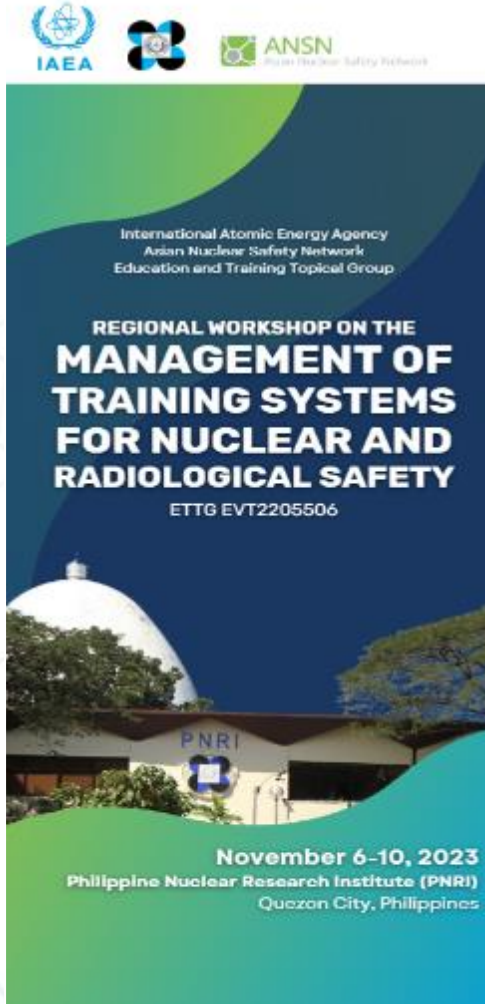




Presentation 3.3

Management of training within an integrated management system (PNRI)





**PHILIPPINE NUCLEAR RESEARCH INSTITUTE
TECHNOLOGY DIFFUSION DIVISION**

Nuclear Training Center

Roel A. Loterina

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Department of Science and Technology

Philippine Nuclear Research Institute

 pnri.dost.gov.ph

 [/PNRIDOST](https://www.facebook.com/PNRIDOST)



Nuclear Training Service Provider



Introduction

- Historical Background

1959

Philippine Atomic Energy Commission (PAEC), now the Philippine Nuclear Research Institute (PNRI) **Nuclear Training Institute** conducted the **1st Radioisotope Techniques Training Course (RTTC)** with 18 participants.

**April 30
2004**

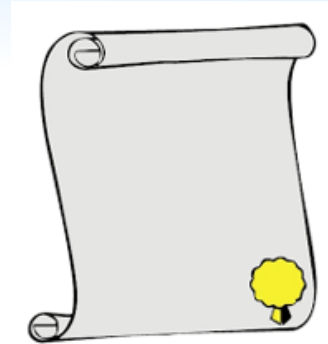
Nuclear Training Unit (NTI) was renamed and designated as **Nuclear Training Center (NTC)**, by virtue of PNRI Office Order No. 004.

PNRI Organizational Chart



Introduction

- PNRI Nuclear Training Center offers professional certificate courses throughout the year.
- courses are designed to meet the regulatory requirements for radiation protection/safety officers (RPO/RSO) and authorized personnel of instruments and processes involving radioactive materials.
- NTC also offers specialized courses for scientists, researchers, professionals in the nuclear science and technology fields, faculty, students, and other stakeholders who are interested in learning about the peaceful applications of nuclear science in various fields.



Introduction

- PNRI Nuclear Training Center implements training programmes, activities and services:



Technical Training

- Conduct of nuclear training courses and seminars for non-power and power applications, as well as NDT
- participants come from government and private institutions nationwide, including PNRI staffs

On-the-Job Training

- Graduate and undergraduate thesis/dissertation
- Radiation and nuclear related studies
- Under the mentorship of PNRI scientists, researchers and/or personnel

Research/Thesis Advisorship

- Graduate and undergraduate thesis/dissertation
- Radiation and nuclear related studies
- Under the mentorship of PNRI scientists, researchers and/or personnel

Workshop/Seminars

- These include specialized subjects such as the safe transport of radioactive materials and emergency planning and preparedness.



ISO 9001:2015 Certification

- **PNRI Nuclear Training Center** implements training services in conformance to **ISO 9001:2015 Certification**



ISO 9001:2015 Certification

Training course syllabi are based on:

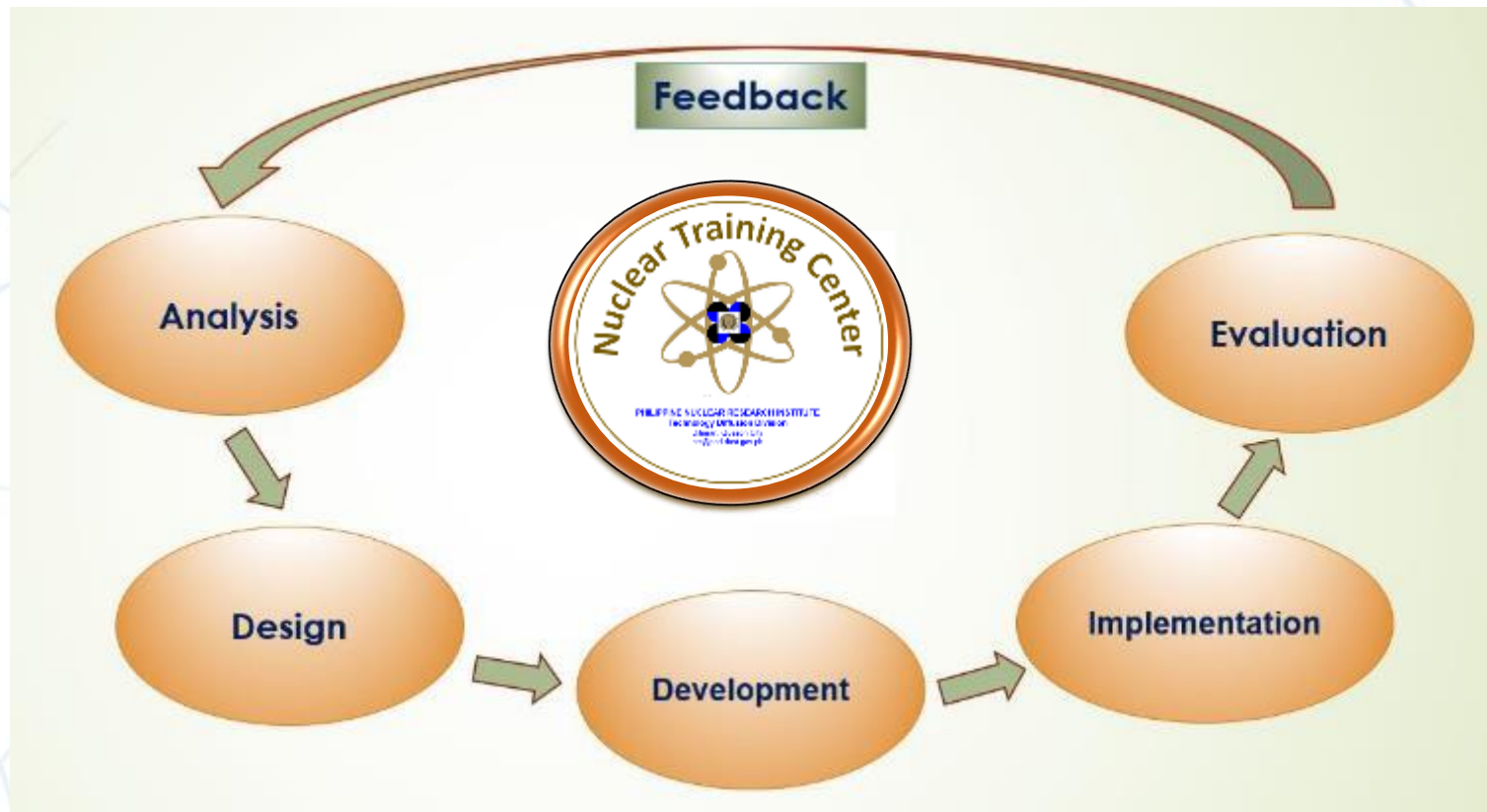
- IAEA standards
- Code of PNRI Regulations



Systematic Approach to Training

- NTC follows the **SAT process** in the implementation of its training programmes

ADDIE



Instructional design

- Training Strategy / Delivery



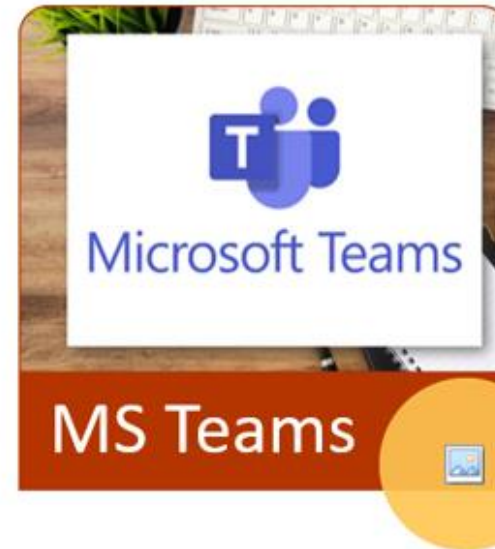
Learning Management System



Video Conferencing, Webinars,
and more



NTC
Learning
Management System



The hub for team collaboration in
Microsoft 365



NTC Lecturers

- Qualified lecturers have undergone specialized training abroad in various aspects of nuclear S & T and are experienced in their area of expertise.



PNRI Facilities

- Laboratories and facilities of the different research units in PNRI are also made available to the trainees.
- For certain training courses, PNRI makes arrangements with other private companies, government agencies, universities, and hospitals for PNRI training participants to use their facilities.



NTC Facilities

NDT Laboratories Radiography Facility



RAM Authorization

RPO

Radiation Safety
Program

NTC Radioisotope Laboratory



RAM Authorization

RPO

Radiation Safety
Program



NTC Equipment



Radioactive Sources



Dose Calibrator



Moisture Density Gauge



Radiation Monitoring Instruments



Technical Training Courses

Radiation Safety

- designed to meet the regulatory requirements for radiation protection/safety officers (RPO/RSO) and authorized personnel of instruments and processes involving radioactive materials.



Technical Training Courses

Radiation Safety

Course Code	Course Title	Duration (days)
RSC-ID	Radiation Safety Course-Sealed Sources in Industrial Devices	5
RSC-CL	Radiation Safety Course – Commercial Sale Involving Radioactive Materials and Low Activity Sources	2
RSRC	Radiation Safety Refresher Course	3
RSC-IR	Radiation Safety Course – Industrial Radiography	10
RSC-MR	Radiation Safety Course – Medical Use of Radioisotopes	10



Technical Training Courses

Technology Diffusion

Course Code	Course Title	Duration (days)
SNST	Seminar in Nuclear Science for High School Science Teachers	15
CNT	Course on Nuclear Technology	15
CMR	Course on Medical Use of Radioisotopes	20
CRT	Course on Radioisotope Technology	15



Technical Training Courses

JAEA Follow-Up Training Courses



Reactor Engineering -1



Nuclear and Radiological Emergency Preparedness and response



Environmental Radioactivity Monitoring

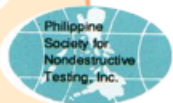
Conducted in collaboration with the
Japan Atomic Energy Agency (JAEA)



Technical Training Courses

NonDestructive Testing

- Designed to meet training requirements for accreditation and certification of qualified NDT practitioners in the Philippines
- Promotes the practice of NDT and upgrades the qualifications and professional standards of NDT personnel.
- The course syllabus follows the Philippine Standard PNS/ISO 9712 version 2006 based on the IAEA-TECDOC 628 on the “Qualification and Certification of NDT Personnel”, EN 4179, and NAS 410, ASNT SNTC-1A..
- Conducted in cooperation with the **Philippine Society for Nondestructive Testing Inc. (PSNT)**



Technical Training Courses

NonDestructive Testing



Course Code	Course Title	Level /s	Duration (hrs)
ET	Eddy Current Testing	1,2,3	80
IT	Infrared Thermographic Testing	1,2	40
SM	Surface Methods:	1,2,3	80
MT	Magnetic Particle Testing	1,2,3	40
PT	Penetrant Testing	1,2,3	40
RI	Radiographic Interpretation		40
RT	Radiographic Testing	1,2,3	80
UT	Ultrasonic Testing	1,2,3	80
WIC	Welding Inspector Course		40



Technical Training Courses

Annual Neutron School

- Established to:
 - develop the knowledge and expertise in nuclear technology of the next generation of nuclear scientists, and
 - promote nuclear research and careers to the academe especially to undergraduate students.

Year	Theme	No. of Participants
2012	Course on Basic Neutron Science	4
2013	"Annual Neutron School Alpha Year"	15
2014	"Neutron Flux Measurement of Three Neutron Sources"	11
2015	"Radiation Leak Measurement in a PNRI Nuclear Facility"	12
2016	"Applications of Neutrons Using Radioisotope Neutron Sources and Accelerator-based Neutron Source"	20
2017	Course on Basic Neutron Science	24



Technical Training Courses

New Courses ...



Technical Training Courses

Planned Courses

Nuclear
Power
Courses

Training
Courses
for the
Regulatory
Staff



CURIE'S CLASS:

Curie's Class: Nuclear Science for High School Teachers

- open to science and technology teachers, with preference to senior high school teachers and those handling special science classes.
- among the topics covered are the basics of atomic structure and radioactivity, effects of radiation, risks and safety of radioactive materials, and nuclear applications in various sectors.



On-the-Job Training for Undergraduates

- provides an opportunity for students:
 - to work alongside scientists, researchers and/or personnel in the institute, and
 - gain valuable experience in the technical and administrative aspects of nuclear science and technology services, research and education

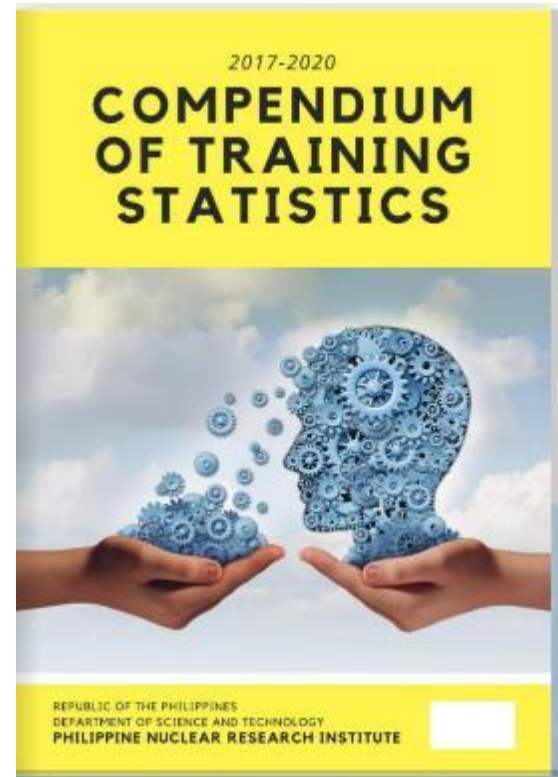
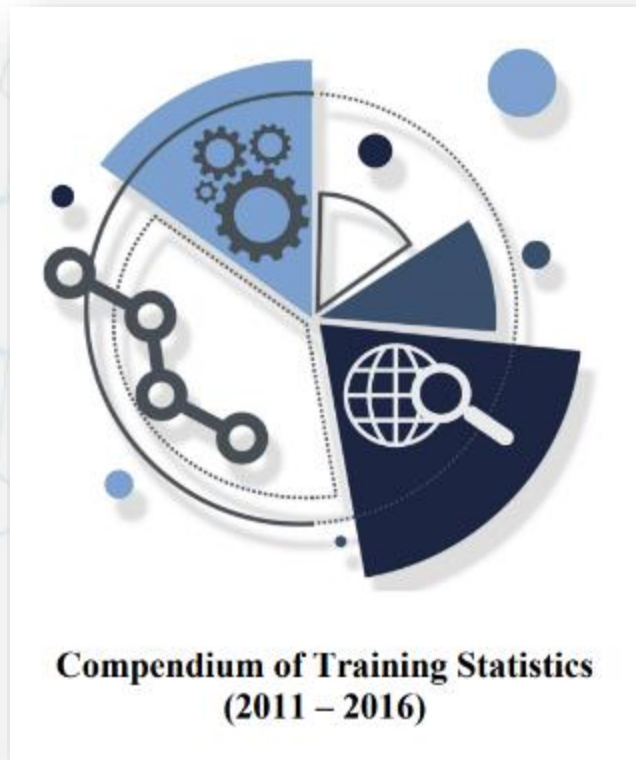


Research/Thesis Advisorship Program

- open to any qualified graduate or undergraduate university/college student who wishes to undertake the laboratory research part of his/her thesis at the PNRI, making use of PNRI facilities and equipment.



Compendium of Training Statistics



- [Compendium \(dost.gov.ph\)](http://dost.gov.ph)
- [Online Flipbook \(heyzine.com\)](http://heyzine.com)



Accreditation as NDT Training Provider

- The PNRI Nuclear Training Center is an accredited training provider for:



**Lufthansa Technik
Philippines**



**Masinloc Power Partners Co.,
Ltd, Zambales**



**Tsuneishi Technical Services
(Phils.) Inc.**



Accreditation as Training Provider

- The PNRI Nuclear Training Center is an accredited training provider for:



Midrand, South Africa



Accreditation as CPD Provider under PRC

Nuclear Training Center, Philippine Nuclear Research Institute is an accredited Continuing Professional Development (CPD) provider by:



CPD Council of
Mechanical Engineering



CPD Council of
Chemistry

CPD Council of
Professional Teachers



Other Activities



Other Activities



International Atomic Energy Agency
Asian Nuclear Safety Network Education and Training Topical Group
Regional Workshop on the Management of Training
System for Nuclear and Radiation Safety

Manila, Philippines
14 to 18 November 2022

Warm greetings from the Philippines!

ROEL A. LOTERIÑA
Philippine Team Leader, ANSN ETTG
Meeting Coordinator/Organizer



Other Activities

50TH ATOMIC ENERGY WEEK 2022

- 5-9 December 2022
- Special Events Committee activities:
 - Mobile Photography Contest
 - Poster Making Contest
 - NucleART Contest

ROEL A. LOTERIÑA

Chair, AEW Special Events Committee



Other Activities

ROEL A. LOTERIÑA
Head, Internal Audit Group
Philippine Nuclear Research Institute



2ND SURVEILLANCE EXTERNAL AUDIT 17-18 OCTOBER 2022

Nuclear Training Center
Area Audited:
Verification of Minor NCs
JNS-01-S1 (Clause 7.1.5)
JNS-02-S1 (Clause 7.1.3)
SSM-01-RA (Clause 7.1.3)

Documents presented:

- DCR Form for PNRINTC Form 34
- PNRINTC Form 34_Scaler Ratemeter Logbook Content

Internal Audit Group
Area Audited:
Nonconformity and Corrective Actions
Clauses 9.2, 10.2
Clause 8.4 for PPS



NTC Training Team



Roel A. Loteriña, LPT M.Sc.
Supervising Science Research Specialist and Head
Radiation and Nuclear Safety
Radiation Protection
Training Management
Curriculum Development
Quality Management System



Abigail C. Dagasdas, LPT
Senior Science Research Specialist
Physics
Radiation Protection
Training Management



Ramoncito F. Sulit, RME
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Mechanical Engineering
Radiation Protection
Nondestructive Testing
Training Management



Jasmine Angelie V. Albelda, PhD.
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Curriculum Development



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Training Management



Daniel L. Del Rosario, RCh.
Science Research Specialist I
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Radiation Monitoring
Training Management



Leah C. Belgera, LPT
Science Research Analyst
Radiation Monitoring
Training Management





**“NURTURE,
TRAIN,
CAPACITATE”**



Nuclear Training Center





Salamat po




PHILIPPINE NUCLEAR RESEARCH INSTITUTE
TECHNOLOGY DIFFUSION DIVISION

Nuclear Training Center

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