MSc/Grad Diploma Medical Physics

(1 Year Full Time/2 Years Part Time)
(Professional Certificate options available)

Medical Physics is the branch of physics that applies the concepts and principles of physics to the diagnosis and treatment of human disease. The MSc in Medical Physics is designed for students who wish to pursue a career in Medical Physics, either in a clinical environment or in research.

The programme provides a strong foundation in diagnostic imaging physics, nuclear medicine, radiation oncology physics and radiation protection, as well as the essential anatomy and physiology knowledge required to understand a patient’s anatomical structure and physiological processes.

Course Content and Structure

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<th>90 credits</th>
<th>60 credits</th>
<th>30 credits</th>
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<tr>
<td>taught masters</td>
<td>taught modules</td>
<td>project work and dissertation</td>
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The taught modules offered as part of the MSc/Graduate Diploma programme include the following:

- Radiological Physics
- Diagnostic Imaging Physics
- Detectors and Dosimetry
- Radiation Oncology Physics
- Radiobiology and Ethics
- Radiation Protection and Safety
- Anatomy and Physiology
- Cross-sectional Imaging
- Statistics
- Data Science

Modules and topics shown are subject to change and are not guaranteed by UCD.

Entry Requirements

- Entrance to this programme requires a degree in physics or a related discipline with a significant physics content. An upper second class honours or international equivalent is required.
- Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent, such as TOEFL (iBT) score of 90 or PTE score of 63. Applicants with an IELTS score of at least 5.5 may apply for admission to the UCD Pre-Masters Pathway programme.

Career Opportunities

The programme provides an accepted route to enter a career in Medical Physics. It is also a stepping-stone to PhD research in areas such as diagnostic imaging, radiation oncology physics, nuclear medicine, radiation protection and radiobiology.

Prospective employers include Medical Physics Departments in hospitals and clinics across Ireland and abroad, medical device manufacturers and regulatory bodies.

Faculty Profile

Dr Seán Cournane

Dr Seán Cournane is Director of the Centre for Physics in Health and Medicine (CPHM) and a clinical medical physicist at St Vincent’s University Hospital (SVUH). He specialises in Diagnostic Imaging physics, with particular interests in nuclear medicine, ultrasound imaging and therapy, novel Positron Emission Tomography (PET) tracers and radionuclide therapy.