

COURSE OVERVIEW HE1105-3D
Certified Radiation Protection Officer (RPO) for Security Systems
(In Accordance with FANR Regulations)

Course Title

Certified Radiation Protection Officer (RPO) for Security Systems *(In Accordance with FANR Regulations)*

Course Date/Venue

August 06-08, 2024/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference

HE1105-3D

Course Duration/Credits

Three days/1.8 CEUs/18 PDHs



Course Description



This practical and highly-interactive course includes practical sessions and exercises where participants carry out surface contamination and dose rate measurements and surveys. Theory learnt in the class will be applied using our state-of-the-art equipment.



This course is designed to provide delegates with a detailed and up-to-date overview of the radiation protection for security systems. It covers the fundamentals of physics and mathematics used in radiation protection, interaction of radiation with matter and sources of radiation; the quantities and measurements; the biological effects of ionizing radiation; and the principles of radiation protection and the international framework covering the conceptual framework, role of international organizations in radiation protection and the development of safety culture.



During this interactive course, participants will learn the regulatory control including the legal framework for radiation protection; the safe use of radiation sources, regulatory system and assessment of the effectiveness of the regulatory programmes; the protection against occupational exposure; the methods of protection and the safe use of radiation sources; the individual and workplace monitoring; and the health surveillance and potential exposure.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Get certified as a “*Certified Radiation Protection Officer*”
- Review the fundamentals of physics and mathematics used in radiation protection, interaction of radiation with matter and sources of radiation
- Identify the quantities and measurements as well as apply dosimetric calculation and radiation detection
- Recognize the biological effects of ionizing radiation covering the effects of radiation at the molecular and the cellular level, deterministic effects, stochastic somatic effects, stochastic hereditary effects, effects on the embryo and foetus, epidemiological studies and issues and concept of radiation detriment
- Discuss the principles of radiation protection and the international framework covering the conceptual framework, the role of international organizations in radiation protection and the development of safety culture
- Apply regulatory control including the legal framework for radiation protection and the safe use of radiation sources, regulatory system and assessment of the effectiveness of the regulatory programmes
- Protect against occupational exposure and apply the methods of protection and the safe use of radiation sources
- Carryout individual and workplace monitoring and health surveillance as well as identify potential exposure

Exclusive Smart Training Kit - H-STK®



Participants of this course will receive the exclusive “Howard Smart Training Kit” (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials, sample video clips of the instructor’s actual lectures & practical sessions during the course conveniently saved in a **Tablet PC**.

Who Should Attend

This course provides an overview of all significant aspects and considerations of radiation safety for security scanning machine operators for those who are willing to be a Radiation Protection Officer (RPO) such as safety officers, supervisors, engineers, inspectors, X-Ray technicians and other technical and medical staff.

Course Fee

US\$ 3,750 per Delegate + **VAT**. This rate includes H-STK® (Howard Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate(s)

- (1) Internationally recognized Wall Competency Certificates and Plastic Wallet Card Certificates will be issued to participants who completed a minimum of 80% of the total tuition hours and successfully passed the exam at the end of the course. Successful candidate will be certified as a “*Certified Radiation Protection Officer*”. Certificates are valid for 5 years.

Recertification is FOC for a Lifetime.

Sample of Certificates

The following are samples of the certificates that will be awarded to course participants:-



- (2) Official Transcript of Records will be provided to the successful delegates with the equivalent number of ANSI/IACET accredited Continuing Education Units (CEUs) earned during the course.

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Haward Technology Middle East
Continuing Professional Development (HTME-CPD)

CEU Official Transcript of Records

TOR Issuance Date: 05-Oct-17
HTME No.: PAR14133
Participant Name: Tawfiq Al Mazrouei

| Program Ref. | Program Title | Program Date | No. of Contact Hours | CEU's |
|--------------|--|---------------------|----------------------|-------|
| HE1105-2D-IH | Radiation Protection Officer (Security X-Ray Screening Devices) (In Accordance with FANR Regulations) | October 04-05, 2017 | 13 | 1.3 |

Total No. of CEU's Earned as of TOR Issuance Date **1.3**

TRUE COPY


 Maricel De Guzman
 Academic Director

Haward Technology has been approved as an Authorized Provider by the International Association for Continuing Education and Training (IACET), 1760 Old Meadow Road, Suite 500, McLean, VA 22102, USA. In obtaining this approval, Haward Technology has demonstrated that it complies with the ANSI/IACET 1-2013 Standard which is widely recognized as the standard of good practice internationally. As a result of their Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for programs that qualify under the ANSI/IACET 1-2013 Standard.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking Continuing Education Units (CEUs) in accordance with the rules & regulations of the International Association for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology is accredited by










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Certificate Accreditations


Certificates are accredited by the following international accreditation organizations: -

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The International Accreditors for Continuing Education and Training (IACET - USA)

Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units (CEUs)** in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

Haward Technology Middle East will award **1.8 CEUs** (Continuing Education Units) or **18 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

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British Accreditation Council (BAC)

Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:



Mr. Tony Bunce, PgDip, BSc, RPA, CMIOSH, CRadP, NEBOSH, is an **Accredited Radiation Protection Adviser (RPA)** and a **Senior Environmental Consultant** with over **20 years** of extensive experience in **HAZOP & HAZAN** Analysis, Hazard Identification (**HAZID**), **ALARP** System, **Radiation Safety & Protection**, **Radioactive Waste Management**, **Radiation Protection Instrumentation**, **Nuclear & Radiological Safety**, **Nuclear Engineering**, **Safety Management System**, **Uranium & Plutonium Safe Handling**, **Contamination Control**, **Radiation Protection Design**, **Risk Assessment**, **Personal Protection Equipment**, **Dosimetry Review**, **Nuclear Weapon & Nuclear Reactor Accident Procedures**, **Personal Protective Equipment**, **Machinery & Work Equipment** and **Manual Handling**. Further, he is also well-versed in **ISO 14001:2004** (Environmental Management System), **AERMOD** Modeling, **Incident Reporting & Investigation**, Cause Tree Analysis (**CTA**), **Fault Tree Analysis (FTA)**, **HSE** Emergency Planning, Crisis Management, **HSSE** Practices, Emergency Response Plans and Emergency Preparedness. He is currently the **Radiation Protection Advisor** of **IAEA (Austria)** wherein his in-charge of the design and commissioning of IAEA's new Nuclear Material Laboratory.

During Mr. Tony's career life, he held significant positions such as the **Radiation Protection Advisor**, **Radiation Protection Officer**, **Safety Adviser**, **Radiation Monitoring Specialist**, **Lead Safety Adviser** and **Health Physics Monitor** for international companies and agencies such as the International Atomic Energy Agency (**IAEA**), **Thorp Nuclear Processing Plant** and the **Nuclear Department of UK** just to name a few.

Mr. Bunce has a **Post Graduate Diploma** in **Radiation and Environmental Protection** from the **University of Surrey** and a **Bachelor** degree in **Environmental Risk Management** from the **University of Wales Institute Cardiff** in **UK** respectively. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management (ILM)**, an **Accredited Radiation Protection Adviser (RPA)** from the **RPA 2000 Board**, a **Qualified Radiological Protection Reviewer**, a Chartered Member of **IOSH (CMIOSH)**, a Chartered Radiological Protection Practitioner (**CRadP**), **Certified Radiation Safety Practice (Stage 1)** from **City and Guilds** and **NEBOSH Diploma** holder. He has further delivered numerous trainings, conferences, workshops and seminars globally.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

- 30% Lectures
- 20% Practical Workshops & Work Presentations
- 30% Hands-on Practical Exercises & Case Studies
- 20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: Tuesday, 06th of August 2024

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|-------------|---|
| 0730 – 0800 | Registration & Coffee |
| 0800 – 0815 | Welcome & Introduction |
| 0815 – 0830 | PRE-TEST |
| 0830 – 0930 | Review of Fundamentals Introduction • Basic Physics & Mathematics Used in Radiation Protection |
| 0930 – 0945 | Break |
| 0945 – 1100 | Review of Fundamentals (cont'd) Interaction of Radiation with Matter • Sources of Radiation |
| 1100 – 1230 | Quantities & Measurements Quantities & Units • Dosimetric Calculations & Measurements |
| 1230 – 1245 | Break |
| 1245 – 1420 | Quantities & Measurements (cont'd) Principles of Radiation Detection & Measurement |
| 1420 – 1430 | Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow |
| 1430 | Lunch & End of Day One |

Day 2: Wednesday, 07th of August 2024

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|-------------|--|
| 0730 – 0930 | Biological Effects of Ionizing Radiation Effects of Radiation at the Molecular & the Cellular Level • Deterministic Effects • Stochastic Somatic Effects • Stochastic Hereditary Effects |
| 0930 – 0945 | Break |
| 0945 – 1100 | Biological Effects of Ionizing Radiation (cont'd) Effects on the Embryo & Foetus • Epidemiological Studies & Issues • The Concept of Radiation Detriment |
| 1100 – 1230 | Principles of Radiation Protection & the International Framework Conceptual Framework • The Role of International Organizations in Radiation Protection |
| 1230 – 1245 | Break |
| 1245 – 1420 | Principles of Radiation Protection & the International Framework (cont'd) The Development of Safety Culture |
| 1420 – 1430 | Recap Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow |
| 1430 | Lunch & End of Day Two |

Day 3: Thursday, 08th of August 2024

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|-------------|--|
| 0730 - 0930 | Regulatory Control Legal Framework for Radiation Protection & the Safe Use of Radiation Sources ● Regulatory System |
| 0930 - 0945 | Break |
| 0945 - 1045 | Regulatory Control (cont'd) Assessment of the Effectiveness of the Regulatory Programmes |
| 1045 - 1200 | Protection Against Occupational Exposure Organization & Management ● Methods of Protection & the Safe Use of Radiation Sources; Optimization ● Individual & Workplace Monitoring |
| 1200 - 1215 | Break |
| 1215 - 1315 | Protection Against Occupational Exposure (cont'd) Health Surveillance ● Potential Exposures |
| 1315 - 1330 | Course Conclusion Using this Course Overview, the Instructor(s) will Brief Participants about the Course Topics that were Covered During the Course |
| 1330 - 1430 | COMPETENCY EXAM |
| 1415 - 1430 | Presentation of Course Certificates |
| 1430 | Lunch End of Course |

Instruments (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art instrument “RadEye B20-ER” model.



Course Coordinator

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