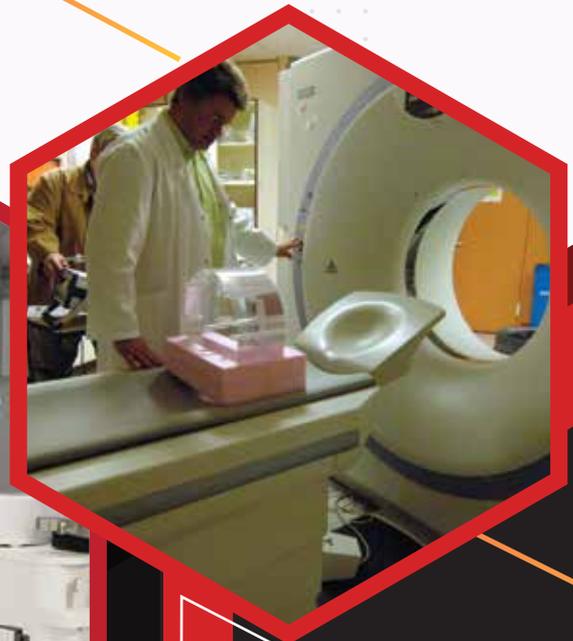


# LEADERSHIP SCHOOL FOR MEDICAL AND INDUSTRIAL RADIATION SAFETY

**17 to 20 March 2020**  
IBA, City Campus, Karachi



In Pakistan a large number (table 1) of radiation equipment are used in various applications such as nuclear medicine, radiotherapy, industrial radiography, scanning, oil well logging, etc. Unfortunately, the safety awareness, safety culture and the leadership for safety to manage such high risks radiation sources need major improvements both within these medical facilities, industrial units and source owners. It is important to have in depth understanding about the safety aspects of these radiation sources. Because the nature of radiation sources and its properties are very unique, one cannot see, feel or smell the radiation but it can cause damage to human life, property and environment. However, due its benefits to society the use of these radiation sources have increased manifold in recent past in every aspect of life.

According to IAEA Report over the last decades more than 3000 patients have been affected by radiotherapy incidents and accidents all over the world. Radiation accidents involving medical uses have accounted for more deaths and early acute health effects than any other type of radiation accident, including accidents at nuclear facilities. These accidents do not only affect patients directly (e.g. harm and death), but might also undermine the public's confidence in the treatment. According to the IAEA report the root causes of these accidents were poor leadership for safety, weak safety culture, poor training and qualifications of personnel and poor-quality management systems within the operators and at the facility.

Table 1.0 Provide details about type of radiation facilities and number of registered facilities and workers with PNRA. (Source: PNRA Annual Report 2018)

S. No.	Type of Radiation Facility	Licensed Facilities	Registered Radiation Workers
1.	Nuclear Medicine, Radiotherapy, Cardiology and other medical Facilities	87	2634
2.	Diagnostic X-ray Facilities including Dental Radiology	4668	7863
3.	Industrial Facilities including Industrial Radiography, Nuclear Gauges, Oil Well Logging, Irradiators, Analyzers, etc.	191	2104
4.	Educational and Research Institutes	71	405
5.	Importers of Radiation Generators and Sources	133	289
6.	Other (Scanners, Service Providers and Manufacturers)	183	709

### Objectives of the Leadership School for Safety

To train and groom future medical and industrial radiation safety leaders. To improve the safety and the financial bottom line of all medical and radiation facilities in Pakistan. To achieve these objectives IBA has decided to offer the Leadership School for Medical and Industrial Safety to fill the gap in this very important and growing area in Pakistan. This leadership school will provide you an opportunity to understand and apply leadership for safety and safety culture concepts developed by International Atomic Energy Agency (IAEA, Vienna). The School will provide you an opportunity to learn about most useful and relevant radiation safety concepts and learn leadership for safety tools and skills. The school will equip you with the knowledge and techniques to view safety from a new dimension, which will be rewarding for you and benefit your organization and team.

### Who Should Attend?

This four (4) days school is designed for nuclear physicians, radiation therapist, and medical physicists from middle and operational levels positions, Radiation protection officers, health and safety managers within industries, medical physicists, radiation facility managers and relevant professionals from private and government departments. If you are such a professional this school is for you to develop your leadership skills.

## Target Organizations:

Medical	Industrial	Other
1. Radiotherapy	1. Nondestructive Testing	1. Service Providers & HSE Organizations
2. Radiology	2. Well Logging	2. Government Bodies
3. Nuclear Medicine	3. Nuclear Gauge	3. Isotope Production
	4. Scanners	4. Irradiators
		5. R&D and Academics

## Key Topics:

1. Basic radiation physics and radiation protection
2. Radiation accidents (domestic and international cases)
3. Regulatory framework and IAEA standards for radiation safety
4. IAEA safety standard for leadership and management for safety
5. Leadership tools for safety
6. Safety culture behaviors in the organization
7. Field visits and observations in field
8. HTO and Systemic Approach for safety
9. Leadership to manage Safety vs Production
10. Signs of declining Safety culture by examining workplace environment.

## School Practical and Applied Approach (Learning by doing)

1. Games and exercise
2. Case studies and role play
3. Group activities
4. Field visits
5. Presentation and guest speaker sessions (by Pakistan Nuclear Regulatory Authority Experts)

## What is Leadership for Safety?

1. Leader for safety focuses on the fact that safety is the top priority in every action.
2. Leader for safety communicates openly and calmly with others during normal daily work and during crisis situation.
3. Leader for safety thinks and acts outside of the box when procedures fails.
4. Leader for safety supports and practices safety culture values, attitudes and behaviours in their organization.
5. Leader for safety respects and follows the procedures during all activities and operations.
6. Leader for safety always encourages questioning attitudes, values and behaviours within the team.
7. Leader for safety keeps the interests and welfare of his or her team and people in organization above his or her own interests.

## Faculty Profile:

### Dr. Nasir Afghan

(Workshop Director)

In Nov 2019 Dr. Afghan was a team member of IAEA mission to conduct the IAEA Regional School of Nuclear and Radiological Leadership for Safety, 11-22 November 2019, Rabat, Morocco. In May 2019 Dr. Afghan was part of IAEA expert team to conduct the IAEA Regional School of Nuclear and Radiological Leadership for Safety in Ankara, Turkey. In July 2019 Dr. Afghan was also part of the IAEA mission to conduct the IAEA School of Nuclear and Radiological Leadership for Safety in Islamabad, Pakistan for PNRA and PAEC staff members. In May 2017, Dr. Afghan was invited by IAEA to be the lead expert and program facilitator for the Leadership School at International Atomic Energy Agency (IAEA), Vienna Austria. He conducted the pilot Leadership School for Nuclear and Radiation safety in Oct 2017 at IAEA Vienna, Austria.



Dr. Afghan was part of the team which was responsible to design, develop and implement School of Nuclear and Radiological Leadership for Safety in 2016 and 2017 at IAEA HQ in Vienna, Austria. He was the key note speaker at IAEA regional conference in South Africa. In May 2013, he was also the key note speaker at IAEA Vienna in International Experts meeting on “Human and Organizational Factors in Nuclear Safety in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant”. Dr. Afghan conducts executive education programs on Transformation Leadership Program (TLP) and Leading Innovative Teams at IBA, Karachi in 2012 and 2013. In September 2013, he was part of IAEA team to conduct Leadership for Safety Culture Workshop at IAEA, Vienna. He was IAEA expert mission team member at Iran Nuclear Power Plant, Bushehr in August 2013. In May 2014, he attended International Conference on Human Resource Development for Nuclear Power Programs: Building and Sustaining Capacity. IAEA Headquarters, Vienna.

In October 2014, he attended Symposium on International Safeguards: Linking Strategy, Implementation and People at Vienna, Austria. He conducted “Safety Culture in High Reliability Organizations” workshop at Fauji Fertilizer Company (FFC). In February 2015 Dr. Nasir Afghan was invited by Pakistan Army to give lecture on “Strategic Thinking and Strategic Management” to newly promoted Major Generals at GHQ Rawalpindi, Pakistan. In recognition of his outstanding teaching performance, Dr. Nasir Afghan was awarded Best University Teacher Award for the year 2014 in a ceremony organized by Higher Education Commission (HEC) in Islamabad in January 2016. Dr. Nasir Afghan conducting leadership school for nuclear and radiation safety for IAEA at Nice France in 2017 at university of Nice.

<https://www.iaea.org/newscenter/news/iea-holds-first-course-on-safety-leadership-for-junior-and-mid-level-nuclear-professionals>



Dr. Afghan holds PhD degree in Managerial Effectiveness from University of Twente, the Netherlands. He holds MBA degree in Industrialization and Strategic Management from Maastricht, the Netherlands. He also holds BSc and MSc in Petroleum Geology degrees from University of Karachi. Before doing his MBA he has worked for several years in Singapore for a Fortune 500 Oil exploration firm as a Petroleum Geologist. He has a full time faculty position and he is also the head of CPEC development center at IBA Karachi, Pakistan.

**Note: Registrations open for public, however, final selection will be based on interviews**

## Workshop Fees PKR 90,000/- per participant + 5% SST

Inclusive of Course material IBA Workshop Certificate Lunch Refreshments & Business networking

Experience

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