

## 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 - Industrial Radiography (RSC-IR)  |
|-----------------------|--|
| Duration              | Ten days (80 hours); 8:00 – 5:00 pm  |
| Target<br>Participant | For individuals involved or will be involved in the use of gamma radiography on-<br>site and in shielded enclosures.   |
| Pre-requisite         | A bachelor's degree in physical sciences or equivalent courses. Successful completion of the Non-Destructive Testing Course on Radiographic Testing (RT) Level 2 or equivalent.  |
| 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>Participants should be able to:         <ol> <li>Identify the nature and severity of ionizing radiation hazards.</li> <li>Describe the nature and properties of gamma radiation and its associated hazards.</li> <li>Acquire a sufficient understanding of the applicable parts of CPR and apply them in industrial radiography activities.</li> <li>Explain and apply the principles of radiation protection.</li> <li>Apply basic concepts of radiation control practices and be able to perform calculations with these factors.</li> <li>Apply practical methods for reducing doses.</li> <li>Demonstrate acceptable work practices,</li> <li>Demonstrate ability to perform radiation surveys and correct operation of equipment</li> <li>Recognize an unusual situation and take the appropriate immediate actions to control doses.</li> <li>Develop a radiation safety program appropriate for their practice.</li> </ol> </li> </ol> |
| Nature and<br>Scope   | <ul> <li>This course consists of lectures, exercises, a workshop, and examinations. The participant's understanding of the subject matter presented is assessed through the following: <ol> <li>Pre and post-test given before and after the course (post-test of 55%)</li> <li>Development and group presentation of a Radiation Protection and Safety Program (30%)</li> <li>Practical exercises (10%)</li> <li>Attendance (5%)</li> </ol> </li> <li>A certificate of completion will be issued to each participant with an overall grade of at least 75%.</li> </ul>  |

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## CONTACT US

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#### TO APPLY FOR A COURSE, VISIT:

https://services.pnri.dost.gov.ph/portal



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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) Medical Certificate; (4)1x1 ID picture; (5) Training Fee of Php 10,000.00  |
|-------------------|--|
| Course<br>Content | Overview of Radiation Sources Used in Industrial Radiography<br>Review of Fundamentals<br>Interaction of Radiation with Matter<br>Biological Effects of Ionizing Radiation<br>External Dose<br>Radiation Shielding<br>Dose and Shielding Calculations<br>Basic Principles of Radiation Protection<br>Radiation Detection and Measurement<br>Radiation Detection and Measurement<br>Radiation Monitoring<br>Exercise on Radiation Monitoring Instruments<br>Radiation Control Practices<br>Leak Testing<br>Exercise on Leak Testing<br>Radiographic Exposure Devices<br>Repair and Maintenance of Radiographic Equipment<br>Applicable Parts of the Code of PNRI Regulations<br>Licensing Requirements and Procedures/ Duties and Responsibilities of RSO<br>Security of Radiation Sources<br>Safe and Secure Transport of Radioactive Materials<br>Applicable Radioactive Waste Management Practices<br>Case Histories in Industrial Radiography<br>Emergency Planning and Preparedness<br>Emergency Drill<br>Development of a Safety Culture<br>Development of a Radiation Safety Program<br>Presentation of Radiation Safety Program |

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