Report
About the Workshop

With blessings and support of Honourable Founder President, Dr. Ashok K Chauhan, Chancellor, Respected Chancellor Dr. Atul Chauhan, Vice Chancellor Prof (Dr) Balvinder Shukla and President, ASTIF Dr. W. Selvamurthy, Amity Institute of Nuclear Science & Technology (AINST), Amity University Uttar Pradesh, Noida organized hands-on training workshop on ***"THE PRACTICAL APPLICATIONS OF NUCLEAR SECURITY"*** during **27th-29th March, 2023** to strengthen the nuclear security culture among the young generation and future leaders as there are several security challenges associated with nuclear facilities, nuclear and other radioactive materials. The workshop was in continuation of the AMITY-DTRA-TAMU project running in the institution.

Objective of the Workshop

- Hands-on experience on nuclear safety and security equipment
- Gain experience by conducting exercises for recovery of different radioactive sources.
- Training on handling emergency situations with radiation detectors
- Insights into Consequence management, Tabletop exercises, field search exercises (prepare for recovery of lost or stray sources
- To provide hands on training on radiation detectors along with lectures to the various stockholders utilizing nuclear security education laboratory at AINST, AUUP.

The resource persons of the workshop were the faculty members of AINST. The observers were from Texas A & M University (TAMU), Oak Ridge National Laboratory (ORNL) Defence Threat Reduction Agency (DTRA), USA. The details of the delegates are:

1) Mr. Norman Turk, Oak Ridge National Laboratory (ORNL)
2) Matthew Boyd, Texas A&M University Department of Nuclear Engineering
3) Dr Farheen Naqvi, Texas A&M University Department of Nuclear Engineering
4) Mr. Steve Gunther, Defense Threat Reduction Agency (DTRA)
5) Mr. Paul Keurajian, Defense Threat Reduction Agency (DTRA)
6) Mr. Drew Bissell, Défense Threat Reduction Agency

Inaugural and Panels discussion

The inaugural was held on 27th March 2023 started by welcome greetings to guest of honour, panellists, guests, US guests. The welcome address was delivered of Dr Alpana Goel, Director and Head, AINST. The Deputy Director General, Dr. Gopal Bhushan shared his views about the theme of the workshop. The Guest of Honor of the workshop was Mr. Aditya Pratap Singh, Second-in-command, Ghaziabad, Uttar Pradesh, India, National Disaster Response Force (NDRF**).** We done felicitation of Mr Aditya Pratap Singh for his immense contribution during Turkey earthquake.

After the formal inaugural, a panel discussion was held, the theme was "Radiation Detection and its Applications towards Nuclear Security". The session was moderated by Prof. A. K. Jain, Advisor, AINST.
The following panellist were invited for panel

1. Dr. Debabrata Datta, Former Nuclear Scientist, Bhabha Atomic Research Centre (BARC), Professor & Joint Director Research and Development, Heritage Institute of Technology (HIT) Kolkata
2. Dr. R.K. Gopalkrishnan, Former Senior Scientist, Bhabha Atomic Research Centre.
3. Dr. Sanjay Rajput, Senior Assistant Director and In-Charge-Shriram Applied Radiation Centre, Shriram Institute for Industrial Research, Delhi
4. Dr. R. Palit, Scientist (H), Department of Nuclear and Atomic Physics, Tata Institute of Fundamental Research, Mumbai.
5. Dr N. Madhavan, Scientist-H, Inter-University Accelerator Centre, New Delhi

The lectures were delivered by AINST faculty members which were followed by exercises:

1. Nuclear Security for Materials Out of Regulatory Control: Nuclear Security for NM and MORC, Prevention, Detection and respond to NSE with MORC and further Consequences, Adversary approach !
2. Radiation Detection Instrumentation for Nuclear Security: The use of RIIDs and their use for the material detections.
3. Instrumentation Demonstration: The demonstration of Hand healed devices for the identification of the nuclear material.
4. Introduction to Search Exercises: Search of left over sources and hidden sources at various place in various circumstances.
5. Vehicle Check Point Exercise: tabletop exercise to discussion on cordon-of road and undisturbed traffic
6. Emergency Response Radiation Detection and Consequence Management for Nuclear Security Events
7. Calibration of detectors
8. Radiation Field Mapping: exercise on bloom in nuclear disaster event using simulator

Apart from above mention sessions, a special session for Innovation and startups Women in engineering, Thesis/Dissertation were organised. Mr Samyak Munot, DGFS Fellow, HBNI, Ms Vaishali Singh, Advancetech Pvt Limited, Ms Reetta SARA Grorge & Mr Tushar Gupta, respectively were invited to deliver a talk and share their experiences.

First day an evening lecture was organised on ***Radiological and Nuclear Poisoning and decontamination*** delivered by Dr Navneet Sharma, AIPS, Amity University.

Concluding

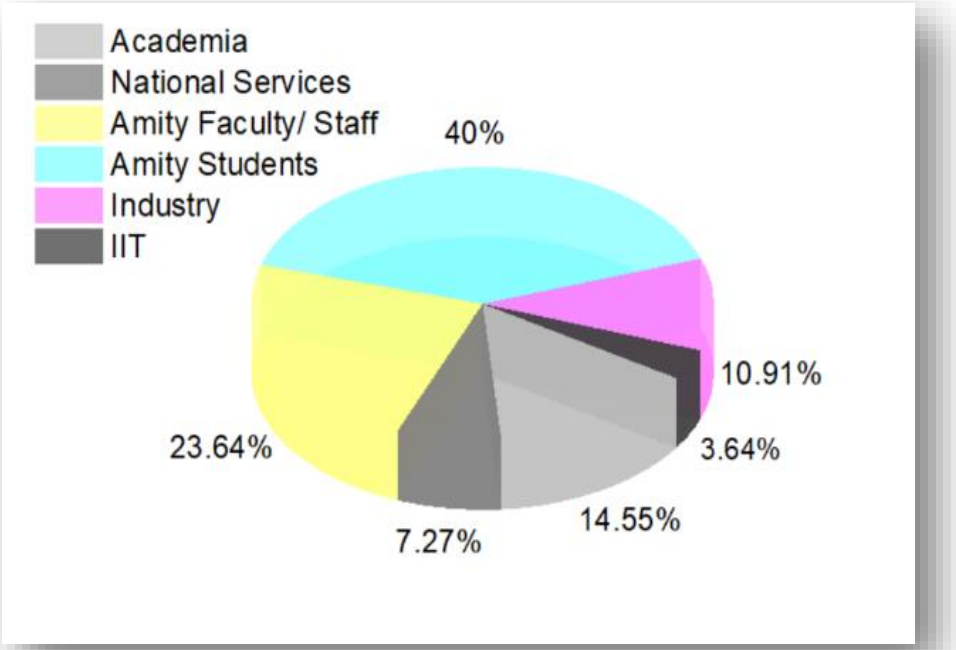
Concluding of the workshop was held on 29th March 2023, where the participants shared their views and feedback regarding the workshop. A Google form was circulated among the participants, and they provided their feedback for future betterment thoughts. Two-three participants were also invited to speak about the workshop. Certificates were given to the participants who have attended the workshop at least for two days. Finally, observer from DTRA, ORNL and TAMU were invited for their feedback.

The **outcomes of this workshop** are as follows:

1. Hands on exercises were conducted with radiation monitoring hand-healed devices which will help participants to detect and quantify radiation in case of both normal and emergency conditions.
2. Radiation monitoring (in field) is demonstrated which will help in consequence management in case of radioactive accident/outbreak.
3. Localization and identification of source in a room, car and building were carried out with different equipment to equip participants about source recovery.
4. The institutes laboratory facilities were brought to the notice of various institutes and organisations working in nuclear and allied sector, this will improve our opportunities of collaborations amongst these organizations.
5. AINST has connect with Industry and academia both which will provide us opportunities for collaboration for research projects, industrial assignments, and opportunities to work with government agencies like National Disaster Relief Force (NDRF).
6. Special To encourage and motivate the audience and specially women force,

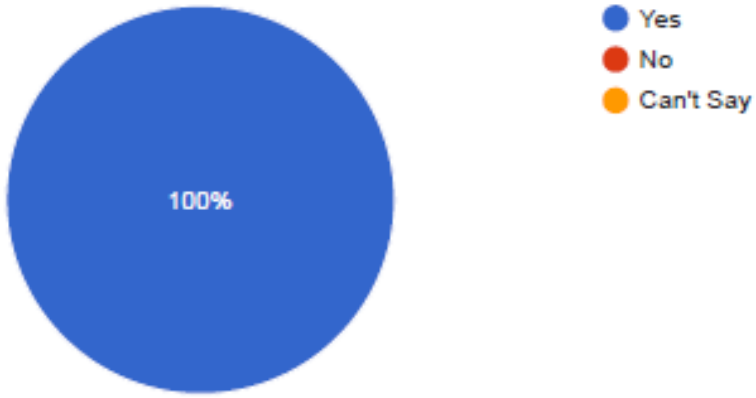
Feedback Analysis

Participants



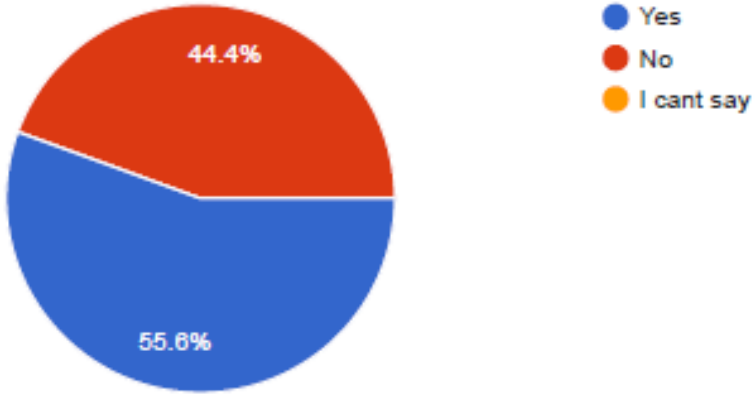
Was the technical information provided to you in the lecture useful and added to your knowledge ?

18 responses



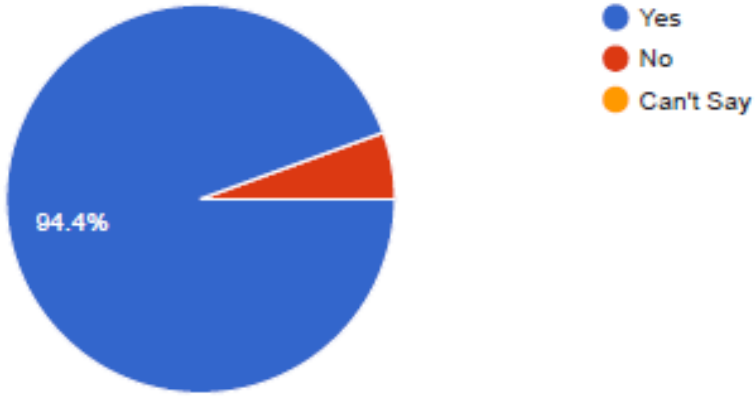
Have you ever used and seen the RIID's used in the practical training?

18 responses



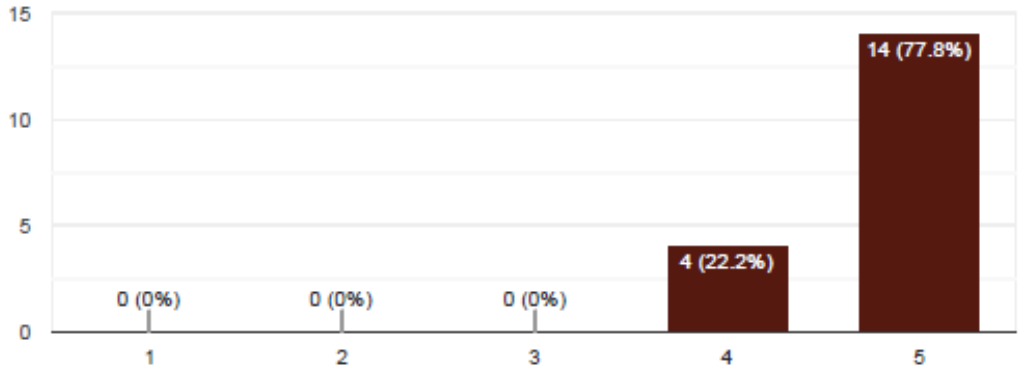
The practical training give you a feel of issues related to nuclear security?

18 responses



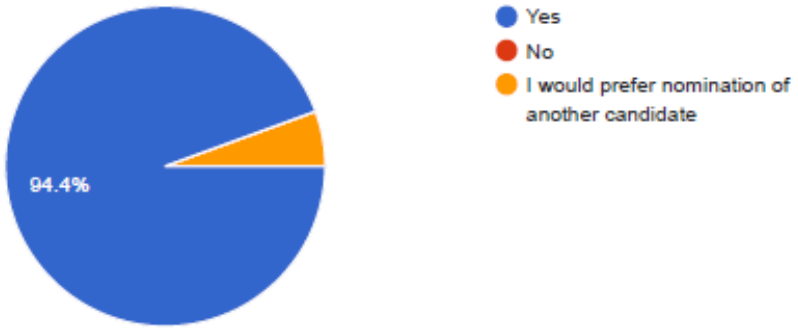
How would you rate the Hands on training part of the workshop? Copy

18 responses



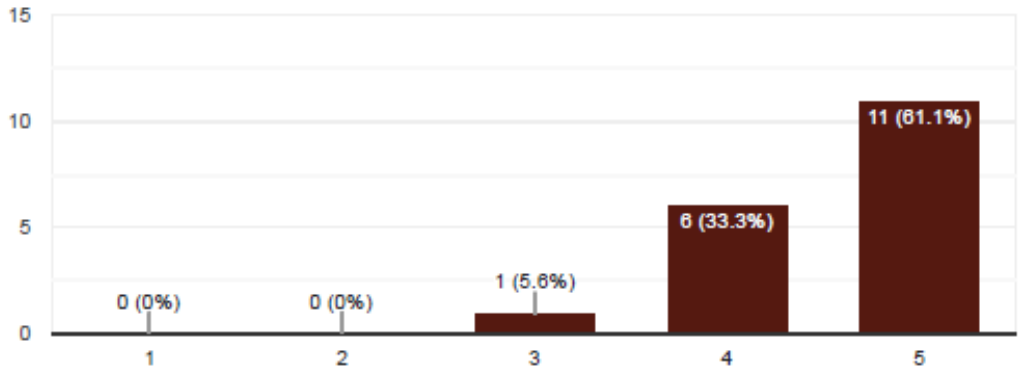
Would you be interested in participation in such upcoming workshops? Copy

18 responses



Please provide rating for stay and Hospitality Copy

18 responses



Suggestions/Comments for improvement

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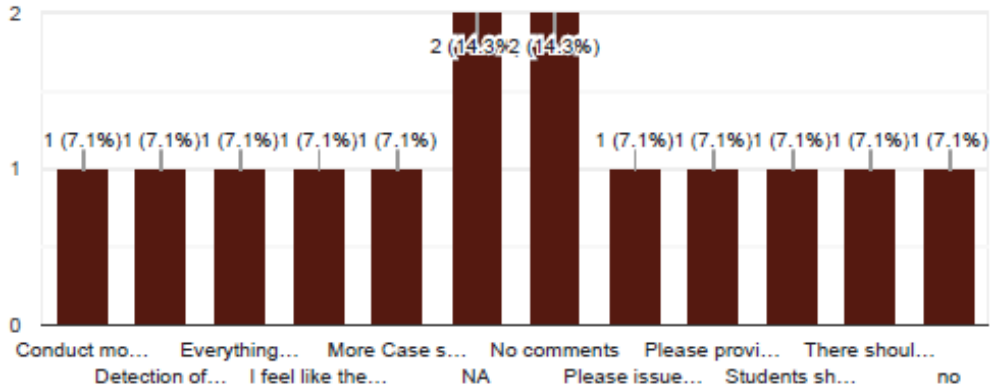
4 responses



Rate the quality of the lecture

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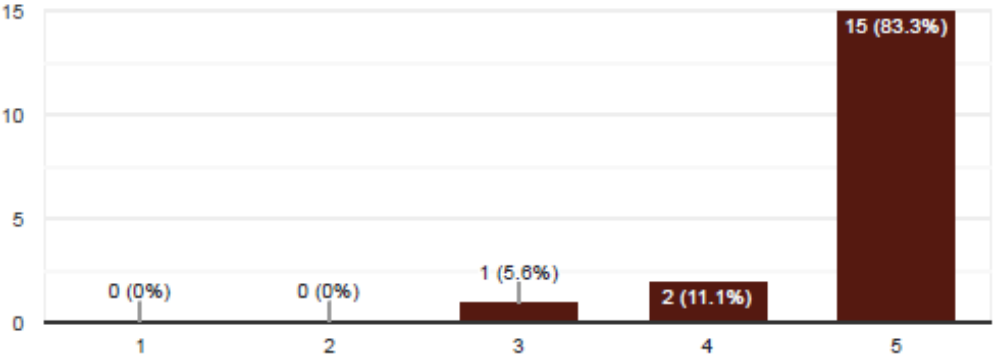
8 responses



Has the training program met your expectations ?

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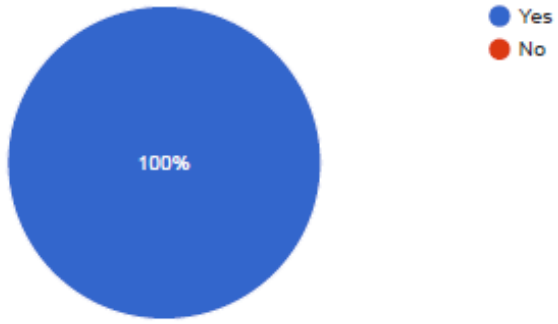
8 responses



Glimpses


AMITY UNIVERSITY
With Support From
Amity Institute of Nuclear Science & Technology
Organizing workshop on


AMITY UNIVERSITY
Amity Institute of Nuclear Science & Technology

WORKSHOP ON "THE PRACTICAL APPLICATIONS OF NUCLEAR SECURITY,
Date: 27th-29th March 2023