Optometry at DIT

Declan Hovenden explains how optometry is taught at the Dublin Institute of Technology

The BSc Optometry programme at Dublin Institute of Technology (DIT) is a level 8, primary honours degree principally designed to train students to be optometrists in primary and secondary optometric environments. In addition, graduates will have acquired the necessary knowledge and skill set to adapt to the changing environment of optometric practice. The programme also provides a foundation in the field of vision science and provides students with the skills to transfer to postgraduate programmes.

The emphasis of the programme is the development of the knowledge, clinical competencies and analytical skills appropriate to optometrists. These skills and competencies prepare the students to take the Professional Qualifying Examinations (a series of practical and oral examinations) of the Association of Optometrists, Ireland. Success in these examinations confers the title (subject to election) of Fellow of the Association of Optometrists, Ireland (FAOI) and also the right to apply for registration with the state's regulatory body, the Opticians Board. Registration is compulsory for the practice of optometry in the Republic of Ireland. Registrants may then apply to the GOC for inclusion on its register should they wish to practise in the UK.

The current programme is the result of a long history of evolution. Full-time diploma programmes in Ophthalmic Optics/Optometry at the College of Technology, Kevin Street date from implementation of the Opticians Act (1956), when a three-year full-time course replaced the previous part-time course which had been running since the 1930s. Continuing developments in the nature and scope of practice in the profession brought about a series of revisions in the programme and in 1992, the Dublin Institute of Technology was formed and was granted the right to award degrees at both undergraduate and postgraduate level. From 1998 onwards, all optometry students have followed the BSc (Honours) programme in Optometry. A number of postgraduate degrees (MPhil and PhD) have been also awarded by DIT's Optometry Department.

Entry requirements

The current minimum admission requirements to the BSc in Optometry are: (a) Irish Leaving Certificate in six subjects with grade C3 or higher in at least three subjects at Higher Level, at least one of which must be selected from the following: Physics, Biology, Chemistry, Physics and Chemistry (combined) or (b) such foreign or other qualifications as may be deemed by the Institute to be equivalent.

The centre is well equipped with modern diagnostic devices

In reality, the requirements for an offer of a place to be made are usually significantly higher than the minimum. Offers are made on the basis of a points system administered by the Central Applications Office (CAO). Optometry has consistently been a high-demand programme, attracting high-calibre applicants. A review of the applications process over recent years shows that of the approximately 900 third-level programmes offered through the CAO, the BSc in Optometry has consistently been in the top 30 in terms of the required number of points.

'Special category' applications such as those from mature students and non-standard applicants (those with qualifications in addition to or other than the Leaving Certificate) are also possible. International applications are welcome from prospective students from non EU countries who are referred to the DIT International Student Office, DIT, 143-149 Rathmines Road, Dublin 6 (email international@dit.ie). The target intake to year one of the programme each year is 25.

Programme structure

Emphasis in the first year of the programme is on the Foundation Sciences (cell biology, anatomy and physiology, chemistry and physics), in order to provide the relevant theoretical basis for the study of Optometric sciences and clinical optometry in subsequent years. Optometric sciences are introduced in first year, with optics, visual science and ophthalmic optics and dispensing also providing a foundation for the introduction of clinical sciences in year two.

The second year aims to complete the theoretical underpinning of foundation sciences with biochemistry, the processes of disease, and experimental statistics. These subjects are a smaller component of the second year. Optometric sciences are further developed with the introduction of ocular anatomy and physiology, and binocular vision. Clinical teaching commences with clinical optometry, which aims to equip the student with the core clinical skills of the routine eye examination, in preparation for patient care clinics in primary care optometry in year three. More clinically orientated aspects of optical dispensing continue in this year, and the study of contact lenses is begun.

Third year consists of clinical optometry and optometric sciences subjects. Students begin participation in primary care optometry in the on-campus clinic – the National Optometry Centre from the beginning of year three; additional clinical techniques are introduced through the subject advanced clinical techniques, and the clinical aspects of binocular vision assessment and management are also introduced. Theoretical support for patient management is provided by tutorials associated with the primary care optometry clinic module, and in the teaching of diseases of the eye and pharmacology.

Real life experience of diseases of the eye is provided within the National Optometry Centre by primary care optometry, advanced clinical techniques and binocular vision clinics. Further instruction continues in contact lenses and patient care in contact lenses is introduced.

Year four consists of eight modules linked across the first and second semesters, a stand-alone hospital placement and a five-month Supervised Practice module which takes place from April to August in the

final year of the programme.

Specialist clinics in contact lens practice, binocular vision, paediatric optometry and vision rehabilitation are provided and supported by lectures and tutorials, aimed at discussing diagnosis and patient management. Aspects of the professional and business side of optometry are taught, as is the involvement of optometry in environmental and occupational health and safety. Modern topics in optometry introduces students to the changing face of optometry through the delivery of material on developing areas in optometry such as refractive surgery. Students also undertake a research project to further develop their research, analytical and independent learning skills.

Clinical training

Patient examination and management are taught through clinical skills training in the first and second years. Once proficiency has been achieved students enter clinics within the National Optometry Centre and work on competency across all the aspects of optometry. There are 22 core competencies which must be achieved in the third year across the advanced clinical techniques, primary care and contact lens clinics. All individual core competencies must be passed independently to complete the module. Fourth-year students must complete a further 58 competencies – 33 'basic' and 25 'advanced'. In most cases evidence of competency takes the form of direct supervisor observation while the student performs an eye examination.

The National Optometry Centre was opened at DIT, Kevin Street in September 2006, its primary function being to provide clinical education and training for the undergraduate students of the optometry programme. To achieve a 'real life' experience for the students the centre operates as a fully operational optometry practice providing a broad range of clinical eye care including primary eye care, contact lens fitting and aftercare, diabetic retinopathy screening, paediatric eye care, vision rehabilitation, spectacle dispensing, referral refinement/ further investigation of patients referred from other optometrists. The centre is well equipped with modern diagnostic devices such as visual field analysers (including HFA), GDx, OCT, fundus imaging, Slit-lamp imaging, anterior segment tomography and corneal topography. In line with modern best practice, the centre uses a secure, paperless electronic practice management system (Acuitas).

The National Optometry Centre operates as a fully operational practice

The introduction of school screenings by the department is providing extremely valuable experience for students in the area of paediatric optometry. Students accompanied by a qualified supervising optometrist visit one of 10 local primary schools to screen the pupils' vision. Pupils who fail the screening are referred into the National Optometry Centre for a full eye examination. This is a community-based learning project which meets the needs of the community, while students gain a broader appreciation of the discipline along with an increased sense of civic responsibility.

At the end of fourth year (starting in April), students are placed in a full-time supervised optometric practice with an experienced practising optometrist for a period of five months. During this period students develop the ability and confidence to participate in and contribute to the successful operation of an optometric practice, a clear understanding of structures in the practice and the role, duties and responsibilities of the optometrist as a primary care provider. A 1:1 ratio of student to supervisor within the practice will apply. The emphasis of the supervised practice period will be on continuing to develop the clinical skills attained at the NOC while preparing students to take the Professional Qualifying Examinations of the AOI. All students are also placed in a hospital ophthalmology department during final year.

UHCO

DIT's School of Physics has had research collaboration links with the University of Houston College of Optometry (Texas) for several years. These links were strengthened in 2010 and direct engagement between UHCO and the Department of Optometry at DIT is now being realised. Two DIT optometry students are currently undertaking their supervised practice placement in the university eye clinic at UHCO.

Research

The theoretical and clinical application of research evidence is a fundamental requirement of undergraduate education at Dublin Institute of Technology. And the last five years particularly have seen the department scale up its research activity, at undergraduate, postgraduate and postdoctoral level. The research is typically current, practice and policy relevant, and critically, it underpins and enhances the undergraduate optometry training programme. Areas of recent and current research activity undertaken by the department include the Mozambique Eyecare Project, macular pigment research (multiple projects), quality of life and health literacy, anterior segment, sports vision, glaucoma, diabetes shared care, cataract and visual performance, glaucoma shared care.

The Mozambique Eyecare Project has been the biggest research undertaking by the department. The project centres around the setting up the first school of optometry in Mozambique. Within the last year four final-year optometry students from DIT had the opportunity to travel to Mozambique and contribute to the training of the students there and participate in delivery of paediatric screening and examination initiatives. It is envisaged that this will be replicated in coming years, affording more DIT students the opportunity to experience this truly valuable initiative first-hand. (Visit www.mozeyecare.org)

EAOO

The Department of Optometry has been actively involved in attracting the annual conference of the European Academy of Optometry and Optics to Dublin in 2012. The conference will take place from April 20-22 next year and the National Optometry Centre at DIT will host the clinical workshop sessions.

Useful websites

www.optometry.dit.ie/programme.html
www.dit.ie/eyeclinic
www.mozeyecare.org
www.cao.ie
www.eaoo.info

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