**1.1.1 - Curricula developed and implemented have relevance to the local, national, regional and global developmental needs which is reflected in Programme outcomes (POs), Programme Specific Outcomes(PSOs) and Course Outcomes(COs) of the Programmes offered by the University**

The academic programmes offered by HBNI aim to integrate basic research with technology development. HBNI has uniquely designed the academic programmes in such a way that they can build the required manpower in the research and development area of various domains, particularly in the field of Nuclear Science and Technology of the Department of Atomic Energy. The diverse academic programmes at HBNI also intend to create professionals in the areas of Engineering, Mathematics and Medical research etc., as per the requirements of the society.

Some of the post graduate level programs offered by HBNI are unique in their aspects and are able to address the needs of the country. Post-graduate diploma programs are offered at BARC Training schools at Mumbai and Kalpakkam. The courses offered as part of these programs also meet the requirement of M. Tech. / M.Sc. (Engg) programs. These courses are designed to meet the mission needs of the concerned centres. For example, courses at IGCAR, Kalpakkam focus on the needs of the fast reactor program. Since many of the vital domains of activity in DAE are multidisciplinary in nature (e.g. Nuclear fuel cycle, accelerator science), courses are also designed to give a multidisciplinary flavour by introducing the science as well as technology elements. Thus, these courses address human resources of the country in the vital domain of indigenous development of nuclear science and technology. The curriculum is also designed to cater to M. Tech. students from defence organizations, who get trained to engage in associated defence programs through exposure to elements of nuclear technology and radiation safety.

HBNI offers various academic programmes in Medical and Health Sciences such as M.Sc. (Occupational Therapy in Oncology) /Master in Occupational Therapy (MOT) which fulfil the national requirements of expertise and knowledge base in the treatment of various types of cancers prevalent in India. With continuous rise of cancer cases in the country, the early diagnosis and treatment is essential and researche in this direction is the need of the hour. The academic programmes at HBNI play a significant role in establishing a knowledge base and contributing towards cancer research. The M.Sc. (Public Health and Epidemiology) course offered by HBNI in Medical and Health Sciences streams aims to introduce the students to all the fields of public health and provide basic understanding of the principles and methods of public health epidemiology.

Applications of radioactivity and various types of radiation are steadily increasing in a number of industries and particularly in healthcare industry. The requirement of specialists who could ensure radiation safety in the hospitals and industries has become an important need for the country, and the programme “Diploma in Radiological Physics” run by HBNI is a highly sought-after programme, with benefits accruing to a diverse set of stake holders.

While designing the above programmes, HBNI also ensures the quality of the programmes and the periodic revision of the syllabus and introduction of new courses are carried out to stay in tune with the latest developments.