

## Post M. Sc. Diploma Course in Medical Physics



**Offered by**

**Department of Physics, Jadavpur University**

**in Collaboration with**

**Chittaranjan National Cancer Institute, Kolkata**

## Preamble

Medical Physics is an applied branch of Physics concerned with the application of the concepts and methods of Physics to the diagnosis and treatment of human diseases. It plays a very important role in the field of treatment of Cancer & related fields of medicine and others where the radiation is being used. There are ample opportunities for successful students to work in Radiology and Nuclear Medicine departments. In recent times there have been attempts to use radiation for research and treatment in Cardiology and Neurosurgery.

As per the Radiation Protection Rule 1971, a Radiotherapy Centre cannot run without a Medical Physicist. In Indian scenario, there is acute shortage of Medical Physicist and in near future there will be need of more, as many cancer centers are coming up in various parts of our country. At present, only few Institutions in India are offering Medical Physics Course and in Eastern India Jadavpur University is the only one.

## Course Content

Students will be trained in the safe use of radiation and radioisotopes in Medicine, Medical Research and other relevant fields. The course contents covers :

Radiation Physics
Radiation Chemistry
Radiation Biology
Electronics and Instrumentation
Statistics
Computational methods



**Lecture session in progress**



**Integrated Brachytherapy Lab.**

Applications of radioisotopes in medicine  
 Radiation hazard evaluation and control  
 Exhaustive Experiments  
 Demonstrations  
 Visit to Hospitals  
 Training in the clinical situation

### **Expertise Gained**

A qualified Medical Physicist is an individual who is competent to fulfill independently the following responsibilities as certified by the competent authority(AERB):

- Planning of radiological installation
- Specification of radiation generating machines and radiation equipment
- To conduct commissioning tests on new equipment
- Calibration of teletherapy and brachytherapy equipment
- Radiation safety
- Treatment planning and dosimetry
- Periodic checking of dose measuring equipment
- Teaching and Research



**Treatment Planning session**

## Placement Opportunities

The course qualifies the candidates for employment as Medical Physicist/Radiological Safety Officer (RSO exam conducted by the AERB) in mainly Medical Institutions and other Research Institutions handling radioisotopes and ionising radiations.

As the precision required to perform complex diagnostic procedures and to deliver exact radiation dose as a therapeutic modality demands the presence of a trained and experienced Medical Physicist, they have very high job prospect.

The successful candidates will get group "A" (Assistant Professor/Lecturer) salary structure in Govt. organisations and there is no limit of salary in private organisations. There is also good opportunities for the candidates in research at institutes in India and abroad .

### Major sources of Placement

- Govt. Hospitals having Radiotherapy Department for Cancer treatment.
- Non-Government Radiotherapy centres.
- Research Institutes handling accelerators and radio-isotopes.
- Application Support Specialist in the major Radiotherapy vendor companies.

## Minimum Educational Qualification for Admission

55% marks in M.Sc(Physics) with Physics as major/honours at B.Sc. level

**Total Course Fees :** Rs.84,000/- for Indian Students  
\$2500 for Foreign Students

**Course Duration:** One Year

**Internship :** One Year

**Class Hours :** 5 p.m. to 9 p.m.

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For further details contact :

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