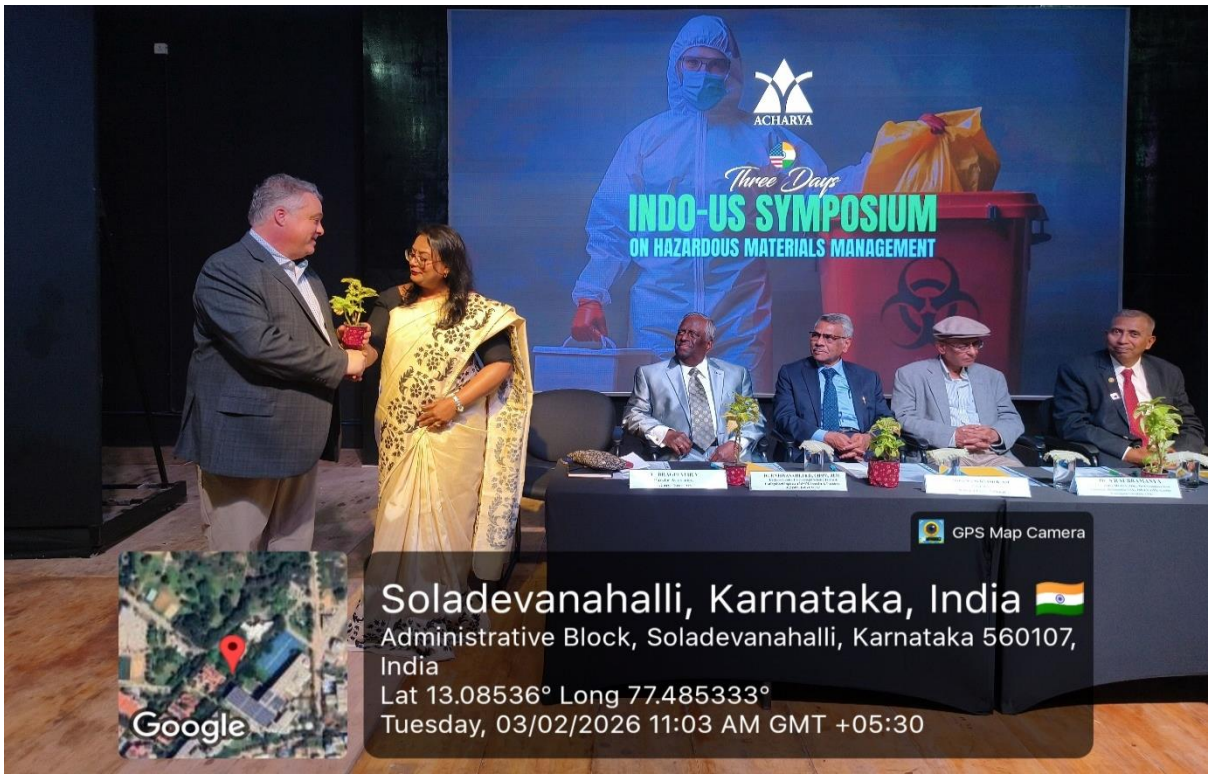
Day-2 (04/02/2026, Wednesday)	
Time	**Topic**
09:30 am - 10:30 am	Module 7- Safely Transporting Hazardous Materials - Kendra Schroer
10:30 am - 11:15 am	Module 8- Table Top Transportation Scenario Exercise – Tim and Kelsey
11:15 am - 11:30 am	Coffee Break
11:30 am - 12:15 pm	Module 2- Facility and Source Investigation- Sampling, Analysis, Reporting – Tim and Kelsey
12:15 pm - 01:00 pm	Module 3- PFAS as an Emerging Contaminant – Erica Marti
01:00 pm - 01:45 pm	Lunch Break
01:45 pm - 02:30 pm	Module 4- Select Waste Processes, Treatment Technologies and Recovery – Kathy Nunez
02:30 pm -03:15 pm	Module 6- Hazardous Material Safe Handling and Emergency Preparedness – Stephen Bennett
03:15 pm - 03:30 pm	Tea Break
03:30 pm -04:15 pm	Module 7- Incident Command/Contingency Planning – Ines Triay

Day-3 (05/02/2026, Thursday)	
Time	**Topic**
09:30 am - 10:30 am	Module 8- Table Top Site Incident Planning Exercise – Bob West
10:30 am - 11:15 am	Module 1- Chemical Site Safety and Security Part 1 – Stephen Bennett
11:15 am - 11:30 am	Coffee Break
11:30 am - 12:15 pm	Module 2- Chemical Site Safety and Security Part 2 – Tim and Kelsey
12:15 pm - 01:00 pm	Module 3- Plastics Impacts and Controls – Dr. Rampur Viswanath
01:00 pm - 01:45 pm	Lunch Break
01:45 pm - 02:30 pm	Module 4- Techniques to Manage PFAS Waste – Erica Marti and Bob West
02:30 pm -03:15 pm	Module 5- Management and Disposal of Radioactive Materials – Ines Triay
03:15 pm - 03:30 pm	Tea Break
03:30 pm -04:15 pm	Module 6- Electronic and Lithium Waste Management – Paul Hausman
04:15 pm - 05:15 pm	Round Table Discussion and Closing Ceremony followed by cultural programme (Theme-Indian culture –Unity in diversity)

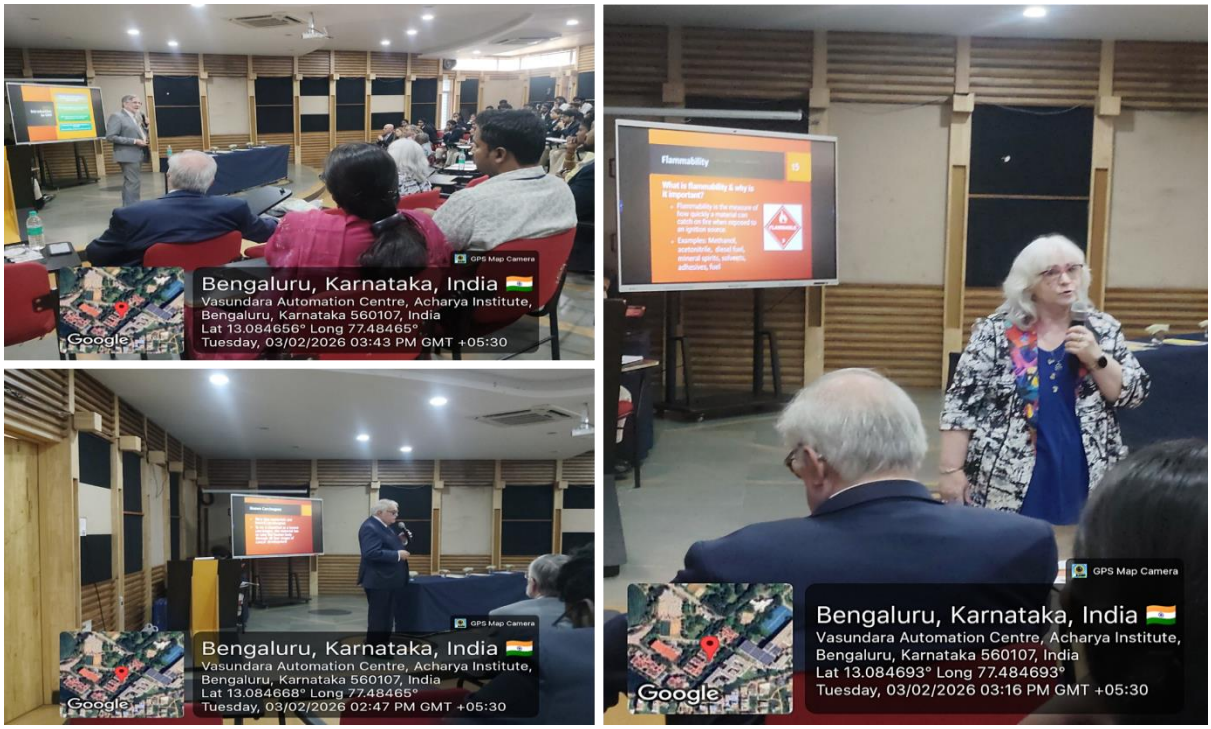
PHOTOS



Inauguration by Lightning the candle

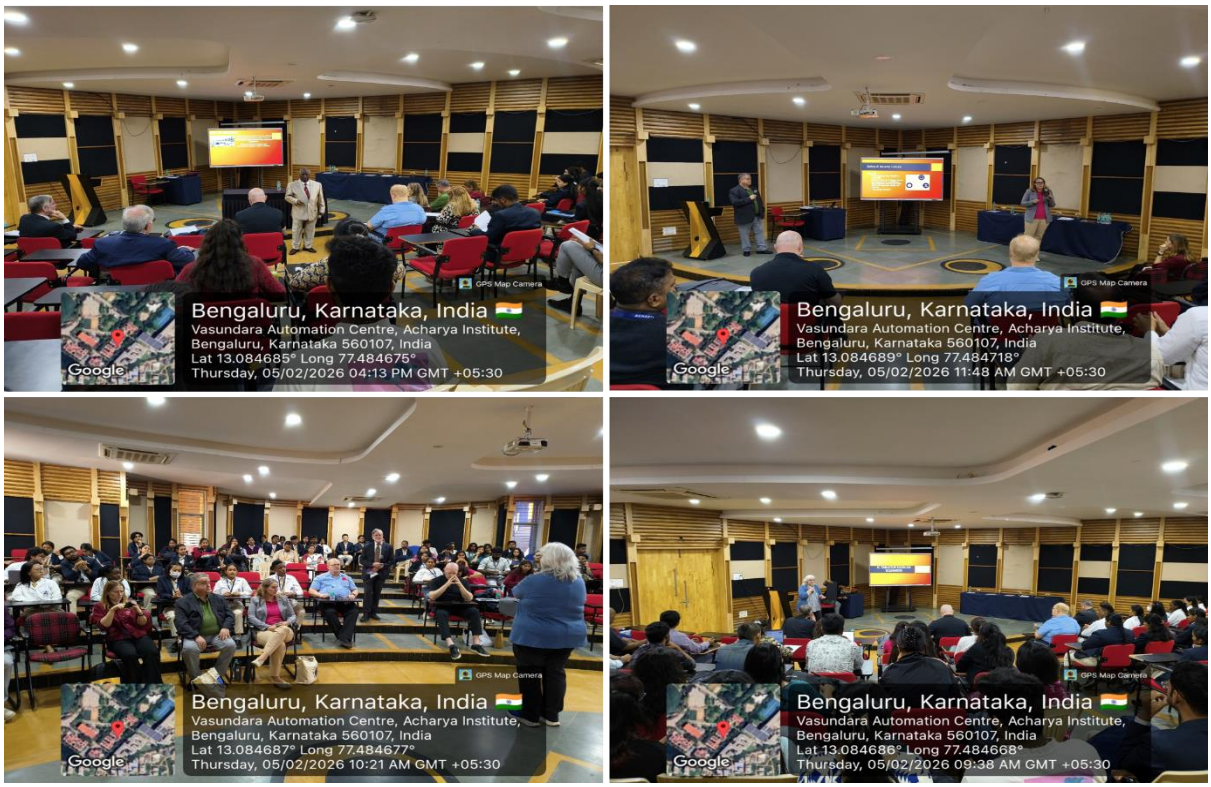


Dr. Bhagirathi V, Director Academics, Welcoming resource person with symbolic sapling



Paul Hausman, Timothy Stirrup, and Kathy Nunez addressing on critical task of Defining Hazardous Materials Chemical Site Safety and Security

Kelsey L. Forde, and Dr. Erica J. Marti addressing Students Mainstream Issues of Hazardous Materials



Dr. Rampur Viswanath, **Erica Marti**, **Kathy Nunez, addressing Participants**

Outcomes:

1. Innovation & Best Practices

   Participants mastered global safety standards by integrating cutting-edge chemical labeling and innovative analytical technologies to ensure all laboratory practices align with the highest industry benchmarks.

2. Emergency Response & Crisis Planning

   Attendees developed robust contingency frameworks through intensive tabletop simulations, gaining the essential skills to execute rapid containment and strategic risk mitigation during hazardous material releases.

3. Sustainability & Waste Minimization

   The symposium championed environmental protection by implementing 4R principles and advanced disposal techniques for emerging contaminants, ensuring sustainable management and the prevention of long-term pollution.

Conclusion and Audience Feedback Summary:

The Department of Chemistry at AIGS successfully hosted the three-day Indo-US Symposium on Hazardous Materials Management, bridging the gap between global industrial standards and academic learning. By hosting international experts, we provided a holistic perspective on hazardous substances—from fundamental chemistry to PFAS and radioactive waste disposal. Transitioning from theory to interactive tabletop exercises ensured students gained actionable emergency response skills. This event empowered the next generation of scientists to lead with innovation, prioritizing sustainability and safety. Its success reaffirms AIGS as a premier hub for specialized technical training and global scientific exchange..

Audience Feedback Summary

Participants highly commended the Department of Chemistry, AIGS for the seamless integration of global expertise with practical, hands-on tabletop simulations. The feedback consistently highlighted that the transition from complex chemical theory to actionable emergency response skills provided a unique professional edge that bridged the gap between the classroom and industry standards.

Feedback Analysis: