



MSc. in Ophthalmology and Vision Research

Ophthalmology

Academic Research Programmes in Ophthalmology

Director:

Prof. Dr. Dr. h.c. Luis E. Abad

MD, DO, MBA, PhD. (hon), FNYAM, DSc. (hon), FBQS (hon), FICP.

Distinguished Professor, Ballsbridge University

The MSc. Clinical Ophthalmology and Vision Research (COVR) provides eye care professionals with an enhanced knowledge and skills in clinical decision-making as the basis for the safe and effective management of a wide range of ocular conditions.

Programme Description

Primary eye care is rapidly expanding to include diagnosing and treating ocular disease in close collaboration with secondary and tertiary care providers. For optometrists, these new roles are in addition to their traditional role of examining eyes and determining the refractive prescription.

The management of eye conditions is normally carried out either independently or in partnership with medical practitioners. These new roles involve taking on greater responsibilities and require additional specialised academic training.

Depending on professional requirements and personal interest, you can tailor your MSc. according to speciality, leading to a named degree on completion of the



dissertation:

- MSc Clinical Ophthalmology and Vision Research (Generic (Optics) - Diseases)
- MSc Clinical Ophthalmology and Vision Research (Tumors)
- MSc Clinical Ophthalmology and Vision Research (Therapeutics)

The programmes are designed to allow you to advance your clinical and academic skills as well as to obtain research experience. If you wish to pursue research within academia to achieve a higher qualification you will also find these programmes an ideal preparation for subsequent studies, for example, towards a Ph.D.

Programme Structure

The programmes use a modular structure, including lectures and tutorials in trimesters A and B, and clinical training and Research Project over trimesters A, B and C.

All three programmes consist of core modules, which are compulsory and must be taken by all students, and optional modules, which can be chosen based on personal interest and professional requirement. A substantial component of each programme is the research project, which makes up a third of the programme.

MSc. Clinical Ophthalmology and Vision Research (Generic) award

The programme is suited to applicants who have obtained a Medical degree, first degree in optometry or a related field. The generic stream of the programme gives a broader perspective than the diabetes, tumors and therapeutic routes. The MSc COVR (Generic) consists of five core and five optional modules:

Core modules:

- Advanced Binocular Vision
- Research Methods
- Clinical Ophthalmology
- Advanced Clinical Investigation
- Research Project



Optional modules:

- Diabetes Care
- Ocular Therapeutics
- Tumors
- Chronic Complications of Diabetes
- Practical and Theoretical Prescribing
- Health Economics

Module Details

Core modules:

Advanced Binocular Vision

This module is designed to provide students with a comprehensive and up to date knowledge on binocular vision. In particular, clinical signs, symptoms, investigations and treatment options will be covered.

Skills for professional practice for vision sciences

This module has two main components: IT & Communication Skills and Experimental Design & Analysis I (EDA I). The module will provide the students with a range of key skills and resources necessary to study at M level and develop scientific research and reporting techniques.

Skills for professional practice for bioscience 2

This module has two components: IT & Communication Skills II and Experimental Design & Analysis (EDA) II. IT & Communication Skills II will expand the range of key skills acquired in Skills for Professional Practice for Vision Sciences, and enable student to critically assess published data and review scientific papers.

Clinical Ophthalmology

This module provides students with detailed knowledge about the ocular diseases and is designed to equip students with the knowledge required to conduct the eye examination to develop a working diagnosis.

Advanced Clinical Investigation

This module is designed to provide students with a comprehensive and up to date knowledge on advanced clinical diagnostic techniques including non-invasive imaging techniques such as OCT in the context of diagnosis and management of ocular disease.



Research Project

MSc. projects will involve the practical investigation of a clearly defined research problem, usually in the areas ophthalmology/ optometry/ vision sciences. This module is designed to provide students with a comprehensive knowledge on how to plan a research project, carry out a comprehensive literature review, collect and analyse data and write up the results in the form of a MSc thesis.

Optional modules:

Diabetes Care

This module will give a broad overview of and introduction to the various types of Diabetes (Type 1, Type 2, Gestational Diabetes, Latent Autoimmune Diabetes in Adults and Maturity Onset Diabetes of the young). The students will review their understanding of the physiology of glucose balance in health and disease.

Ocular Therapeutics

This module is designed to provide students with the knowledge of the pharmacology of ocular therapeutic drugs, the clinical features and management options for anterior eye disease, drugs used in the treatment of eye disease and the potential impact of medications on the eye and visual function.

Recognition, diagnosis and treatment of tumors of each eye area

Chronic Complications of Diabetes

This module will generate an in-depth knowledge and understanding of microvascular complications, in particular eye disease and sexual dysfunction. Treatment and support for these complications will be discussed.

Practical and Theoretical Prescribing

This module will explore topics such as the use of medications in the management of ocular conditions, the development of clinical management plans, and critically assess available optometric, medical and treatment (therapeutic) strategies within an informed and flexible approach.

Health Economics

This module is designed to provide students with the analytical tools to understand, from an economic perspective: the nature of health care systems internationally; how to assess health care reforms and specific health intervention programmes. It will provide



students with skills needed to participate in the evaluation of health care, and to contribute to cost-effectiveness analysis and cost-benefit analysis in a health context.

Clinical Placements

For international students, clinical placements will be available to enhance your diagnostic expertise and allow familiarisation with state-of-the-art clinical instrumentation including OCT, super-wide field fundus photography and specular microscopy.

Assessment

A range of assessment methods will be used including formal exams, case reports, oral presentations and clinical assessments as well as assessment of the research project/MSc. dissertation.