



KEMENTERIAN SAINS,  
TEKNOLOGI DAN INOVASI  
MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION



# RADIATION SAFETY & HEALTH

PUSAT KECEMERLANGAN NUKLEAR, NUKLEAR MALAYSIA  
CENTRE OF NUCLEAR EXCELLENCE, NUKLEAR MALAYSIA

*Nuclear Technology Propels the National Mission*    *Teknologi Nuklear Pemacu Wawasan Negara*

## Recognition



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# INTRODUCTION

**The use of radionuclides and radiation sources in industry, medicine, and education continues to create a need for persons trained in their safe use**



The use of radionuclides and radiation sources in industry, medicine, and education continues to create a need for persons trained in their safe use. There are a lot of demands for the competency of RPO and other safety personnel in an organization, in connection of that Centre of Nuclear Excellence has played an important role in achieving the target through holistic approach in training, consultancy as well as recognized center of excellence in radiation protection by AELB.

Radiation protection is an integral part of general health procedures, safety regulations and management systems at the workplace. The safe use and handling of radiation sources can be accomplished through familiarization with the associated technical topics. Safety can be assured when organization and radiation workers have enough information and good practice in right working procedure.

All of our training programmes, can be conducted through Public Training, Regional based programmes and Agency-based Programme. The programme can be designed to respond to the demands and meet the needs of the organization. Nuclear Malaysia training programme are conducted by a pool of qualified and experienced facilitators and supported by well-equipped facilities towards customer's satisfaction.

## Preamble



Economic activities using ionising radiation are widely popular due to its benefits to mankind, availability of sufficient radiation safety standards and value for money. As such, a radiation professional must be responsive on these issues and other radiation related subjects. As one knows the subject matter very well, it is obliged to put ionising radiation in the right perspectives. All related issues must be properly addressed to strengthen safety confidence among worker and public alike. In this regard, they must keep abreast with the latest development and recent professional practices on ionising radiation, at both local and international levels.

In an organisation, the task and responsibility of these professionals especially “The Person Responsible Towards License” (*Orang yang Bertanggungjawab Terhadap Lesen/OBTL*), Radiation Protection Officer (RPO) and Radiation Protection Supervisor (RPS) are not only limited in ensuring that the safety procedures are observed, but also in improving safety performance in order to increase quality and productivity. Strict adherence to the safety procedures is necessary to avoid any mishap and unintended accident that could result in loss to an organisation in terms of profit, assets, and also reputation.

Rapid development in the application of ionising radiation in various sectors demands a comprehensive implementation of legislative requirements in an effort to minimize risks that could possibly arise from human errors and technical failures of equipment. Hence, there is a need to strategise and harmonise standards, procedures, training and implementation, so that they will cater to the real needs of radiation issues that lead to the development of safety culture in an organisation.

Based on recommendations from participants of previous conference, the same format will be retained for this year's event, taking into account the wide spectrum of participants: OBTL, RPO, RPS and other related professionals.

This Radiation Protection Conference and Workshop is a good platform for radiation professionals, OBTLs, RPOs, members of relevant authorities, associated professionals and other key personnel to meet, discuss, share thoughts and experiences, and establish better networking to enhance safety performance as well as their professionalism.



## Radiation Safety and Health Sector (RSH)

**The Radiation Safety and Health Sector (RSH) is one of the sectors in the Centre of Nuclear Excellence (CoNE) that coordinates and manages trainings related to radiation safety and health. There are a total of 17 scheduled courses conducted throughout the year. The courses are to fulfill the demands and requirements of AELB for the safety of radiation workers throughout Malaysia.**

The Radiation Protection Course for Officers (RSH 300) is the main course because this course is mandatory for personnel who wish to become Radiation Protection Officers (RPO) or to apply for a license for their respective field of work.

There are also awareness-raising courses such as Radiation Safety Awareness (RSH 101), Awareness Seminar on Radiation Safety for OBTL (RSH 104), and Radiation Safety Course on NORM / TENORM (RSH 105).

There are also technical courses being offered. For example, Radiological Monitoring and Measurement (RSH 106), Workshop on Radiological Emergency Plan (RSH 108), Radiological Emergency Preparedness and Response Exercise (RSH 109), Leak Test of Sealed Sources (RSH 201), as well as Safety Working Procedures with X-Ray Instrumentation (RSH 202).

**All the courses offered can be carried out based on annual agenda or through an agency-based programme where CoNE will bring the training course direct to the customers. The courses at CoNE will be handled by experienced speakers and facilitators and also supported with outstanding equipment and facilities for the satisfaction of our customers.**



### Introduction

Our courses are of the high standard and are recognised by Atomic Energy Licensing Board (AELB). Realising the increasing demand and the fact that interested participants come from different places all over the country, a special course which covers the whole spectrum of syllabus taught in Radiation Protection Course has been designed and brought closer to your door, just to serve you better. This 3-day course is designed to generate greater awareness on the importance of radiation safety and to promote safety culture through good radiation protection practice at the workplace. Corresponding to this, the safety of personnel, members of the public and also the environment can be raised to the highest standard and subsequently increase the organisation's productivity. This training programme will greatly contribute to the safety culture at workplace leading to reliable safety performance.

### Course Objective

- To provide better understanding of the philosophy and principles of radiation safety and protection
- To create awareness on biological effects and the risks of ionising radiation.
- To learn the right procedures when dealing with ionising radiation
- To acquire techniques and proper procedures in controlling radiation exposure to radiation workers

### Who Should Attend

Safety officer, RPO, RPS, radiation worker, radiologist, radiographer, X-ray operator, supplier, supervisor, lecturer, technologist, technician, laboratory assistant and those who are involved and interested in the application of ionizing radiation in various sectors – industry, engineering, petroleum and gas, medical, manufacturing, agriculture, etc.

### Course Contents

- Basic Information on Ionising Radiation
- Principles of Radiation Protection
- Biological Effects on Ionising Radiation
- Radiological Monitoring Equipment and Methods
- Safety Procedures for Working with Radioactive Sources and Radioactive Materials
- Safe Handling of Radioactive Source
- Transportation of Radioactive Material
- Management of Radioactive Waste
- Regulation of Radiation Protection & Legislative Requirements
- Security of Radioactive Material
- Plan and Procedures for Radiological Emergencies
- Radiation Protection Organisation and Programme

### Methodology

- Participative Lecture
- Demonstration
- Discussion

### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 1,485.00	RM1560.00
Team Discount per Pax (2 or more registrations from the same organisation)	RM 1,410.00	RM 1,485.00

**Introduction**

The course on radiation safety, which is primarily aimed for the safety of workers, members of the public and the environment, emphasises on the aspects of radiation protection, in line with the requirement of the Atomic Energy Licensing Act 1984. The increasing use of ionising radiation in various sectors - industry, medical, manufacturing, agriculture and research - demands a comprehensive implementation of the Atomic Energy Licensing Act which requires all those involved with the use of ionising radiation to have a Radiation Protection Officer (RPO) and properly trained radiation workers. This 1-day course is specially designed to create awareness on radiation safety in order to protect the safety of workers, public and the environment.

**Course Objective**

- To provide basic understanding of the philosophy and principles of radiation protection
- To create awareness on the risks and effects of ionizing radiation
- To improve knowledge of radiation safety

**Who Should Attend**

Safety officer, RPO, RPS, radiation worker, radiologist, radiographer, X-ray operator, supplier, supervisor, lecturer, technologist, technician, laboratory assistant and those who are involved and interested in the application of ionising radiation in various sectors - industry, engineering, petroleum and gas, medical, manufacturing, agriculture, etc.

**Course Contents**

- Basic Information on Ionising Radiation
- Principles of Radiation Protection
- Effects of Radiation On Man
- Application of Ionising Radiation in Various Sectors
- Radiological Monitoring and Measurement
- Working Procedure with Ionising Radiation and Radioactive Materials
- Atomic Energy Licensing Act/Legislative Requirements
- Security of Radioactive Material

**Methodology**

- Participative Lecture



**Your Investment**

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 580.00	RM 610.00
Team Discount per Pax (2 or more registrations from the same organisation)	RM 550.00	RM 580.00

7 days

**RSH  
102**

# WORKSHOP ON GOOD RADIATION SAFETY PRACTICE

*Bengkel Amalan Keselamatan Sinaran Terbaik*

CEP  
AELB  
7

## Introduction

This workshop is designed to help establish a good code of radiation safety practice. Radiation related issues should be properly addressed to strengthen radiation safety practice to the highest level that leads to the development of safety culture in an organisation. The course will cover good perspective of the subject matter and it should become a continuous quality improvement of training as well as in planning future training programmes for the benefits of our nation.

## Course Objective

- To give overview the principles of radiation protection for dose optimisation
- To give exposure on proper radiation practices at workplace as to conform to the legislative requirement, safety standard and procedures
- To create awareness on the risks and effects of radiation
- To have better understanding on good operational practices and techniques in monitoring and controlling the exposure of ionising radiation.

## Who Should Attend

Radiation licensee, RPO, RPS, supervisor, radiation worker, manager, researcher, training provider, lecturer, scientist, trainer, academician, safety officer, ESH (safety and health) officer, medical physicist, physician, laboratory manager and those who are interested in radiation safety.

## Course Contents

- Overview of Radiation Safety and Protection
- Quality Assurance of Radiation Equipment
- Radiation Safety Working Procedure and Emergency Procedure
- Safety Management and Audit
- Legislative Requirements
- Security of Radioactive Material

## Methodology

- Participative Lecture
- Discussion

## Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 580.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 550.00	-



**Introduction**

The advancement in nuclear technology and development of radiation equipment and gauges safely places nucleonic gauges as one of the leading equipment used for non-destructive measurement and non-intrusive investigation in the industrial sector. The use of nucleonic gauges in industrial plants proved to be an excellent tool especially where there are extreme conditions such as high temperature or presence of hazardous chemicals where non-contact investigation is the only option available.

Nucleonic gauges can be used in industrial plants for internal physical investigation of vessels and tanks and more. They are also used as safe and efficient monitoring peripherals at plants. Modern, especially automatic, production methods often need to be consistently monitored in order to check the quality of the products and to control the production process. Such monitoring can be carried out by quality control devices using the unique properties of ionising radiation. Further enhancement of the nucleonic gauges with the incorporation of electronics in their design has made the use of these gauges simpler, enabling easy data acquisition and storage. Thus, this course aims to fulfill the need to fully understand nucleonic gauges and their applications to further enhance plant operations.

**Course Objective**

- To provide better understanding on the concepts and applications of nucleonic gauges
- To learn the right procedures in handling nucleonic gauges, especially the operation and maintenance
- To be able to practice safety procedures during operation of nucleonic gauges

**Who Should Attend**

This course is designed for people who work with or operate radiation gauges in industrial applications, such oil and gas, petrochemical and chemical; radiation safety officer, radiation safety personnel, managers, engineers, industrial hygienist, instrument personnel, and other individuals interested in nuclear gauging related activities.

**Course Contents**

- Basic and Principles of Nuclear Physic
- Types of Nuclear Gauging
- Safety Working Procedures in Handling Radiation Gauges
- Working Procedures in Normal and Abnormal Situation
- Emergencies Operating Procedures
- Regulatory Control

**Methodology**

- Participative lecture
- Demonstration / role play
- Discussion / case study



**Your Investment**

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 1,375.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 1,305.00	-

### Introduction

The course on radiation safety is primarily directed to the safety of workers, members of the public and the environment by emphasizing aspects of radiation protection, in line with the requirement of the Atomic Energy Licensing Act 1984. The increasing use of ionising radiation in various sectors demands a comprehensive implementation of the Atomic Energy Licensing Act which requires all those involved with the use of ionising radiation to have a Radiation Protection Officer and properly trained radiation workers. It is an important for employer to carry out a process of risk assessment that will enable them to decide the policies, procedures and trained personnel they must have in place to meet their statutory health and safety requirements. This half-day aseminar is specially designed to create radiation safety awareness in the company to enable them to review their own safety systems, and also introducing new controls or implementing changes as appropriate to ensure the safety of workers at their workplace.

### Course Objective

- To provide basic understanding of working safely with emphasize on radiation safety
- To generate awareness on the risks and effects of ionizing radiation
- To improve knowledge of safety awareness and legislative requirements
- To recognize the importance of having the safety management system in an organisation

### Who Should Attend

The course is designed for Licensee, Person In-charge Towards the License (OBTL), top management and those who are responsible for the safe use of ionising radiation in an organisation.

### Methodology

- Participative Lecture
- Demonstration/Role Play
- Discussion

### Course Contents

- Safety in the Workplace
- Security of Radioactive Sources
- Effect of Radiation On Man
- The Organizations' Safety Policy, Responsibilities and Liabilities
- Accident Prevention, Control and Reporting
- Regulatory Control



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 440.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 410.00	-

**RSH  
105**

# RADIATION SAFETY COURSE ON NORM/TENORM

## Keselamatan Sinaran Dalam NORM/TENORM

**2 days**

**CEP  
AELB  
13**

### Introduction

TENORM is an abbreviation for Technologically Enhanced Naturally Occuring Radioactive Material. TENORM may present in the form of product or waste containing enhanced level of radionuclide activity concentration as a result of technological processes. Not all NORM processing will end-up with TENORM production. Some processes only produce material with similar activity to the normal soil, i.e. no enhancement of radionuclide activity concentration. In Naturally Occuring Radioactive Material (NORM) processing, enhancement can be compared with the activity level of the raw material used. In oil and gas industry, the activity level of normal soil can be used as a reference to evaluate enhancement.

### Course Objective

- To provide basic understanding of the philosophy and principles of radiation protection in NORM/TENORM processing
- TO create awareness on the effects of ionising radiation and safety working procedure related to NORM/TENORM
- To familiarise with safe working procedures when dealing with NORM/TENORM

### Course Contents

- Basic Information on Ionising Radiation Emphasising on NORM/TENORM
- Principles of Radiation Protection
- Effects of Radiation on Man
- Basic Radiological Monitoring And Measurement
- Working Procedures in NORM/TENORM Processing
- Plan and Procedures for Radiological Emergencies in NORM/TENORM
- Legislative Requirements Pertaining to NORM/TENORM

### Who Should Attend

Radiation licensee, RPO, RPS, supervisor, radiation worker, manager, researcher, training provider, lecturer, scientist, trainer, academician, safety officer, ESH (safety and health) officer, medical physicist, physician, laboratory manager and those who are interested in TENORM processing.

### Methodology

- Lecture
- Discussion
- Case Study



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

2 days

CEP  
AELB  
11

**RSH  
106**

# RADIOLOGICAL MONITORING AND MEASUREMENT

*Pemantauan dan Pengukuran Sinaran Radiologikal*

## Introduction

Ionising radiation cannot be sensed directly by human beings in any way though excessive exposure to it may result in adverse health effects. Thus, a proper selection and appropriate use of measuring instruments, and an effective monitoring programme is seen as a paramount need while working with radiation sources, for both personal and area monitorings. This 2-day course is designed to provide guidance on radiological monitoring and measurement for employers, Radiation Protection Officers, managers and other technically competent persons who have responsibility to ensure the safety working with ionising radiation. It is very important to ensure that monitoring is executed in a proper manner where potential radiation exposure may occur. The monitoring instrument utilised has to be appropriate for the task and the users should be able to correctly interpret the results obtained. This programme covers both personal and area monitorings that are necessary to control occupational exposure of working personnel and public alike.

## Course Objective

- To provide basic understanding of the philosophy and principles of radiation protection.
- To create awareness on the effects of ionising radiation and safety working procedures that are being practiced in radiological monitoring and measurement
- To acquire proper techniques and procedures in monitoring and measurement for both personal and area.
- To improve capabilities, enhance skills and knowledge thus contribute to proper radiation safety practice.

- Survey Meter
- Care and Maintenance of Monitoring Devices

## Who Should Attend

Radiation licensee, RPO, RPS, supervisor, radiation worker, manager researcher, training provider, lecturer, scientist, trainer, academician, safety officer, SHO, medical physicist, physician, laboratory manager, and those who are interested in radiological monitoring and measurement.

## Course Contents

- Basic Information on Ionising Radiation
- Principles of Radiation Protection
- Effects of Radiation on Man
- Quantity and Unit of Radiation Measurement
- Recognition of a Good / Reliable Radiation Monitoring Equipment
- Radiological Monitoring Equipment and Methods
- Detection and Measurement of Radiation
- Characteristic, Selection and Calibration of

## Methodology

- Participative Lecture
- Demonstration
- Discussion



## Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

2 days

RSH  
107

# RADIOLOGICAL EMERGENCY PLAN PROGRAMME

Program Pelan Kecemasan Radiologi

CEP  
AELB  
12

## Introduction

The course on radiation safety, which is primarily aimed for the safety of workers, members of the public and the environment, emphasises on the aspects of radiation protection, in line with the requirement of the Atomic Energy Licensing Act 1984. The increasing use of ionising radiation in various sectors - industry, medical, manufacturing, agriculture and research - demands a comprehensive implementation of the Atomic Energy Licensing Act which requires all those involved with the use of ionising radiation to have a fit and working emergency plan programme.

This 2-day course is designed to provide participants with a basic understanding of what is required to prepare for workplace emergencies, how they can be ready to respond, as well as what they should know about their employers' emergency plan. It also gives recommendations for developing and implementing a response plan for workplace emergencies including off-site emergencies involving the organisation's staff.

## Course Objective

- To understand the new provision under Act 304 for the preparation of emergency plans.
- To assess radiological risk and propose solutions to eliminate or reduce risks.
- To identify the emergency plan that should be prepared based on radiological risks.

## Target Group

Radiation Licensee, RPO, Manager, Safety Officer, Supervisor, radiation worker, radiographer, assistant researcher, technician, Safety and Health Officer, laboratory assistant, operator, general worker and those working directly with ionising radiation and responsible for developing, implementing and maintaining emergency response plan.

## Course Contents

- Principles of Radiation Protection
- Radiological Monitoring & Measurement
- Overview of Radiological Emergency Plan
- Response Mechanism on Radiological Emergency Plan
- Guideline to the Preparation of Radiological Emergency Plan
- Principles and Risk Assessment Process
- Implementation of Specific Elements in Radiological Emergency Plan
- Radiological Risk Assessment at Facilities & Fields
- Public Communication and Information on Radiological Emergency
- Implementing the Plan: Preparing to Respond
- Evaluating Effectiveness and Continuous Improvement

## Methodology

- Participative Lecture
- Discussion / Case study
- Demonstration / Practical



## Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

2 days

**RSH  
108**

# WORKSHOP ON RADIOLOGICAL EMERGENCY PLAN

*Bengkel Program Pelan Kecemasan Radiologi*

**CEP  
AELB  
13**

## Introduction

This consequential training for Radiological Emergency Plan Programme training course, is more towards hands-on development of REPP. It also provides participants with the necessary tools and knowledge to develop and maintain capabilities for radiological emergency response at local and facility levels that meet the requirements and guidance of AELB safety standards.

## Course Objective

- To help participants develop radiological emergency response plans that will meet the specific needs of their respective company
- To introduce an effective radiological emergency plan at the workplace
- To enhance competence in evaluating, mitigating and responding to emergency situations

- Evaluating Effectiveness and Continuous Improvement of Emergency Plan Refreshment

## Target Group

Safety officer, RPO, RPS, radiologist, manager, supervisor, lecturer, technologist, and those who are involved and interested in the application of ionising radiation in various sectors-industry, engineering, petroleum and gas, medical, manufacturing, etc and those who are responsible for the safe use of ionising radiation in various activities.

## Course Contents

- Principles of Radiation Protection
- Guideline to the Preparation of Material for Radioactive and Radiological Emergency Plan
- Roles & Responsibilities of Emergency Organisation
- Core Elements of Emergency Plan
- Radiological Risk Assessment at Facilities and Fields
- Mitigative & Preventive Action Plan in Accident/ Incident to Eliminate the Risk
- Operation & Management Procedure in Accident/ Incident – Recovery & Business Continuity Plan
- Resources & Logistic Management, Assistance, Budget & Administration
- Public & Workers Communication and Information
- Training, Exercise, Drills, Dssessment and Corrective Action

## Methodology

- Participative Lecture
- Discussion / Case study
- Demonstration / Practical



## Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

2 days

RSH  
109

# RADIOLOGICAL EMERGENCY PREPAREDNESS AND RESPONSE EXERCISE

## Latih Amal Kesiapsiagaan dan Tindak Balas Kecemasan Radiologi

CEP  
AELB  
14

### Introduction

In recent past, there were a few cases of incidents or emergencies involving radioactive sources that had happened in Malaysia. The sources were either lost or stolen, which had led to cases of overexposure to members of the public, as well as to the emergency response team. Therefore, there is a need for operators, as well as first responders, to have appropriate training for dealing with such accidents. Furthermore, it will be a good exposure for the operators to understand and personally experience the role and responsibilities of first responders through hands-on practical provided in this training. This training is also initiated from the feedback given by most of the previous course participants, where they requested for more practical sessions in the courses organised by Nuclear Malaysia.

### Course Objective

- To present goals and practical objectives of emergency preparedness and response in case of radiological emergency.
- To introduce participants to an effective radiological emergency plan at the workplace that will meet the specific needs of their company.
- To enhance competence in preparing, assessing and responding to radiological emergency.
- To understand the need for the emergency preparedness process to support an effective emergency response.
- To be knowledgeable on how to prevent or mitigate adverse outcomes.
- To learn coordinated response by various response agencies.
- To gain experience on how to use various types of equipment and tools used during radiological emergency.

- Radiological Emergency Response
- Lesson Learned on Radiological and Nuclear Accident
- Transport and Lost Source Accident
- Spillage of Unsealed Source

### Target Group

Emergency planners and their support staff, emergency response coordinators, emergency managers, first responders to a radiological emergency, qualified experts, radiation protection officers, and persons responsible for training in this area.

### Methodology

- Participative Lecture
- Discussion / Case study
- Demonstration / Practical

### Course Contents

- Radiological Emergency Plans Requirements
- Radiological Instrumentation and PPE
- Contamination screening and decontamination procedures



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

5 days

CEP  
AELB  
27

**RSH  
200**

# RADIATION PROTECTION FOR WORKER

*Perlindungan Sinaran untuk Pekerja*

## Introduction

The course on radiation safety, which is primarily aimed for the safety of workers, members of the public and the environment, emphasises on the aspects of radiation protection, in line with the requirement of the Atomic Energy Licensing Act 1984. The increasing use of ionising radiation in various sectors - industry, medical, manufacturing, agriculture and research - demands a comprehensive implementation of the Atomic Energy Licensing Act which requires all those involved with the use of ionising radiation to have a Radiation Protection Officer (RPO) and properly trained radiation workers.

## Course Objective

- To understand the philosophy and principles of radiation protection
- To raise awareness on the risks and biological effects of ionising radiation
- To give exposure on safe working procedures with ionising radiation
- To acquire proper techniques and procedures in controlling the exposure of ionising radiation

## Who Should Attend

Supervisor, radiation worker, radiographer, assistant researcher, technician, laboratory assistant, supplier, marketer, operator, general worker and those working directly with ionising radiation.

## Methodology

- Participative Lecture
- Demonstration/Role Play
- Discussion/Case Study

## Course Contents

- Basic Information on Ionising Radiation
- Principles of Radiation Protection
- Biological Effects of Radiation
- Methodology in Radiation Measurement and Monitoring
- Working Procedures in Handling Radiation Sources and Radioactive Materials
- Safe Transport of Radioactive Materials
- Management of Radioactive Waste
- Plan and Procedures for Radiological Emergencies
- Atomic Energy Licensing Act and Radiation Protection Regulation
- Security of Radioactive Material



## Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 2,235.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 2,120.00	-

**RSH  
201**

# LEAK TEST OF SEALED SOURCE

## *Ujian Kebocoran Punca Terkedap*

**2 days**

**CEP  
AELB  
13**

### Introduction

The use of nuclear and radiation technology have given a lot of positive impacts to the industry. Compliance and best practice of radiation safety should be applied to prevent incident such as leakage of radiation, caused by equipment failure and negligence of personnel. The leakage of radiation can cause overexposure to surroundings and brings bad impacts to public and the environment. Therefore, Leak Test of Sealed Source is one of the radiation protection compliance requirements by the Atomic Energy Licensing Board (AELB) for handling the sealed source of radiation equipment, as stated in the Regulation 11 of the Radiation Protection (Licensing) Regulations 1986. A certified Leak Tester recognised by the AELB is required to have specific knowledge and skills to ensure that the leak test is conducted in a right manner.

This 2-day course is designed to provide participants with information related to technical aspect, safety procedure and legal requirements for conducting leak test on the sealed source. During the course, participants will also get hands-on experience dealing with leakage of sealed sources. After the completion of training, participants will be allowed to sit for the Leak Tester examination conducted by AELB. The candidates, who have successfully passed the examination, will be recognised as competent Leak Testers.

### Course Objective

- To provide better understanding of the ALARA concept for dose optimisation.
- To learn the safety procedures and correct methods when performing leak test on sealed sources.
- To equip participants with necessary skills and competency of a Leak Tester.

### Who Should Attend

People who are interested to become a Leak Tester recognised by AELB and for those who work with or operate sealed sources in industrial applications such as safety officer, RPO, RPS and others who are involve with ionising radiation.

### Course Contents

- ALARA Concept for Dose Optimisation
- Radiological Monitoring - Area and Personal Monitoring
- Emergency & Safety Working Procedures When Dealing With Sealed Sources
- General Requirement & Methods for Leak Test
- Legislative Requirements, Safety and Security of Radioactive Material
- Counting System and Analysis of Leak Test Sample
- Transportation and Waste Management of Radioactive Materials
- Maintenance and Calibration of Leak Test Equipment
- Demonstration of Leak Test

### Methodology

- Participative Lecture
- Demonstration / Practical
- Role Play



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

2 days

CEP  
AELB

8

RSH  
202

## SAFETY WORKING PROCEDURES WITH X-RAY INSTRUMENTATION

*Prosedur dan Amalan Kerja Selamat Melibatkan Peralatan X-Ray*

### Introduction

**X-ray diffraction (XRD)** is a rapid analytical technique primarily used for phase identification of a crystalline material and can provide information on unit cell dimensions. Whereas **X-ray fluorescence (XRF)** is the emission of characteristic (or fluorescent) X-rays from a material that has been excited by bombarding with high-energy X-rays or gamma rays. Basically, both methods are widely used in analyzing finely ground and homogenized materials.

Realising the increasing demand and the fact that interested participants come from different places all over the country, a special course which covers the whole spectrum of syllabus on interpretation of XRD and XRF machine has been designed and brought closer to your door, just to serve you better. This 2-day course is designed to generate better understanding on fundamental use of XRD and XRF. It also promotes safety handling procedure while handling both XRD and XRF.

### Course Objective

- To provide better understanding of the philosophy and principles of XRD and XRF.
- To create awareness on radiation protection while handling XRD and XRF.
- To learn the right procedures when dealing with XRD and XRF machine.
- To acquire proper techniques and procedures while handling XRD and XRF.

### Who Should Attend

Safety officer, RPO, RPS, radiation worker, radiologist, radiographer, x-ray operator, supplier, supervisor, lecturer, technologist, technician, laboratory assistant and those who are involved and interested in the application of XRD and XRF in various sectors-industry, engineering, petroleum and gas, medical, manufacturing, agriculture, etc.

### Course Contents

- Introduction, Properties, Production and Detection of X-rays
- Instrumentation, Analysis Technique and Data Interpretation for XRD
- X-Ray Scattering
- X-ray Protection
- Introduction to XRF
- Instrumentation and Techniques of XRF
- Demonstration and Sample Preparation for XRD
- Demonstration and Sample Preparation for XRF
- Regulations of Radiation Protection and Legislative Requirements
- Application of XRD and XRF in Industry

### Methodology

- Participative Lecture
- Demonstration
- Discussion



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

**Introduction**

Radioactive waste includes any material that is either intrinsically radioactive, or has been contaminated by radioactivity, and that is deemed to have no further use. Government policy dictates whether certain materials – such as used nuclear fuel and plutonium – are categorised as waste.

Every radionuclide has a half-life – the time taken for half of its atoms to decay, and thus for it to lose half of its radioactivity. Radionuclides with long half-lives tend to be alpha and beta emitters – making their handling easier – while those with short half-lives generally emit the more penetrating gamma rays. Eventually all radioactive waste decays into non-radioactive elements. The more radioactive an isotope is, the faster it decays. Radioactive waste is typically classified as either low-level (LLW), intermediate-level (ILW), or high-level (HLW), depending, primarily, on its level of radioactivity.

This 2-day course is designed to generate greater awareness on the importance of good practice in managing radioactive waste and to promote safety culture through good radiation protection practice at the workplace. Corresponding to this, the safety of personnel, members of the public and also the environment can be raised to the highest standard and subsequently increase the organisation’s productivity.

**Course Objective**

- To provide better understanding of the philosophy and principles of radiation safety and protection.
- To create awareness on biological effects and the risks of ionising radiation.
- To learn the right procedures when dealing with ionising radiation.
- To acquire proper techniques and procedures in controlling the radiation exposure to the radiation workers.
- Emergency Preparedness and Response while Handling Radioactive Waste
- Security of Radioactive Materials and Radiation Sources

**Who Should Attend**

Safety officer, RPO, RPS, radiation worker, radiologist, radiographer, x-ray operator, supplier, supervisor, lecturer, technologist, technician, laboratory assistant and those who are involved and interested in the application of ionising radiation in various sectors-industry, engineering, petroleum and gas, medical, manufacturing, agriculture, etc.

**Course Contents**

- Principle of Radioactive Waste Management
- Introduction to Radioactive Waste
- Regulations of Radiation Protection and Legislative Requirements
- Security of Radioactive Materials and Radiation Sources
- Characterisation & Classification of Radioactive Waste
- Pre-disposal Management Of Radioactive Waste: Waste Storage
- Pre-disposal Management Of Radioactive Waste: Waste Handling
- Waste Disposal Methods & Techniques
- Transportation of Radioactive Waste
- Safety Cases and Assessments

**Methodology**

- Participative Lecture
- Demonstration
- Discussion



**Your Investment**

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

2 days

CEP  
AELB  
14

RSH  
204

# SAFE AND SECURE TRANSPORT OF RADIOACTIVE MATERIAL

## Pengangkutan Bahan Radioaktif dengan Selamat

### Introduction

Today, all manner of products that we take for granted are supported by safe, secure and reliable transport of radioactive materials from manufacturer to end user. As a result of the increased use of radioactive substances in, for example, industry, medicine and agriculture, shipments have become more frequent and larger in volume. In addition, transport safety and security is vital during all stages of the nuclear fuel cycle - to and from nuclear power plants: at the front end, to transport uranium concentrates and new fuel assemblies; and at the back end, to transport radioactive waste and spent nuclear fuel for storage or disposal.

Transport of radioactive material by its nature gives rise to the risk of accidents with the potential for radiological exposures that could impact the safety of people, property and the environment.

This 2-day course is designed to generate greater awareness on the importance to have good knowledge in managing the transportation of radioactive materials and to promote safety culture through good radiation protection practice at the workplace. Corresponding to this, the safety of personnel, members of the public and the environment can be raised to the highest standard and subsequently increase the organisation's productivity.

### Course Objective

- To increase participants' knowledge regarding regulatory requirement of transportation.
- To strengthen participants' knowledge and hands-on work on safe transport concept. To enhance hands-on skill on how to response to an emergency situation during transportation.

### Who Should Attend

RPO, Radiation Supervisor, Scientists, Academician, Radiation workers, Students, Environmental managers, facilities managers, program managers, and all personnel who are involve with transportation of radioactive material/waste

### Course Contents

- Overview of Radiation Protection – Behaviour and Risk
- Transport Regulation
- Security of Radioactive Material During Transportation
- Responsibilities of Consignor, Consignee and Carrier
- Safety and Security Aspect of Transport Packaging
- Development of Transport Document
- Safety and Security Aspect of Transporting Radioactive Material
- Emergency Response During Transportation
- Recovery Action during Emergency

### Methodology

- Participative Lecture
- Demonstration
- Hands-on practical
- Discussion



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 930.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 880.00	-

9 days

CEP  
AELB  
58  
61  
58

RSH  
300

# RADIATION PROTECTION FOR OFFICER

## Perlindungan Sinaran untuk Pegawai

### Introduction

The course on radiation safety, which is primarily aimed for the protection of workers, members of the public and the environment, emphasises on the aspects of radiation protection and safety, in line with the requirement of the Atomic Energy Licensing Act 1984 (Act 304).

The increasing use of ionising radiation in various sectors - industry, medical, manufacturing, agriculture, research, etc.- demands a comprehensive implementation of the Atomic Energy Licensing Act which requires all organisations involved in the use of ionising radiation to have a Radiation Protection Officer (RPO) and properly trained radiation workers.

It is anticipated that this training programme would raise radiation safety practice to the highest possible level and at the same time would lead to the development of safety culture in an organisation. The course is intended to provide a platform and preparing a personnel for a career in radiation related position/task such as Radiation Protection Officer or Radiation Protection Supervisor (RPS).

### Course Contents

#### Module 1: Radiation Safety (7 Days)

Module 1 has been established to cover all aspects of radiation safety related to the use of ionising radiation in various sectors leading to the good radiation protection practice at a workplace.

#### Course Objective

- To understand the philosophy and principles of radiation protection
- To creating awareness on biological effects and the risks of ionizing radiation
- To improve the capabilities, enhance skills and knowledge, thus contributing to proper radiation safety practice
- To learn the right and proper procedures in controlling radiation exposure to radiation workers

### Course Contents

- Basic Information on Ionising Radiation
- Principles of Radiation Protection
- Biological Effects of Ionising Radiation
- Radiation Measurement and Monitoring
- Working Procedures in Handling Irradiation Apparatus and Radioactive Materials
- Transportation of Radioactive Materials
- Management of Radioactive Wastes
- Plan and Procedures for Radiological Emergencies
- Atomic Energy Licensing Act and Radiation Protection Regulation
- Radiation Protection Organisation and Programme
- Radiation Safety Audit
- Security Of Radioactive Materials

#### Module 2: Elective Subject (Duration: 2 days)

Module 2 is to equip the candidate with radiation protection aspects in a specific sector. To qualify as an RPO, candidate must attend both modules, namely Module 1 and any one of the selected Sub-module 2, depending on the nature of job of the candidate.

#### Industrial Cluster

- Category 1: Radiation Processing
- Category 2: Industrial Radiography
- Category 3: NORM/TENORM, Nuclear Gauging

#### Course Objective

- To provide better understanding on radiation safety and procedures applicable to the specific sectors
- To gain knowledge on operational aspects of the specific instruments including principles of operation, application, techniques and safety measure
- To equip the participants with the necessary knowledge and skill required of an RPO



### Course Contents

- Safe Working Procedures in Specific Category
- Plan Emergencies Procedures in Specific Category
- Safety and Security in Specific Category
- Demonstration/practical in Specific Category

### Methodology

- Participative Lecture
- Practical
- Demonstration
- Role Play
- Discussion
- Case Study

### Qualification for Examination

- Minimum requirement for participants to sit for the certification examination conducted by AELB is **18 years old and above**.
- For those who want to be an RPO in Industrial Radiography, they must have certificate of attendance in Radiography Testing (RT) Level 2.
- The certification examination is carried out for a duration of 2 days, comprises theoretical and practical components, covering both Module 1 and 2.



### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 2615.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 2480.00	-

2 days

**RSH  
301**

## **RADIATION SAFETY & EMERGENCY PROCEDURE**

*Prosedur Keselamatan & Kecemasan Sinaran*

### **Introduction**

This course is to equip the candidate with radiation protection aspects in a specific cluster. To qualify as a Radiation Protection Officer (RPO), candidate must attend both modules, namely Module 1 and any one of the selected category in a respective cluster, depending on the nature of job of the candidate in the organisation.

### **Course Objective**

- To provide better understanding on radiation safety and procedures applicable to the specific sectors
- To gain knowledge on operational aspects of the specific instruments including principles of operation, application, techniques and safety measure
- To equip the participants with the necessary knowledge and skill required of an RPO

### **Who Should Attend**

Radiation Protection Officer who would want to add a specific sector in AELB license. Eligible to apply for license renewal/refresher from AELB

### **Methodology**

- Participative Lecture
- Discussion
- Demonstration

### **Course Contents**

Industrial Sector

Category 1: Radiation Processing

Category 2: Industrial Radiography

Category 3: NORM/TENORM, Nuclear Gauging

- Safe Working Procedures in Specific Category
- Plan and Emergencies Procedures in Specific Category
- Safety and Security in Specific Category

### **Your Investment**

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 820.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 780.00	-



3 days

CEP  
AELB  
18

**RSH  
302**

# POST TRAINING OF RADIATION PROTECTION OFFICER

*Kursus Lanjutan Pegawai Perlindungan Sinaran*

## Introduction

The responsibilities of a Radiation Protection Officer (RPO) who deals with radiation safety issues on a daily basis vary, from very slight as in the case of a business with one or two sealed sources, to an irradiation facility that uses million curies of sealed sources for sterilisation purposes. The range of devices may include X-ray devices, industrial gauges or equipment, sealed and unsealed radiation sources, radiation equipment in the laboratory, Naturally Occurring Radioactive Material and storage of radioactive materials.

The range of duties may include all activities for the compliance of AELB's Act 304, such as implementation of radiation safety management, risk assessment, transport and storage of radioactive material, development of radiation safety management plans, handling of radiation awareness trainings and supervision of staff, purchase selection and calibration of instrumentation and equipment.

## Course Objective

- To understand license requirements and expectations on Atomic Energy Licensing Act (Act 304) and regulations.
- To develop RPOs with skills specific to industry, research and radiopharmaceutical laboratory environments.
- To assess risk of radiation and biological effects and work effectively with employees to eliminate those risks.
- To equip RPOs with necessary knowledge on radiological emergency preparedness and response.
- Recordkeeping and Retention for Compliance
- Demonstration of eSPP Online System
- Survey Documentation, Contamination Control, Good Practices and Employee PPE
- Response to Personnel and Area Contamination Incident
- Requirement of Radiological Emergency Plan and Radioactive Sources' Security Plan
- Preparing for License Inspection, Notice of Violation and Penalties
- Tour of Irradiation Facility
- Demonstration of Radiation Detection Instruments

## Learning Outcome

- To be a competent Radiation Protection Officer (RPO)

## Course Contents

- Radiation Protection Programme
- Radiation Protection Act, Regulation and Guidelines
- Management Systems in Radiation Protection, Audits, License Renewal, Procedures, Training and Technical Resources for RPO
- Inventory Control of Radioactive Material
- Security and Protection of Radioactive Material

## Who Should Attend

RPO, RPS and individual who deals with radiation safety issues, regulators, personnel working in emergency services, universities, hospitals, mines, paper mills, research institutions, factories, oil and gas, construction, non-destructive testing (NDT) and defense, radiation instrument detection manufacturers.

## Methodology

- Participative lecture
- Discussion / case study
- Demonstration

## Fees

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 1,485.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 1,410.00	-

4 days



RSH 400

# RADIATION PROTECTION CONFERENCE AND WORKSHOP

## Persidangan Dan Bengkel Perlindungan Sinaran

### Introduction

The economic activities using ionising radiation are widely popular due to the benefits to the mankind, availability of sufficient radiation safety standards and value for money. As such, a radiation professional must be responsive on these issues and other radiation related subjects. The issues must be properly addressed to strengthen safety confidence among workers and public alike. As one knows the subject matter very well, it is duty bound for them to place the ionising radiation to the right perspectives. In this regards, they must keep abreast with the latest development and recent professional practices on ionising radiation both at local and international arena. In organisation, the task and responsibility of these professionals especially Person Responsibility for The License' (OBTL), Radiation Protection Officer (RPO) and Radiation Protection Supervisor (RPS) are not only limited to ensure the safety procedures are observed, but also to improve safety performance in order to increase quality and productivity. Strict adherence to the safety procedures is necessary to avoid any mishap and unwarranted accident that cost an organisation the profit, reputation and assets.

### Conference Objective

- To disseminate information on the latest development, strategies and future direction for proper radiation safety practices
- To overview the current radiation practices at workplace as to confirm to the safety standard and procedures
- To keep abreast on the development of ionizing radiation activities such as R&D education and training, procedures, licensing and regulation
- To provide networking opportunity, sharing, thoughts and experience with other professional colleagues towards the betterment of RPO professionalism
- As a platform where radiation professionals, managers, trainers, academicians and those from regulatory and relevant authorities meet together

- Radiation Safety Monitoring and Control
- Legislation, standards and procedures
- Education and training
- Performance of Equipment
- Human Talent
- Recent Professional Practices
- Safety Professional Practices
- Safety, Security and Safeguard
- Nuclear Renaissance

### Who Should Attend

Radiation licensee, person responsible to the license (OBTL), Radiation Protection Officer (RPO), Radiation Protection Supervisor, supervisor, manager, researcher, training provider, lecturer, scientist, trainer, academician, safety officer, HSE (Health, Safety and Environment) officer, medical physicist, physician, laboratory manager, supplier and those who are interested in radiation protection and safety.

### Paper Presentation

A total of 19 papers are scheduled to be presented at conference. There will be 4 keynotes address and 15 papers delivered by notable international and local speaker covering the following aspects:

- Safety Management
- Quality and Productivity
- Safety Culture and Environment

### Dialogue & Forum

There will be a discourse and interactive round table discussion after the Conference where the participants will be teamed into several groups to discuss issues of interest adopting smart partnership approach, followed by group presentation of resolution and subsequently the conclusion remarks by the Chairman.

### Your Investment

Payment	Peninsular Malaysia	Sabah / Sarawak
Single Registration per Pax	RM 1,570.00	-
Team Discount per Pax (2 or more registrations from the same organisation)	RM 1,520.00	-

**RSH  
401**

## **SEMINAR ON ADVANCED NUCLEAR TECHNOLOGY APPLICATIONS**

*Seminar Aplikasi Teknologi Nuklear Termaju*

**2** days

**CEP  
AELB**

### **Introduction**

Generations of industrial revolutions have brought about significant technological changes, advancements and innovations. Since the 18th century, the first industrial generation introduced new possibilities with mechanization and technologies such as steam engines, which revolutionized the economy by accelerating transportation and developing industry and manufacturing.

Today, 4IR or the Fourth Industrial Revolution continues to unfold, which combines human behaviour with technology, continues to change the way people live, work and interact with each other. People will continue to find new ways to collaborate and work together, bridging vast distances. Connected devices will impact daily life like never before and the possibilities are endless.

The Nuclear Industry has an important role in powering the Fourth Industrial Revolution too. It is also an industry where experts and innovators are constantly evaluating and incorporating the latest breakthrough technologies, including those from the latest industrial revolution, to ensure the continued efficient production and safety for workers. For example, virtual reality creates immersive experiences that allow personnel to train, prepare for and even practise activities before they arrive at a plant site. Workers can decide how they will need to organise and position equipment to complete work in the safest and most efficient way. Once they are on-site, augmented reality applications feed important data, such as radiological activity and dosimetry, to field workers.

Other than that, nuclear technology has multiple applications that are fundamental to our daily life. The best-known applications are in medicine and electricity production, but there are others in such diverse fields as agriculture, industry and art. These applications have a large presence in our day-to-day life, and in the future, they will be even more relevant as research is increasing their possibilities of utilization and justifying their use. And with reference to those activities, innovation is the driving force behind the ongoing development of nuclear technology.

This first-ever seminar is able to provide a platform for multidisciplinary scientists, practitioners, academicians, inventors, industry players, vendors and users to present and showcase their latest research and developments in a broad spectrum of topics, particularly in the applications of nuclear techniques.

In the meantime, audiences will have ample time to interact with each other or to engage in wide-ranging interdisciplinary discussions in a pleasant and friendly environment, and chances to walk through to see some showcases

### **THEME**

#### **SAFETY THROUGH ADVANCEMENT OF TECHNOLOGY**

#### **Course Objective**

- To disseminate information on current and future uses of nuclear technology
- To share knowledge and experience from experts throughout the use of advanced nuclear technology applications
- To keep abreast of the latest developments in the application of nuclear technology
- As a networking platform to exchange views and ideas on the latest innovations, trends, concerns and challenges faced
- To get an overview of the advanced nuclear industry around the world
- To equip RPOs with necessary knowledge on radiological emergency preparedness and response.

## Scope / Highlights

- Safety
- Inspection and Instrumentation
- Risk Assessments and Management
- Innovation
- Digital and Intelligent Technology Application
- Radioisotope Application
- Nuclear Standards, Regulation and Licensing
- Radiation Protection & Waste Management
- Cybersecurity
- Nuclear Energy

## Who Should Attend

- Researchers, scientists, inventors
- Academicians & educators
- Practitioners in all related fields
- Equipment suppliers & vendors
- Radiation workers, OBTL, RPOs,
- Regulators



## Programme Structure

The seminar will be conducted in a hybrid mode, where notable local speakers will be presenting physically and distinguished international speakers will be presenting live on a virtual platform. The seminar sessions will be comprised of both oral and poster presentations. A total of 10 papers including 2 Preliminary Speech will be presented for the duration of this 2-day event, in which 1 hour will be allocated

for each presentation. Throughout the seminar, we will introduce hi-tech session where associated companies will be given 10-minute slots to promote and brief about products and technologies that they can offer to interested parties. Exhibition booths will also be available for companies to display their products and for business pitching purposes.

## Investment

	PACKAGE A (RM)		PACKAGE B (RM)		PACKAGE C (RM)		PACKAGE D (RM)	
	SEMINAR ONLY		SEMINAR & POSTER					
<b>PHYSICAL</b> (SINGLE REGISTRATION)	A1	900	B1	1200	-		-	
<b>PHYSICAL</b> (SINGLE REGISTRATION WITH ACCOMMODATION)	**A2	1650	**B2	1950	-		-	
<b>PHYSICAL</b> (TEAM REGISTRATION)	A3	850	B3	1150	-		-	
<b>PHYSICAL</b> (TEAM REGISTRATION WITH ACCOMMODATION)	**A4	1600	**B4	1900	-		-	
<b>ONLINE</b>	A5	700	-		-		-	
<b>POSTER ONLY</b>	-	-	-	C2	C1	300 (NORMAL)	-	
					200 (STUDENT)			
<b>EXHIBITION ONLY</b>	-	-	-		-		D1	3000 (TEAM)

## HOW WE CONDUCT?

### PUBLIC TRAINING COURSE

This course is specially design to meet the general needs and requirement of any organization. Please refer to our training Agenda.

### AGENCY BASED PROGRAMME

All courses can be conducted as in company basis tailored to meet specific needs.

### CONSORTIA

A derived version of in-company programme, designed for a small group of companies that provide the benefit of customized programme and based on cost-sharing principles.

### E-TUITION

An online system that enable clients to reach our training programmes "anywhere, anytime". User can learn at own place, sit for a test and get certification.



## ASSOCIATED PARTNERSHIP / KERJASAMA LATIHAN BERSEKUTU

A form of training cooperation with the concept of PPP (Public-Private Partnership) between Nuclear Malaysia and NGO / Companies / Organizations that focus on training management partnership through system efficiency, innovation elements and accountability injected into training programs to improve the overall quality system to be more viable at local and internationally.

## SCIENTIFIC ATTACHMENT / SANGKUTAN PENYELIDIKAN

Scientific attachment programs provide dynamic learning for researches and scientist to enhance their knowledge and experience in the field of nuclear applications and technologies. Through this programme, participants undertake specific reseach / projects will be supervised by our highly experienced & skilled Nuclear Malaysia Researcher in their respective research facilities. This programme is offered openly to the local and international researchers / scientists. Radiation Safety and Health / Keselamatan Sinaran dan Kesihatan



## INVESTMENT / FEES FOR AGENCY BASED PROGRAMME

### Programme

(No. of days)

1 Day	2 Days	3 Days & Above
<p><b>Fees/Rate*</b> RM 3600.00</p> <hr/> <p><b>Certificate</b> Statement of Attendance</p>	<p><b>Fees/Rate*</b> RM 6800.00 RM 3400.00 per day</p> <hr/> <p><b>Certificate</b> Statement of Attendance</p>	<p><b>Fees/Rate*</b> RM 9600.00 RM 3200.00 per day</p> <hr/> <p><b>Certificate</b> Statement of Attendance</p>

\*subject to change

- ▶ Bench fees of RM750.00 per day are charges for course conducted in Nuclear Malaysia
- ▶ Programme conducted outside Nuclear Malaysia additional cost of accomodation, food and travelling will incur
- ▶ Fees must be paid in advance through bank draft / money order / cheque / LO payable to : **KETUA PENGARAH AGENSI NUKLEAR MALAYSIA**

### Field of Scientific attachment programme / Bidang Sangkutan Saintifik yang ditawarkan

- ▶ Radiation Safety and Health / Keselamatan Sinaran dan Kesihatan
- ▶ Non Destructive Testing / Ujian Tanpa Musnah
- ▶ Medical Technology / Teknologi Perubatan
- ▶ Non-Ionizing Radiation / Sinaran Tidak Mengion
- ▶ Plant Assessment Technology / Teknologi Penilaian Tumbuhan
- ▶ Radiation Waste Management / Pengurusan Sisa Radioaktif
- ▶ Nuclear Engineering and Reactor Application / Aplikasi Kejuruteraan Nuklear dan Reaktor
- ▶ Agriculture & Bioscience / Pertanian & Biosains
- ▶ Material Technology / Teknologi Bahan
- ▶ Ionization Radiation Metrology / Metrologi Sinaran Mengion
- ▶ Nuclear Engineering Support / Kejuruteraan Sokongan Nuklear
- ▶ Medical Physics / Fizik Perubatan
- ▶ Environment / Alam Sekitar

Sebarang maklumat lanjut boleh layari / For more information visit  
<http://www.nuclearmalaysia.gov.my/edu/mainEdu.php>

# HOW TO REGISTER



Please send us the complete registration form or participant's details (Name, I.C. / Passport Number, Company Name, Preferred Course and Date, Contact info) via:

**POST-MAIL :**  
Director General  
Malaysian Nuclear Agency (Nuklear Malaysia)  
Blok 57, Kompleks Jalan Dengkil  
Bangi, 43000 Kajang, Selangor  
Attn: Centre of Nuclear Excellence (CoNE)

**FAX :**  
03-8911 2180

**E-MAIL :**  
nuradila@cc.nuclearmalaysia.gov.my  
ibrahim\_nahar@cc.nuclearmalaysia.gov.my  
zulaikha@cc.nuclearmalaysia.gov.my  
nora\_aini@cc.nuclearmalaysia.gov.my

**ONLINE REGISTRATION :**  
<http://eclient.nuclearmalaysia.gov.my>  
<http://trainingcentre.nuclearmalaysia.gov.my>

**WALK-IN :**  
Walk-in participants with payment will also be admitted on a space available basis

**FURTHER INFORMATION :**  
Please visit our website :  
<http://trainingcentre.nuclearmalaysia.gov.my>

## TERMS AND CONDITIONS

Full registration fee is required with the registration form. Fees include the cost of training material, luncheons, coffee breaks and refreshments. Payment through **bank draft / money order / company cheque / Local Order (L.O.)** should be crossed and made payable to **Director General Malaysian Nuclear Agency**. The management has the right to change the date / venue of the event prior to the date with a notice in advance.



## (IN-COMPANY TRAINING REQUEST FORM) BORANG PERMOHONAN LATIHAN ASAS AGENSI

CODE /TITLE NAME :


MODE OF TRAINING : (        ) Classroom    (        ) Online

O.OF DAYS) :

--

TRAINING VENUE :

--

NUMBER OF PARTICIPANTS :

--

COMPANY DETAILS

Name of Company :

--

Address :


Name :

--

Designation :

--

E-mail :

--

Tel.:

(off.)

(h/p) :

--

Fax :

--

Company Stamp :

Date :

--

*Company  
Stamp*

## INQUIRIES / CONTACT US

### INQUIRIES:

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