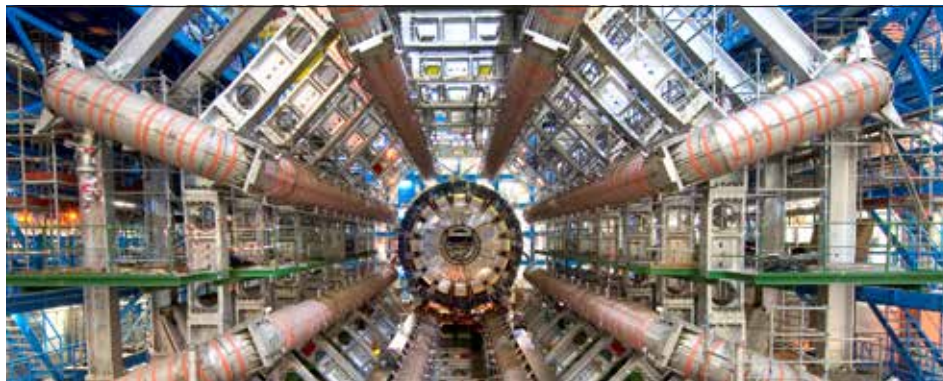


# Physics

Our alumni are making a difference in the worlds of medical and particle physics.



Medical physicists improve the understanding, diagnosis and treatment of disease using the tools of physics. Particle physicists study the nature of particles that make up matter and radiation. Carleton's Department of Physics offers master's and PhD degrees in both medical and particle physics.

In medical physics, our national capital community is closely networked. Thesis projects are available both on and off campus with adjunct faculty in clinical and government institutions. Topics range from MRI, PET, SPECT and x-ray imaging through cancer radiation therapy treatment delivery, verification and dosimetry to biophotonics and radiation biology. Our PhD program was the first in Ontario to be internationally accredited ([campep.org](http://campep.org)).



The theoretical particle physics group is the largest phenomenology group in Canada, studying connections between theory and experiment. We have active research in Higgs physics, dark matter, neutrinos and physics beyond the Standard Model. The experimental particle physics group participates in major international experiments, including ATLAS at CERN's Large Hadron Collider, one of two experiments to confirm the existence of the Higgs boson. We are building on our success with the SNO experiment with the Enriched Xenon Observatory (EXO) to understand the nature of the neutrino and the DEAP experiment at SNOLAB to understand the nature of dark matter. Our students also benefit from Carleton's membership in TRIUMF, Canada's centre for particle and nuclear physics.

Our degrees include a substantial research project which builds on the courses taken. Our programs are linked with the University of Ottawa through the Ottawa-Carleton Institute for Physics ([ocip.ca](http://ocip.ca)) which allows both universities to offer a broad spectrum of complementary programs.

We also offer a combined specialization in Data Science at the Master's level.

## Degrees Offered

MSc, PhD

## Career Options

Our alumni are found across Canada, the U.S. and overseas. Particle physics alumni work in government labs, academia and in industry. Medical physics alumni hold positions as clinical physicists, researchers and academics, physicists in regulatory agencies, and in industry.

## Fall Application Deadline

**January 15** (late applications will be considered if openings remain)

## Admission requirements

**MSc:** An Honours BSc in Physics or a closely related field with at least a B+ average.

**PHD:** An MSc in Physics, or a closely related field, with at least a B+ average. Students holding an MSc in a discipline of physics outside of medical or particle physics will be considered. Students who have been admitted to the MSc program may be invited to transfer into the PhD program if they demonstrate academic abilities for advanced research in their field.

### Contact Info

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