



FACULTY OF SCIENCE

## MEDICAL PHYSICS

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**Clinical Medical and Health Physics is an exciting and expanding field that applies our fundamental knowledge of physics to the prevention, diagnosis, and treatment of a variety of human conditions. The Medical Physics program at UWinnipeg is excellent preparation for Medical School and other advanced fields in medicine.**

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Ultrasound, Magnetic Resonance, Computed Tomography, Nuclear Medicine, X-rays, Radiation Therapy, are all branches of medical physics in which continued research is being conducted by a very large group of dedicated researchers consisting of highly qualified physicists, engineers, and radiologists.

Our professors' research spans a broad range of topics such as developing low field magnetic resonance imaging devices and techniques in hopes of lowering the costs of clinical MRI scans to employing the use of MRI and positron emission tomography (PET) in diagnosing disease. Students can participate in these research activities, and many find paid summer employment with the various research groups. The program at UWinnipeg leads to a **Bachelor of Science degree (4-year Honours)** and provides excellent preparation for entry into a graduate program, such as the two-year MSc program at the University of Manitoba through

### SAMPLE COURSES

**Human Anatomy and Physiology:** This course deals with the biological study of the human organism; microscopic and gross anatomy; cellular and general physiology, and human genetics.

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**Foundations of Physics:** This calculus-based course provides students with a working knowledge of the basic concepts underlying modern physics.

**Medical Imaging:** This course is an introduction to medical imaging techniques, such as ultrasound, x-rays, CT scans, MRIs, and PET scans.

**Medical Physics and Physiological Measurement:** This course will introduce the core subject areas of Medical Physics, in particular the physics of physiology and of radiology.

## **MORE SAMPLE COURSES**

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