



National Cancer Control Programme

National Radiation Oncology Physics Residency Programme

The National Radiation Oncology Physics Residency Programme (NROPRP) was established in 2007 by the Health Service Executive's National Cancer Control Programme (NCCP) to provide a dedicated national training programme for physicists entering the profession in the field of radiation oncology.

The programme is governed at a policy level by the National Radiation Oncology Physics Residency Committee (NROPRC). The programme operates as a national programme, and all standards, procedures and policies are developed and implemented on a national basis, overseen by the NROPRC. There is ongoing and continuous engagement of staff and residents involved in the residency programme across the participating centres,

The training programme formally commenced in May 2008 with the appointment of 5 residents and 1.5 dedicated training coordinator posts. Since that time the programme has graduated 16 residents, 11 of whom are currently working as medical physicists and 2 are currently undertaking further postgraduate studies.

In October 2008 an application for accreditation of the training programme was submitted to the Commission on Accreditation of Medical Physics Education Programs (CAMPEP). Following a site evaluation visit by CAMPEP in May 2009 the programme was granted full accreditation status. More information can be found on CAMPEP by accessing www.campep.org.

Key Objectives

The key objectives of the programme include:

- Providing residents with comprehensive training in the core competencies required to deliver a high standard of radiation oncology physics at an operational and clinical level.
- Preparing residents for certification and registration and a professional career in radiation oncology.
- Preparing residents for academic leadership and research in the clinical environment.
- Supporting the workforce planning objectives of the HSE's National Cancer Control Programme (NCCP).

Training Delivery

Residents are given clinical placements in medical physics departments and provided with comprehensive training in the core competencies required to deliver a high standard of radiation oncology physics at an operational and clinical level

Training is delivered at local hospital level under the supervision of training coordinators and designated supervisors. Training coordinators liaise with others in the physics department to organise the delivery of the programme in a manner which allows each resident to gain core competencies across the programme curriculum.



Training Centre Rotation

Training centres exist in the Galway University Hospital, St. Luke's Radiation Oncology Network, Dublin and Cork University Hospital. Training may take place in any one of these centres.

Residents will be required to rotate through the different centres to complete their training. This will involve long periods of up to 1 Year where residents will be required to move locations and shorter periods for localised training events. For any period lasting longer than 5 working days residents will be notified at least 1 month in advance of the placement.

Assessment

Residents are fundamentally assessed against the job specifications as provided with the position and the clinical competencies, which are consistent with The American Association of Physicists in Medicine (AAPM) Report 249. (http://www.aapm.org/pubs/reports/RPT_249.pdf) and CAMPEP requirements (<http://www.campep.org/ResidencyStandards.pdf>)

Methods used for assessment include, but are not limited to:

- Observation during training and regular meetings with supervisors
- Formal interviews with residents following completion of clinical competency rotations, approximately every three months
- Evaluation of clinical project reports and project presentations
- Review of training logbook/portfolio of evidence that confirms the appropriate level of competency has been reached in all areas of the curriculum consistent with the standards set by the Committee
- Formal assessment interview and/or examination at the end of year one
- Formal end of training assessment interview, examination (written or oral) and clinical presentation

Final evaluation and assessment of the candidate's performance and level of competence is determined by the Committee.

Programme Completion

Residents are required to successfully meet all programme components to ensure satisfactory completion of the programme. It comprises the successful completion and attainment of competencies in a number of areas:

- Clinical Competencies (assessed through a series of defined clinical rotation modules: Induction, Machine QA and Dosimetry, Treatment Planning, Brachytherapy, Imaging, Advanced Treatment Planning, Advanced Dosimetry, Clinical projects).
- Other competencies (Introduction into safety and risk, psychology of cancer, patient confidentiality, ethical considerations in cancer, and equipment procurement)
- Research and development
- Organizational and communication skills

Satisfactory completion of the training programme is contingent on obtaining all of the required competencies to the required standard. Those standards are based on the CAMPEP curriculum requirements as assessed by the NROPRC.



Residents enrolled in the standard programme are expected to complete the programme within a two year timeframe.

Residents enrolled on the integrated PhD programme are expected to complete the programme with a five year timeframe. The first year of the integrated PhD programme is common with the first year of the standard programme. The format of the second year of training is a tailored learning programme to suit the individual resident and their research requirements. The two year training element of the programme should be completed by the end of the fourth year of the integrated PhD programme. The university is responsible for determining the completion of the PhD element of the programme.

Admission

Residency positions are advertised when available. For further information contact:

Prof. Brendan McClean (Programme Director) Brendan.McClean@sh.ie

Admission to the standard programme follows the HSE recruitment and interview procedure and the management of the process is undertaken jointly between the Public Appointments System (PAS), the HSE and the National Radiation Oncology Physics Residency Committee.

(<http://www.hse.ie/portal/eng/staff/jobs/Careers.html>)

Admission to the integrated PhD programme follows the university recruitment and interview procedure, including open advertisement, shortlisting and interview. The recruitment process is undertaken jointly with the National Radiation Oncology Physics Residency Committee and the interviewing panel comprises members of the university and the residency committee.

Candidates must hold an undergraduate honours degree in science (L8 QQI) in which physics was taken as a major subject and honours obtained in that subject. Candidates must also have a theoretical medical physics knowledge, which normally would be obtained through the completion of an appropriate MSc. course in Medical Physics.

The required classes expected for a Medical Physics Degree are:

Radiation Fundamental (Physics and Dosimetry)

Medical Imaging

Radiotherapy Physics

Radiation Protection and Safety

Anatomy and Physiology

Radiobiology

Residents must meet the required didactic requirements to be accepted onto the programme. Potential candidates without the required didactic requirements must take the appropriate modules from a CAMPEP accredited programme before being accepted onto the programme

Employer and Remuneration

Residents enrolled in the standard programme are given a 2 year fixed term clinical placement in a medical physics department. They are appointed to the HSE's National Cancer Control Programme irrespective of their location. The resident



salary is paid on the basis of the 1st point on the trainee physicist grade pay scale and increases will be in accordance with the Department of Health and Children (DoHC) salary scales and HSE terms and conditions of employment.

Residents enrolled on the integrated PhD/residency programme are enrolled on a 5 year part-time PhD programme at the university and provided with an annual stipend. Funding for the stipend, fees, training and consumables will be transferred to the university by the NCCP on an annual basis.

Programme Statistics

Year	# of applicants	# of residents admitted	# of residents graduating	Location of Graduates
2008	117	5	0	
2009	75	5	0	
2010	0*	0	4	4 clinical
2011	0*	0	5	2 clinical 1 industry 2 academia
2012	20**	0	0	
2013	24	2**	0	
2014	2	3	0	
2015	2	2	0	
2016	0	0	2	2 clinical
2017	25	5	2	2 PhD
2018	0*	0	0	
2019	10	1**	3	3 clinical

* No recruitment

**Integrated PhD/residency programme