University of Glasgow | School of Physics & Astronomy

PhD Studentships and Taught Masters in Physics and Astronomy

With an internationally-leading research portfolio, an enviable graduate training programme and a long-standing reputation for excellence, the University of Glasgow provides an incredibly vibrant environment for physics studies. Research students have access to state-of-the-art local facilities and many participate in multi-national, large-scale collaborative projects. The postgraduate experience is enhanced by the Scottish Universities Physics Alliance (SUPA), which blends the best resources and expertise from many institutions to provide a training experience with a competitive advantage.

Research Groups:

Astronomy and Astrophysics
- Solar physics theory
- Observational solar physics
- Plasma physics
- Cosmology
- Radio astronomy

Imaging
- Computational imaging, wavefront coding and aperture synthesis
- Hyperspectral imaging techniques and their application
- Retinal imaging and oximetry
- Biophotonic imaging and microscopy
- Optical manipulation

Institute for Gravitational Research
- Data analysis: novel methods for exploring gravitational wave (GW) data
- Materials research: studies of materials for use as mirrors in GW detectors
- Interferometry: studies of the influence of quantum effects on measurements of macroscopic objects
- Studies of optical systems to be used in space-based GW detectors

Materials and Condensed Matter Physics
- Spintronics and Nanomagnetism: new approaches for sensors and ICT
- Developing thin film oxides for advanced functional materials
- Next generation structural alloys
- Artificial spin ice

Nuclear Physics
- Investigating nucleon structure
- Spectroscopy of strongly interacting particles
- Development of novel radiation detectors
- Applications of nuclear science

Optics
- Cold atoms, manipulation with twisted light and quantum storage
- Holographic optical tweezers, their application to biology and beyond
- Orbital angular momentum, the application to imaging and communication
- Transformation optics, achieving what is not possible with lenses and mirrors
- Quantum Optics, the entanglement of spatial modes

Particle Physics Experiment
- ATLAS: Properties of the of the recently discovered Higgs boson at the LHC
- ATLAS: Studying top quark interactions at the highest energies
- LHCb: Discovering New Physics through rare decays
- LHCb: Measuring Matter / Anti-matter asymmetry
- Development of detector systems for future experiments

Particle Physics Theory
- Phenomenology for the Large Hadron Collider
- Beyond the Standard Model Supersymmetry, Higgs and top quark physics
- Precision tests of the Standard Model through Quantum Chromodynamics

Quantum Theory
- Theoretical quantum information and quantum optics
- Orbital angular momentum
- Optimal quantum measurements
- Quantum key distribution

For further information on PhD scholarships/funding/admissions,
Email: grad.admissions@physics.gla.ac.uk
Online application: www.gla.ac.uk/schools/physics/courses/phdstudy

For further information on the Taught Masters program,
Email: physics-pgtadmissions@glasgow.ac.uk
Online application: http://www.gla.ac.uk/schools/physics/postgraduate