INSTA Executive Programme for Educators – Progress and Lessons Learnt

Regional Meeting on Nuclear Education and Training in Asia Pacific: Achievements and Future Strategic Planning, Chiang Mai, Thailand (17-21 August 2026)

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Background and Motivation

- Nuclear science plays a significant role and contributes directly to **9 of the 17 SDGs**.
- **Education** serves as a fundamental component for all of the SDGs.
- Educators face limited resources, workforce challenges and conflicting demands that affect learning and facilitation especially in the field of Nuclear Science & Technology (NST).
- IAEA has been supporting professional education and training in NST through various technical cooperation (TC) projects.
- Through IAEA TC project RAS0091, the **International Nuclear Science and Technology Academy (INSTA) was established in 2021** to support NST education at the secondary and tertiary level.



INSTA Executive Programme for Educators (EPE)

- **Conceived in 2022** to support educators in empowering them to leverage the knowledge of NST in their own institution or respective fields.
- EPE is the **flagship programme** of INSTA
- Designed for **experienced professionals and educators**
- Focuses on a simple, **WOW factor** and **state of the art education approach**
- Incorporates case study and research-based presentations, discussions and exercises taught by **INSTA faculties/members**
- **Maximises organizational and personal impact** while **minimizing disruption to work and family life**
- EPE had its **first run in 2024** and was well received.
- **12 out of the 24 participants** who completed Phase 1 of EPE proceeded to join the **INSTA Spring School in Japan (Phase 2)** in 2025 and the rest given the opportunities to join various other physical nuclear programmes.

Objectives of Executive Programme for Educators



To develop deeper understanding of the global agenda, legislation, and treaties and on Nuclear Science and Technology (NST) contributions and relation to them



To improve competency of imparting knowledge on NST through effective learning and facilitation



To inspire new generation of educators on benefits and potential of NST or socio-economic development



To promote growth, research, development and innovation of NST in one own's field



To strengthen collaboration towards improving NST education and optimize nuclear knowledge management collectively

Structure of Executive Programme for Educators

Phase 1

3 Online Learning Modules

- Module 1: Learning Approaches & Strategies for the 21st Century
- Module 2: Global Agenda, Laws and Treaties
- Module 3: Roles of NST in Development

To be completed in 5 – 6 months

Phase 2

1 Onsite Module

- Module 4: Education Hub INSTA Schools

Chance to proceed only with completion of Phase 1

Modules and Courses for EPE Phase 1 (Online Mode)

	Module 1: Learning approaches & strategies for the 21st century	Module 2: Global agenda, laws and treaties	Module 3: Role of NST in development
Compulsory	✓**Educator Paradigm for Life-long Learning** ✓**Learning & Facilitation** ✓**Pedagogical Approaches**	✓**United Nation Sustainable Development Goals** ✓**International Convention & Treaties** ✓**International Atomic Energy Agency and Partners**	✓**Principles of Nuclear Science & Technology** ✓**Nuclear Knowledge Management** ✓**Educator's Role in NST**
Optional	• Ethics in Nuclear Science and Technology • The "Gogies" • Creative Content • Internet Revolution Learning • Learning Design • Learning Assessment • Learning Theories	• Radiation and Realism • Nuclear Safety • Nuclear Security • Nuclear Safeguards • Education Networking • Nuclear Safety Culture • International Cooperation	• Radiation Medicine for Human Health • Agriculture: Soil and Water Management and Crop Production • Food Quality and Safety • Environmental Preservation • RR and Particle Accelerators • Powering the Future: SMRs

Some Shortcomings of EPE in 2024

- ❑ Difficulties in scheduling discussion sessions for courses
- ❑ Demand on lecturers to assess the students for every course – especially if they were turned in randomly.
- ❑ Very different standards in some of the courses and Learning Objectives were not explicitly stated in some courses
- ❑ Confusion over platforms for different modules and over completion of courses and programme

In 2026 EPE, improvements were made to overcome some of the above in the organization and requirements (especially the assessments) for completion. At the same time, standardization were made on the course webpage to provide introduction of course and instructors as well as the Learning Objectives.

Updated Organisation for EPE Phase 1 (Online Mode)

- Most activities are still **virtual** (to be completed at students' own time before deadline, except for the presentation session) [Unchanged]
- For **each module**, students are expected to
  - Spend about **10 hours for lectures**: 2 hours for each of the **3 compulsory courses & 2 elective courses** [encourage to complete more for your own learning - unchanged]
  - Submit **1 written assignment** [Updated]
- Attend a **1-hour session for individual presentation** scheduled on last two weeks of programme when student will do a **5-min presentation including 2 min Q&A**. [Updated]
- **One self-recorded video** and **a written reflection** are also to be submitted at the end of the programme [Updated]
- EPE still utilizes **2 learning platforms** [Unchanged – will work towards one platform]
  - Module 1 → Open University of Malaysia (OUM) LMS
  - Modules 2 and 3 → Asian Network for Education in Nuclear Technology (ANENT) LMS

Updated Requirements for Completion of Modules 2 & 3



COMPLETE

ALL 3 COMPULSORY + AT LEAST 2 OPTIONAL COURSES FOR EACH MODULE WHICH INCLUDE

1) AN MCQ OR T/F QUIZ AT THE END OF EACH COURSE [UPDATED]

2) ONE WRITTEN ASSIGNMENT EACH FOR MODULE 2 AND 3 [UPDATED]



DELIVER A PRESENTATION

OF 3-MINUTE DURATION, AT ONE OF THE ONLINE SESSIONS [NEW]

SUBMIT A VIDEO

OF 5-MINUTE DURATION TO BE SUBMITTED BEFORE END OF PROGRAMME [NEW]



SUBMIT SURVEYS

AT THE END OF EACH COURSE, MODULE & PROGRAMME

AND A REFLECTION

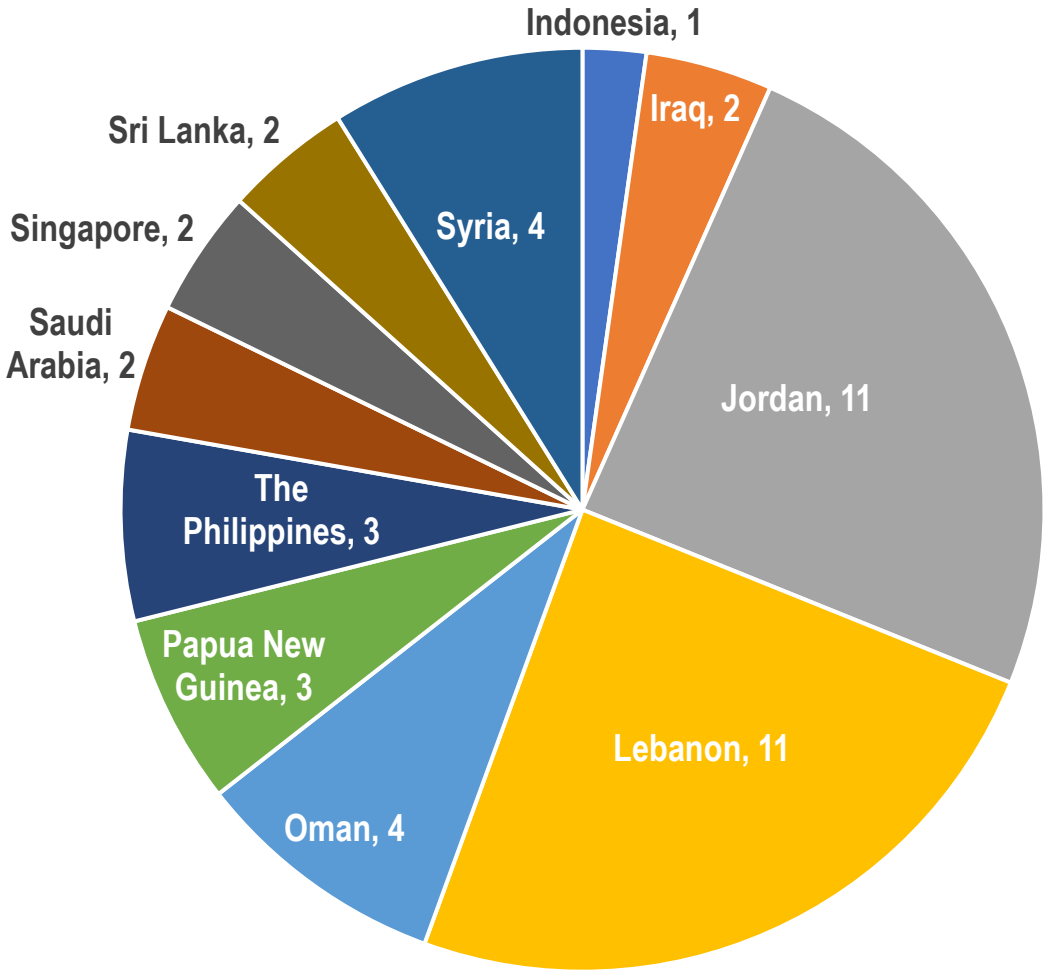
AT THE END OF THE PROGRAMME

Timeline of EPE (Phase 1) 2026

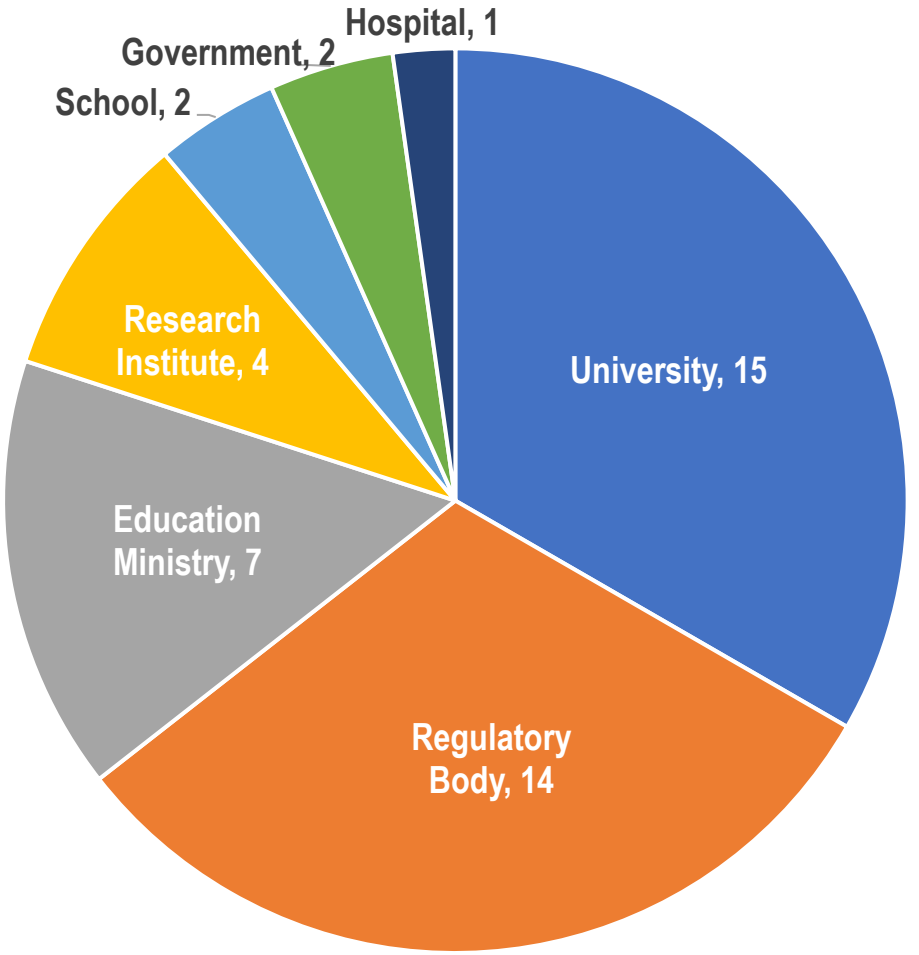
Date	Activity	Remarks
18 May 2026	Opening Session	Now
18 May 2026 – 31 July 2026	Module 1	**Encouraged to complete Core courses by end of June**
1 Jul 2026 – 31 Oct 2026	Modules 2 & 3	Students can register only after completion of Module 1 **Core Courses**
17 Oct 2026 – 31 Oct 2026	Presentation Sessions	Students choose only one session to attend
15 Nov 2026	Closing Session	Tentative

EPE 2026 – Accepted Participants

❑ **45 participants** from 11 countries were initially accepted to the programme.



Countries of Participants



Category of Organizations of Participants

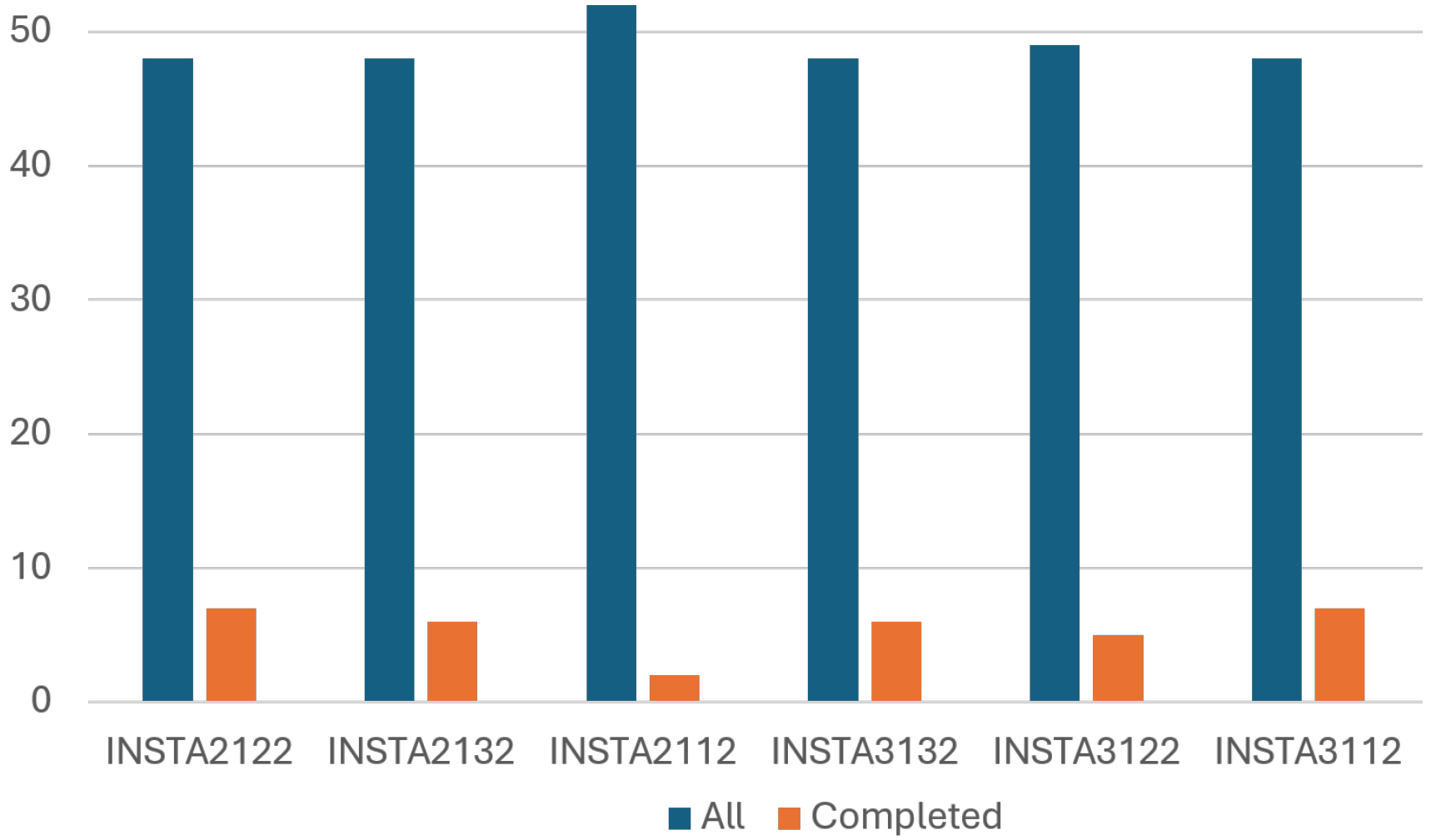
PARTICIPANTS BY COUNTRY

48 PARTICIPANTS • 12 COUNTRIES



Update:19/08/2026

Modules 2 & 3 Compulsory Modules: Numbers Completed



Update:19/08/2026

For Discussion and Consideration

- **AI-assisted Grading for Essay Assignments**: to further reduce the load of the lecturers of the compulsory courses. This was done through the ANENT platform and the lecturers for the compulsory courses in Modules 2 & 3 have been briefed.
- Original **target of class size** is **60** to ensure all who complete EPE successfully get a chance to attend one of the INSTA Schools (with financial support). However, our aim is always **to reach out to as many countries and participants as possible**.
- We may want to consider **various levels of "achievement"**. This allows us to open the application directly to anyone interested (can be without NLO's endorsement).
  - Just issued with **Certificates of Completion (for individual courses)**
  - Compete for places in **INSTA schools** (can be similar to 2026 EPE as a minimum or with more stringent requirements through an appropriate scoring system)
  - To be used by members for their **careers' requirements** (exact counting of hours, courses, etc. and may require verification of assessments if done online).

Reference to Changes Agreed During January Workshop in Vienna – on Assessments for 2026 EPE

(Backup Slides For Discussion and Clarification)

Assessments (Conclusion from Days 2 & 3)

Slides from Jan Workshop

- **Course Level**:
  - Assessments must be able to be marked by system
  - Simple MCQs (4 choices) or T/F, should have min of 10 questions for whole course
  - Up to two attempts can be made to reach passing level (80%) – 1.5 min per questions. *[Note: students will be informed of the total mark scored but not on correct answers or which questions they got wrong.]*
  - Based on materials of lectures

- **Module level (Modules 2 & 3 only)**
  - For each module**, choose and submit 1 out of 3 given assignments (i.e., one assignment will be given for each compulsory course)**
  - Ideally, assignment should include an element so that participants need to include materials from the elective courses they have taken as case study.
  - Course instructors to grade. Marking based on Pass/Fail with feedback to participants. If given Fail grade, lecturer must give good justifications and suggestions to improve. Participants will be given one chance for re-submission.

- **Programme level**:
  - A **written reflection** is requested from the participants covering (1) gains from programme, (2) how participants will use the materials in work, (3) strengths and weaknesses of programme. No grade but must submit as part of requirement for completion of module.

Presentation (Conclusion from Days 2 & 3)

Slides from Jan Workshop

- In place of attendance to discussion session, each student will give a **3-minute presentation** (with exactly 1 slide /poster – no overlapping contents through animation) + 2 min Q&A. [Presentation and self-recorded video can be based on the same topic.]
- Up to 15 participants per session (75 min). Number of places should be at least 30% more than expected number of participants to ensure places for all participants. Slots will be opened (probably on 4th month) for registration and participants will be allocated on first-come-first-served basis.
- Possible presentation topics on peaceful uses of NST and the corresponding education
  1. Good ideas on that they would like to share
  2. Some plans or proposals they would like to share or pitch
  3. Good practices in NST
  4. How EPE has prepared them for teaching NST-related education programmes
- All lecturers will attend at least one session. At least 3 lecturers per session.
- No grade but is compulsory and may be taken as one of the factors in the selection of participants in INSTA Schools.

Self-Record Video (Conclusion from Days 2 & 3)

Slides from Jan Workshop

- **Self-recorded Video**:
  - Participants to produce **one** self-recorded video
  - Duration of video should be about 5 minutes (± 30 seconds)
  - To be submitted to LMS and peer-reviewed. Fellow participants will vote for the top three videos. The selected top video(s) will receive awards and be highlighted in the Closing Ceremony and other occasions.
  - The quality of video may be one of the selection criteria for participation at INSTA Schools.
  - Examples of topics for videos will be given but participants can choose to produce other videos related to NST.
  - Must submit to be considered that programme is completed.