The Medical Physics Division of the Department of Oncology offers comprehensive graduate training in the application of ionizing radiation for the diagnosis and treatment of disease. The UAlberta program is accredited by the Commission on Accreditation of Medical Physics Educational Programs (CAMPEP) and offers the following degrees:

**MSc in Medical Physics**

**PhD in Medical Physics**

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**Research**

- **Image-Guided Adaptive Radiotherapy (IGAR):**
  - Real-time MRI Guided Adaptive Radiotherapy - A research team is developing a unique hybrid linear accelerator and MRI system.
  - MR-animal imaging studies using a small bore 9.4T MR Imaging and Spectroscopy System.
  - Hardware and Software Technological Development - including development of radiation detectors, MR-RF coils, and software for: image fusion, radiobiological modelling and treatment planning.
  - Multi-institutional Clinical Trials
  - Intensity Modulated Radiotherapy

- **Imaging:**
  - Positron Emission Tomography (PET)
  - Radiopharmacological Research
  - Magnetic Resonance Imaging (MRI)

- **Planning Techniques:**
  - Inverse Planning
  - Monte Carlo Dose Calculations
  - Simulated Annealing

- Commissioning, Integration and Development of New Technologies for Clinical Use

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**For Further Information:**

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