

#### **DEPARTMENT OF SCIENCE AND TECHNOLOGY**

# PHILIPPINE NUCLEAR RESEARCH INSTITUTE

## COURSE INFORMATION BULLETIN

PNRI/NTC Form 20 Rev. 1/ 01 June 2022

Course Title	Radiation Safety Course - Sealed Sources in Industrial Devices (RSC-ID)
Duration	Face-to-Face: 5 days (40 hours); 8:00 – 5:00 pm Online: 40 hours of training spread over eight days
Target Participant	For individuals involved in the use of <b>Category 3</b> and <b>4</b> radioactive sources in fixed and portable industrial devices, e.g., level gauges, conveyor gauges, spinning pipe gauges, thickness/fill-level gauges, moisture-density gauges, and static eliminators.  At least ten (10) participants are required to push through with the course. A maximum of thirty (30) participants will be accepted.
Pre-requisite	A background in basic algebra and trigonometry and finished at least a bachelor's degree.
Goal	To enable participants to acquire a sufficient level of understanding/skills in the following areas: (1) basic radiation and radioactivity concepts; (2) fundamentals of radiation safety and security; (3) regulatory requirements; and (4) development and implementation of a radiation safety program applicable to their practice.
Objectives	<ol> <li>At the end of this course, participants are expected to:</li> <li>Identify the nature and severity of ionizing radiation hazards.</li> <li>Explain and apply the principles of radiation protection.</li> <li>Be familiar with the different parts of the PNRI Codes of Regulations</li> <li>Be able to use the parts and sections of the CPR which apply to their activity involving radioactive sources.</li> <li>Identify the duties and responsibilities of a Radiation Safety Officer/Assistant RSO and be able to apply these principles in their workplace.</li> <li>Measure the radiation dose rate using appropriate instruments.</li> <li>Develop a radiation safety program appropriate for their practice.</li> <li>Be able to prepare a suitably detailed report to management on issues related to radiation safety and include recommendations for actions to achieve appropriate levels of safety.</li> </ol>
Nature and Scope	This course consists of lectures, exercises, workshops, and examinations.  Participant's understanding of the subject matter presented will be assessed through the following:  1. A pre-and post-test to be given before and after the lectures - (55%)  2. Development and presentation of a Radiation Protection and Safety Program (RPSP - (30%)  3. Practical exercises - (10%)  4. Attendance - (5%)  A certificate of completion will be issued to each participant with an overall grade of at least 75%.



#### **DEPARTMENT OF SCIENCE AND TECHNOLOGY**

# PHILIPPINE NUCLEAR RESEARCH INSTITUTE

## COURSE INFORMATION BULLETIN

PNRI/NTC Form 20 Rev. 1/01 June 2022

Requirements	(1) NTC Online Application; (2) Recommendation Letter to attend the course from Supervisor; (3) 1x1 ID picture; (4) Training Fee of Php 5,500.00
Course Content	The Atom Radioactivity and Radiation Radioactive Decay Calculations Quantities and Units in Radiation Protection Interaction of Radiation with Matter Biological Effects of Ionizing Radiation Radiation Detection and Measuring Instruments Basic Principles of Radiation Protection Radiation Control and Handling Practices Radiation Monitoring Exercise: Radiation Monitoring Development of a Radiation Safety Program Industrial Gauges and Basic Safety Requirements for Nuclear Gauges Leak Testing of Sealed Sources Categorization of Radioactive Sources Applicable Regulatory Requirements/ Duties and Responsibilities of RSO Security of Radioactive Sources Safe and Secure Transport of Radioactive Materials Applicable Radioactive Waste Management Practices Emergency Planning, Preparedness, Procedures, and Response Presentation of Radiation Safety Program