Introduction

The Institute of Nuclear Science & Technology (INST) is a constituent institute of the College of Architecture and Engineering (CAE), University of Nairobi (UoN). It is a successful product of the Kenya Government and International Atomic Energy Agency (IAEA) X-Ray Fluorescence project in 1980s which was implemented after a visibility study in 1979. It was established under the Faculty of Engineering as a Centre for Nuclear Science Techniques to promote peaceful application of nuclear science in Kenya.

It became an Institute in 1994 and immediately launched a Master of Science (MSc.) programme in Nuclear Science. This program has since developed to include a doctorate degree in nuclear science.

The program and short trainings that are offered focus primarily on the peaceful application of nuclear science technology and related technologies.

Vision

To be a world-class centre for the development of knowledge in applications of nuclear science and associated sciences for the enhancement of life in our society.

Mission

To train local manpower in the applications and peaceful utilisation of nuclear science and technology and promote intellectual service to our country through teaching, research and outreach.

Objectives

(i) Train the local manpower in applications of experimental nuclear techniques.
(ii) Study and utilize peaceful uses of nuclear technology in the country.
(iii) Use nuclear analytical techniques in analysis of a wide variety of materials.
(iv) Provide consultancy services to university departments, government institutions and the private sector.

Thematic areas

The training programs, research and consultancy services offered at INST encompasses the following thematic areas of nuclear science including short training courses/workshops (advertised on INST website):

(i) Environmental radioactivity measurements and studies.
(ii) Heavy metal pollution measurements and studies.
(iii) Air pollution measurements and studies.
(iv) Non-destructive testing and studies.
(v) X-ray fluorescence applications and nutrition studies.
(vi) Medical applications.
(vii) Gamma spectroscopy applications and studies.
(viii) Off-grid Solar (15 W) product testing
(ix) Instrumentation, maintenance, installation and operation.

PhD Program

- PhD in Nuclear Science

Holders of master of degree in nuclear science, related biological sciences, physical sciences and engineering are eligible for this program. It is a three-year program comprising of both coursework, research and thesis.

MSc program

- MSc in Nuclear Science

Holders of bachelor of science honours in related biological sciences, physical sciences and engineering are eligible for this program. It is a two-year program; the first year is a full-time coursework (lectures and examination) while the second year is field work, research, presentations and thesis.

Planned 2020 Programs

Diploma programs

(i) Diploma in radiation protection
(ii) Diploma in non-destructive testing

Form four leavers who do not qualify for a direct entry into a bachelor's degree program will be eligible for above diploma courses. The courses offered will be industry demand and technology driven with huge employment potential.

Career opportunities

Applications of nuclear techniques finds applications in almost all sectors of the economy including industry, agriculture, and medical sectors etc. Some of the organisations which require nuclear related services include the following:

Industries – manufacturing, processing, aviation, Marine etc.

Government institutions – ministries of energy, water, education, transport, infrastructure, housing & urban development etc.

Parastatals – KPA, KQ, Kengen, KPLC, KPRL etc.

Private sector – banks, audit firms, engineering, consultants, hotels, hospitals

International organizations – UN agencies, Marine industry

Security – KDF, police, airports, malls

INSTRUMENTATION, MAINTENANCE AND REPAIR SERVICES

At INST, we have a section that deals with routine maintenance, installation and operation of scientific equipment nuclear instrumentation. These services are also available to the general public.

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