



## MEDICAL PHYSICIST JOB DESCRIPTION

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### Job Summary:

Medical physicists use their knowledge of physics to improve medical equipment and technology in order to help diagnose and treat patients. Aspiring medical physicists must earn an advanced degree and complete an experiential training program in a medical setting. Other qualifications may include board certification and meeting individual state requirements.

### Qualifications:

**Education:** Masters Degree minimum, but most assignment will require Doctoral degree in Medical Physics or Radiation Biology.

**Experience:** One year full time experience as a Physicist

### Duties and Responsibilities

A medical physicist may work in the fields of radiotherapy, nuclear technology or medical imaging. Clinical medical physicists consult with physicians and care for patients in hospitals, healthcare facilities, clinics and private practices. They perform and supervise treatments using therapeutic equipment. They may monitor radiation output employed for cancer patients. Those specializing in nuclear medicine measure radioactivity in the human body and use medical imaging to examine a patient's internal organs and metabolic rate. Medical physicists ensure optimal equipment performance and protect patients and physicians from radiation hazards.

Many medical physicists work in university laboratories where they conduct research aimed to improve existing [medical technology](#) and applications. They help to resolve issues dealing with radiation therapy and diagnostic radiology. They may also be involved in developing new technology and instrumentation, such as new medical imaging techniques. Many split their time conducting research and teaching university classes in medical physics or biophysics. Those employed in research institutes or other industries may not have any clinical or teaching responsibilities.

### Essential Skills

- Must be able to understand the technical aspects of radiation oncology and medical physics to derive computerized treatment plans, and communicate these aspects to the Radiation Oncologist for plan approval, and to the Radiation Therapist for plan implementation.
- Operates and performs quality assurance on the treatment planning computer.
- Has working knowledge of radiation safety and current rules and regulations of the Nuclear Regulatory Commission.
- Has the ability to interpret and execute treatment plans as defined in relevant treatment protocols.
- Must possess mathematical skills including algebra, trigonometry, and introductory calculus and be able to visualize objects in three-dimensional concepts to facilitate the treatment planning process

**Working Conditions:**

The Medical Physicist must understand and accept the possibility of exposure to inside environmental conditions, such as noise, infectious/communicable diseases, radiation, chemicals and/or chemical fumes, odors, gases and dusts

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