

Job Description for Professional Posts

Reference:NA2024/36

Position and Grade: Associate Database Officer (Medical Physics), P2

Organizational Unit: Dosimetry and Medical Radiation Physics Section
Division of Human Health

Duty Station: Vienna

Type/Duration of Appointment: FT – JPO, 1 year

Organizational Setting

The Department of Nuclear Sciences and Applications implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Division of Human Health is organized into four Sections whose objectives are to enhance the capabilities of Member States to address needs related to the prevention, diagnosis and treatment of health problems through the development and application of nuclear techniques within a framework of quality assurance.

The Department of Nuclear Sciences and Applications implements the IAEA's Major Programme 2, "Nuclear Techniques for Development and Environmental Protection". This Major Programme comprises individual programmes on food and agriculture, human health, water resources, environment and radiation technologies. These programmes are supported by laboratories in Seibersdorf, Monaco and Vienna. The Major Programme's objective is to enhance the capacity of Member States to meet basic human needs and to assess and manage the marine and terrestrial environments through the use of nuclear and isotopic techniques in sustainable development programmes.

The Dosimetry and Medical Radiation Physics Section (DMRP) is responsible for quality assurance and metrology in radiation medicine. The Section works closely with clinical colleagues of the Applied Radiation Biology and Radiotherapy Section and the Nuclear Medicine and Diagnostic Imaging Section. Specifically, DMRP provides technical support in medical physics to ensure the safe and effective applications of nuclear technology in radiotherapy, diagnostic radiology and nuclear medicine. It operates the Dosimetry Laboratory located at the Agency's Laboratories, Seibersdorf, and provides a dosimetry calibration service and a dosimetry auditing and verification service for Member States.

Main Purpose

As a member of the Dosimetry and Medical Radiation Physics Section, reporting to the Section Head, the Associate Database Officer (Medical Physics) contributes specialized technical knowledge and experience to the development, maintenance and validation of new databases platforms and of the existing databases pertaining to all medical physics and laboratory activities (currently DIRAC, SSDL, IDEA, DAN and DOLNET). The incumbent supports the ongoing development and recommends

improvement of database structures and links between datasets; monitors and reports on the quality and maintains the update of the relevant websites linked to the databases. He/she develops analysis tools in order to enhance IAEA research, reporting and presentations that incorporate data.

Role

The Associate Database Officer (Medical Physics) is: (i) a contributor who, with Dosimetry and Medical Radiation Physics Section professional staff, develops, enhances and maintains databases based on the activities of the Section, and ensures the confidentiality of classified information pertaining to dosimetry; (ii) a collaborator, who interacts with hospitals and laboratory institutions in Member States and organizations in order to collect and validate data elements; (iii) a technical specialist in medical physics with the ability to maintain high quality datasets using modern IT technologies and solutions, as well as produce relevant end-user documentation including internal and external user manuals, SOPs, etc. in collaboration with the IT Systems Engineer (Databases) and the Information Systems Assistant of NAHU.

Partnerships

The Associate Database Officer (Medical Physics) maintains collaborative relationships with colleagues in the other Sections of the Human Health Division, including the Dosimetry Laboratory, as well as with Member State hospitals and laboratory institutions.

Functions / Key Results Expected

- Liaise with IAEA staff, hospitals and laboratory institutions in Member States and organizations to collect medical physics equipment, resources and laboratory data.
- Maintain and update the databases in medical physics, radiation oncology, and the dosimetry laboratory and assure their integrity.
- Contribute to the identification of database enhancement needs and in the development of data presentation.
- Provide statistical analysis of data for IAEA research, publications, presentations and reports.
- Liaise with the IAEA database and IT staff to improve database structure, links and harmonization.

Competencies and Expertise (do not revise or edit)

Core Competencies		
Competence	Occupational Role	Behavioural Indicator
Communication	Individual Contributor	Communicates orally and in writing in a clear, concise and impartial manner. Takes time to listen and understand the perspective of others and proposes solutions.
Achieving Results	Individual Contributor	Takes initiative in defining realistic outputs and clarifying roles, responsibilities and expected results in the context of the Department/Division's programme. Evaluates his/her results realistically, drawing conclusions from lessons learned.

RESTRICTED

Teamwork	Individual Contributor	Actively contributes to achieving team results. Supports team decisions.
Planning and Organizing	Individual Contributor	Plans and organizes his/her own work in support of achieving the team or Section's priorities. Takes into account potential changes and proposes contingency plans.

Functional Competencies		
Competence	Occupational Role	Behavioural Indicator
Client orientation	Associate	Establishes effective relationships with clients to understand and meet or exceed their needs. Finds ways to ensure client satisfaction.
Commitment to continuous process improvement	Associate	Identifies opportunities for process, system and structural improvement as well as improving current practices, increasing effectiveness and achieving efficiency gains. Actively supports the application of sound quality management standards and process improvement.
Technical/scientific credibility	Associate	Acquires and applies new skills to remain up to date in his/her area of expertise. Reliably applies knowledge of basic technical/scientific methods and concepts.

Expertise	
Expertise	Description
Information Technology Database Management	Familiar with SQL server; design and analysis of databases. Knowledge of artificial intelligence principles and methods
Medical Physics Radiotherapy Physics	Knowledge of equipment, techniques and technologies related to medical radiation physics environments.
Radiation Medicine Database Operations	Experience in data collection, curation and validation.

RESTRICTED

Education, Experience and Language Skills

- University degree in medical physics or other related field.
- Minimum of two years of working experience in medical radiation physics or a related field. Experience in the use of software related to databases e.g. MS Excel, SQL server. Experience in data visualization/presentation and statistical analysis. Experience in creating a database based on a set of requirements.
- Excellent oral and written command of English. Knowledge of other official IAEA languages (Arabic, Chinese, French, Russian and Spanish) is an asset.