

Optometry and Vision Science

Handbook 2021



THE UNIVERSITY OF
AUCKLAND
Te Whare Wananga o Tāmaki Makaurau
NEW ZEALAND

**MEDICAL AND
HEALTH SCIENCES**

**SCHOOL OF OPTOMETRY
AND VISION SCIENCE**



A warm welcome to the School of Optometry and Vision Science

As the only optometry School in New Zealand, we are unique in offering a Bachelor's degree that allows our graduates to practise optometry in New Zealand and Australia. We offer a blend of innovative teaching, in the context of cutting-edge clinical practice, supported by internationally recognised translational research.



While the study of optometry has a professional focus, we also provide you with a strong foundation in basic and health science. These skills will enable you to keep up with the expanding role of optometry in providing lifelong eye health and vision care to the community. A particular strength of our programme is its emphasis on inter-professional engagement using our links with allied clinical disciplines such as pharmacy and ophthalmology. Our students undertake extensive “work-integrated” learning in private practice, hospital clinics and through our student-led vision screening programme in greater Auckland schools. The School of Optometry and Vision Science occupies a modern space (overlooking the Auckland Domain) incorporating its own Eye Clinic, teaching laboratories (including a virtual reality simulation suite) and state-of-the-art research facilities.

Whether you are a student starting out in our BOptom programme or are entering one of our postgraduate programmes, I wish you every success in your endeavours. My staff and I assure you that we will provide you with the support you need to achieve your goals.

Ngā mihi

A handwritten signature in black ink, appearing to read 'Steven Dakin'.

PROFESSOR STEVEN DAKIN
Head, School of Optometry and Vision Science
Faculty of Medical and Health Sciences
The University of Auckland



Contents

Optometry as a career	4
Māori and Pacific students and optometry	5
School of Optometry and Vision Science	6
Undergraduate study	7
Admission pathways	7
Programme information	8
Course prescriptions	10
Important information for undergraduates	13
Scholarships and prizes	16
Postgraduate study	17
Postgraduate study	17
Postgraduate programme pathways	18
Staff list	19
Dates to remember	22

At the University of Auckland, you're taught by world-renowned staff and researchers who are passionate about teaching their students and ensuring they succeed.

"The combination of cutting-edge technology, teaching staff and clinical experience means you are ready to join the workforce and make a real difference from day one."

Gabriel Lobo is studying for a Bachelor of Optometry



GABRIEL LOBO

Student: Bachelor of Optometry

Optometry as a career

As a primary health care professional, an optometrist is specifically educated and clinically trained to examine the eyes and the integrity of the visual pathways, to diagnose vision problems or impairments, and to prescribe and provide treatment. After thorough examination, often using advanced instruments, the optometrist must make appropriate diagnoses and decide how various defects should be remedied, managed and treated. Optometrists work with other health professionals including general medical practitioners and ophthalmologists to ensure the best eye and vision health outcomes.

With the current emphasis on good health and disease prevention, and the increased demands for vision care made by an ageing population, there is a continuing need for highly qualified optometrists, particularly away from major population centres. Optometrists must be able to communicate easily and effectively, particularly when providing special services to children, the elderly and the partially sighted. Students considering optometry as a career should possess a genuine desire to help people.

Optometry offers the opportunity to join a profession that is both personally challenging and financially rewarding. The majority of optometrists enter private practice. This offers favourable working conditions, regular hours without excessive emergency calls, the freedom to choose where to live and practise and the opportunity to concentrate on clinical areas of particular interest. Optometrists may also practise in hospitals and clinics, or pursue careers in research and in the industry. Opportunities also exist for those wishing to undertake postgraduate education, research and teaching, not only in New Zealand but also at overseas universities.

Completion of the University of Auckland BOptom programme enables graduates to apply for registration to practise as an optometrist in New Zealand, Australia and Malaysia. In the United Kingdom, additional examinations must be completed before full registration can be gained. If you wish to practise in other countries, including Canada and the USA, you need to enquire with each country's Optometry Registration Board about their specific registration requirements.

New Zealand graduates

The qualification required for registration in New Zealand as an Optometrist is the Bachelor of Optometry (BOptom) degree from Auckland. From the time that students pass the final examinations in the BOptom programme until they have their degree conferred, students must hold a Provisional Registration certificate before they may engage in optometric practice. To apply for provisional registration, the NZ Optometrists and Dispensing Opticians Registration Board requires an official academic transcript from the University. This must be applied for online through Student Services Online (SSO).

Overseas graduates

Optometrists who have completed their optometry degree overseas should contact the New Zealand Optometrists and Dispensing Opticians Registration Board to enquire about eligibility of their qualification as being suitable for registration in New Zealand. Currently it is possible for optometrists with certain overseas degrees in optometry to sit the competency examinations conducted by the Optometry Council of Australia and New Zealand. Those completing this examination are eligible to apply for registration to practise in New Zealand. Alternatively, overseas optometrists may complete the five-year BOptom degree at Auckland. If entry into the Auckland BOptom programme is granted, credit may be given for previous study.

www.odob.health.nz

www.ocanz.org

New Zealand Postgraduate Diplomas, Masters or PhD qualifications in optometry or in vision science are not accepted for registration as an Optometrist in New Zealand.

Māori and Pacific students and optometry

As primary-care health professionals, Optometrists have the opportunity to develop close links and improve vision-based health outcomes with their communities. However, in the most recent Health Workforce Survey, the proportion of practicing optometrists who identified as Māori (2%) and Pacific optometrists (1.5%) was well below their representation in the New Zealand population.

Vision 2020 is the Faculty of Medical and Health Sciences' commitment to increasing the number of Māori and Pacific health professionals to 10% of the health workforce by the year 2020. Vision 2020 has three components, the Māori and Pacific Admission Scheme (MAPAS), Hikitia te Ora - Certificate in Health Sciences, and Whakapiki Ake Project, a recruitment programme that actively engages with rangatahi Māori enrolled in secondary schools to promote health as a career. Vision 2020 is coordinated by Te Kupenga Hauora Māori.

Te Kupenga Hauora Māori (TKHM) promotes the aims of Vision 2020 and coordinates teaching in Māori health across the Faculty of Medical and Health Sciences and externally, spanning foundation, undergraduate and postgraduate education. There is also a focus on building capacity and developing appropriate teaching practices in Māori health throughout the Faculty of Medical and Health Sciences.

With an intake of only 60 students per year, the School of Optometry and Vision Science supports the principles of whakawhanaungatanga within the Bachelor of Optometry programme, encouraging a collaborative, relationship-based learning environment between students and staff.

Māori and Pacific Admission Scheme (MAPAS)

MAPAS is a programme that provides admission, academic and pastoral support for Māori and Pacific students who are studying within the Faculty of Medical and Health Sciences. The goal of MAPAS is to support the transition and retention of MAPAS students while on their cultural and academic journey, helping them to successfully complete and graduate from the Faculty of Medical and Health Sciences (FMHS).

Students applying for the MAPAS programme must have verified evidence of an indigenous New Zealand Māori or Pacific whakapapa/ancestry, be a citizen or permanent resident of New Zealand, and have applied for entry into a FMHS programme.

Details of the MAPAS programme can be found at: www.fmhs.auckland.ac.nz/mapas

He Rau Aroha Scholarships

The University offers two He Rau Aroha scholarships of \$10,000 per annum each to Māori and Pacific Island students (New Zealand citizens or permanent residents) enrolled in the Bachelor of Optometry through the MAPAS programme. The awards are made based on academic merit, leadership qualities and financial needs, and are awarded for the duration of the programme. Further information regarding eligibility can be found on the MAPAS programme pages linked above.

“I hope by becoming an optometrist, I can work towards reducing inequities to achieve better visual health outcomes in New Zealand.”

There is currently an under-representation of Māori optometrists in the profession. Māori are more susceptible to ocular diseases such as diabetic retinopathy which can be prevented with early detection and treatment.

I have always had a passion for helping others, and I hope by becoming an optometrist, I can work towards reducing these inequities to achieve better visual health outcomes in New Zealand.

Tiana Williamson (Ngāti Kahungunu) is studying for a Bachelor of Optometry



TIANA WILLIAMSON
Student: Bachelor of Optometry

What captures me about optometry is the incredible phenomenon of sight. However, vision science is much more fun and complex than just prescribing glasses! We cover concepts from eye diseases to colour vision, paediatrics to myopia control - to name a few.

A highlight of my study was a Summer Research Scholarship I did with the Department of Ophthalmology. This opportunity was a unique and fun learning experience which got me more interested in research through the first-hand experience of all that goes into it. Writing up reports, learning practical skills, and the chance to work with experts in research broadened my knowledge. There is a wide range of projects each year, and I highly recommend anybody interested to apply for one.

I'm particularly interested in the improvement of health outcomes through advances in technology. I want to practice in a rural area helping to improve the quality of and access to eye healthcare for New Zealanders.

Michelle Tiang is studying for a Bachelor of Optometry

**MICHELLE
TIANG**

**Student: Bachelor of
Optometry**

School of Optometry and Vision Science

The School of Optometry and Vision Science is responsible for conducting the five-year Bachelor of Optometry (BOptom) programme and postgraduate programmes leading to the degrees of:

- Master of Science (MSc)
- Master of Health Science (MHSc)
- Doctor of Philosophy (PhD)
- Postgraduate Diploma in Science (PGDipSci) in Optometry

Contact details

The School of Optometry and Vision Science is located in Building 503, Level 3

The University of Auckland
Grafton Campus
85 Park Road
Grafton
Auckland 1023

Mail can be directed to:

School of Optometry and Vision Science
Faculty of Medical and Health Sciences
The University of Auckland
Private Bag 92019
Auckland 1142, New Zealand

Phone: +64 9 923 6483

Email: manager-optometry@auckland.ac.nz

Website: www.optometry.auckland.ac.nz

Facilities

In addition to excellent teaching and laboratory facilities, the Grafton Campus houses clinical teaching facilities. These provide an ideal environment for training students in the final two years of the Bachelor of Optometry degree. Students are given the opportunity of not only using the latest optometric equipment, but also gaining hands-on experience in the use of advanced imaging techniques that have become a standard part of patient examinations and report preparation.

The major role of the Optometry Clinic is to provide a wide range of patient experience as part of the teaching of senior undergraduate students. Students work under the supervision of registered optometrists and carry out a wide range of vision and eye care examinations. It is important for students to examine as wide a range of patients as possible to enable them to develop their clinical judgment and management skills. This may mean prescribing spectacles, contact lenses or low vision aids;

managing eye diseases with both topical and oral medicines; treating eye disorders with exercises or giving advice on lighting and screen based equipment. The dry eye Clinic uses state-of-the-art technology and techniques to diagnose and manage dry eye according to the latest research. We offer a comprehensive evaluation of the tear film and the lipid glands to determine the exact cause of the dry eye, and offer a tailored treatment plan including Blephasteam, BlephEx, Lipiflow and E-Eye IPL. Where necessary, patients are referred to medical practitioners.

The Optometry Clinic is a "teaching laboratory", and in addition to observing the ethical guidelines for clinical teaching, students must maintain a high standard of dress and behaviour.

Reflecting the importance of clinical training for optometry students, the University of Auckland provides 16 examination and four specialist consulting rooms. Patients include staff and students of the University as well as members of the general public. Additional valuable experience is gained by attending the Eye Department at the Greenlane Clinical Centre of the Auckland District Health Board, Waitakere Hospital, and other ophthalmology practices. During their final year, students are expected to spend time in an approved practicum location which might include optometric practices, optometry schools, hospitals or other institutions in New Zealand and overseas.

How We See: General Education course (OPTOM 101G)

This course allows students engaged in degrees other than the BOptom to gain an understanding of how vision works. This includes the physiology of the visual system, the subjective nature of perception, issues faced by those who lose vision, and even what art can reveal about our visual experience of the world. This course is also available to non-degree students wishing to take it as a stand-alone certificate of proficiency. For more information on General Education courses and degree requirements see the Open Schedule at:

www.auckland.ac.nz/general-education

Undergraduate programme: admission pathways

New Zealand and Australian Citizens and Permanent Residents

Entry to Part II of the programme is limited. Applications close 1 October 2020 for 2021 places. Applicants are considered through one of two entry pathways: the undergraduate entry pathway or the graduate entry pathway.

www.fmhs.auckland.ac.nz/boptom

Undergraduate entry pathway

This pathway is open to applicants who are New Zealand citizens, or have permanent resident status, and who have completed the following six pre-requisite courses at the University of Auckland. These courses are usually taken within the Bachelor of Science (Biomedical Science) programme:

BIOSCI 101

Life! Origins and Mechanisms
Semester Two

BIOSCI 106

Foundations of Biochemistry
Semester Two

BIOSCI 107

Biology for Biomedical Science: Cellular Processes and Development
Semester One

CHEM 110

Chemistry of the Living World
Semester One

MEDSCI 142

Biology for Biomedical Science: Organ Systems
Semester Two

PHYSICS 160

Physics for the Life Sciences
Semester Two

POPLHLTH 111

Biology for Biomedical Science: Cellular Processes and Development
Semester One

In addition to the seven prerequisite Year One courses, students must enrol in a 15-point General Education course.

It is currently possible to undertake an equivalent first year at Otago University by completing their Health Sciences First Year Programme. The required Otago papers are: BIOC 192, CELS 191, CHEM 191, POPH 192, HUBS 191, HUBS 192 and PHSI 191.

Other New Zealand universities do not currently offer equivalent courses at first year level.

Selection process

Applicants through this entry pathway will be ranked on their GPA/GPE equivalents across the seven prerequisite courses. Interviews will be required and will be offered to those who meet the minimum requirements. These will be conducted in late November. Selection is based on both the GPA/GPE and the interview outcome.

It is usual for the University to receive application numbers considerably in excess of the number of places so selection is very competitive. The current Grade Point Average for successful applicants is at least 6.0. Therefore, students enrolling in the first year Biomedical Science programme will need to achieve high grades to be considered for entry to the BOptom.

Graduate entry pathway

This pathway is available for graduates with bachelor's degrees. Please consult the Faculty of Medical and Health Sciences Student Centre for details of preferred degrees (usually science-based) and for advice if your degree is not recent.

www.fmhs.auckland.ac.nz/student-centre

Selection process

Interviews will be required and offered to those who meet the minimum requirement. These will be conducted in late November. Selection is based on both the GPA/GPE and the interview outcome.

Māori and Pacific Admission Scheme (MAPAS)

Applicants eligible under this scheme must complete the first year of the Bachelor of Science (Biomedical Science) degree at the University of Auckland or equivalent from the University of Otago, or have completed a bachelor's degree and apply as a graduate.

An interview is required which will assess personal attributes considered to be important for a career in optometry.

- First year BSc (Biomedical Science) and Alternative Admission applicants applying for entry in the Bachelor of Optometry under MAPAS will be required to attend a MAPAS Optometry Interview in November.
- The MAPAS Optometry Interview will assess each candidate using six domains –

academic, whānau/family, culture, problem solving, awareness and knowledge of MAPAS. This interview will be with a MAPAS academic representative.

- Following confirmation of their MAPAS eligibility, applicants' academic records will be subject to consideration by the Optometry Admissions Committee.

www.fmhs.auckland.ac.nz/mapas

Regional/Rural Admission Scheme

Students wishing to apply under the Regional/Rural Entry category must provide evidence of their regional/rural origin as specified at:

www.fmhs.auckland.ac.nz/ras

Credit and concessions for students entering the BOptom

Please refer to the credit regulations in the University of Auckland Calendar:

- If you are transferring from another New Zealand university
- If you have undertaken previous study at Auckland and apply for credit at the time of enrolment

If you are an international student, credit will be assessed and granted at time of admission.

General admission enquiries

Email: fmhs@auckland.ac.nz

International students

The Bachelor of Optometry degree is available to overseas students who meet the criteria set by the University of Auckland. Applications are considered throughout the year up until the application deadline of 1 October, and offers of places can be through either the undergraduate or graduate entry pathways.

For more information students should contact:

Email: fmhs@auckland.ac.nz

Undergraduate programme information

Overview of the Bachelor of Optometry

The Bachelor of Optometry programme is a set programme that consists of five years of full-time undergraduate study at the University of Auckland in consecutive years.

The first year, Part I, comprises the seven prerequisite courses from the Bachelor of Science (Biomedical Science) first year and the 15 points of other courses detailed below. Details about the Bachelor of Science (Biomedical Science) first year can be found at:

www.science.auckland.ac.nz/biomedsci-ug

Parts II and III of the programme contain a mixture of courses in applicable life sciences and vision science and the basic optometric sciences.

Parts IV and V of the programme are largely devoted to clinical practice, including comprehensive eye examinations, clinics in eye disease, contact lens fitting, problems of the partially sighted, colour vision assessment and binocular vision problems.

The BOptom degree may be awarded with Honours where a student's grades for Parts III, IV and V are sufficiently high. There are two classes of honours: First Class Honours and Second Class Honours. Second Class Honours are awarded in either First Division or Second Division.

Important BOptom regulations (see the University Calendar)

The BOptom programme has a fixed schedule of courses. When you enrol for any Part of the Programme, you should enrol for all the courses listed under that Part, as listed in the Bachelor of Optometry Schedule..

Each Part must normally be completed before the next Part may be taken. However a student

Points structure

The Bachelor of Optometry is a five year degree (600 points). The courses completed under Bachelor of Science (Biomedical Science) prior to selection for Part II of the degree are transferred to the BOptom if you are selected. These form all of Part I if you have completed 120 points.

A student must pass a total of 600 points

“Coming from a rural background, I understand the struggles of reduced accessibility to healthcare”

who has failed to pass one of those Parts in its entirety may be allowed, at the discretion of Senate or its representative, to enrol for the course or courses needed to complete that Part together with a course(s) towards the next Part.

The BOptom degree must be pursued in consecutive semesters. Interrupted study may be resumed only with the approval of, and on conditions set by, Senate or its representative.

(including the required number of points in General Education Courses if applicable) over the entire BOptom programme to graduate with a BOptom degree.

I initially chose optometry because I wanted to contribute to the health of the community, and science was my passion. Little did I know that optometry was more than selling glasses. It involves diagnosing, preventing and treating diseases that can cause blindness.

To be able to give someone the gift of sight or prevent blindness is incredibly rewarding for an optometrist and is truly life-changing for our patients.

Coming from a rural background, I understand the struggles of reduced accessibility to healthcare as well as the rewards from living in a peaceful paradise with the local community. I strongly encourage students like me from rural backgrounds to get involved in optometry and be open to returning to practice in local communities.

Jasmine Feng is in her 5th year, studying a Bachelor of Optometry

The University of Auckland academic year consists of two semesters. Most courses are run over both semesters and are labelled A & B accordingly. To complete these double semester courses, students must enrol in both A & B courses.

BOptom Part I

On entering Part II of the degree, a student must have taken or have been credited 120 points of courses as follows:

BIOSCI 101 15 pts
Life! Origins and Mechanisms

BIOSCI 106 15 pts
Foundations of Biochemistry

BIOSCI 107 15 pts
Biology for Biomedical Science:
Cellular Processes and Development

CHEM 110 15 pts
Chemistry of the Living World

MEDSCI 142 15 pts
Biology for Biomedical Science: Organ Systems

PHYSICS 160 15 pts
Physics for the Life Sciences

POPHLTH 111 15 pts
Biology for Biomedical Science:
Cellular Processes and Development
plus

- 15 points from General Education courses listed in the Open or EMHSS Schedules

Students in the BOptom programme cannot choose OPTOM 101G: How We See as their General Education course.

BOptom Part II

A student must take all of the following courses:

OPTOM 216 A & B 30 pts
Introduction to Optometry
Semester One and Two

OPTOM 263 A & B 30 pts
Essential Optics
Semester One and Two

OPTOM 272 A & B 30 pts
Visual Science 1: Structure and Function of the
Visual System
Semester One and Semester Two

MEDSCI 203 15 pts
Mechanisms of Disease
Semester One

BOptom Part III

A student must take all of the following courses:

OPTOM 316 A & B 60 pts
Optometry
Semester One and Semester Two

OPTOM 345 A & B 15 pts
Principles of Ocular Pharmacology
Semester One and Semester Two

OPTOM 353 A & B 15 pts
Ocular Pathology
Semester One and Semester Two

OPTOM 375 A & B 15 pts
Visual Science 2
Semester One and Semester Two

MEDSCI 202 15 pts
Microbiology and Immunology
Semester One

BOptom Part IV

A student must take all of the following courses:

OPTOM 416 A & B 30 pts
Clinical Optometry
Semester One and Semester Two

OPTOM 430 A & B 15 pts
Contact Lens Practice
Semester One and Semester Two

OPTOM 442 A & B 15 pts
Optometry for Special Populations
Semester One and Semester Two

OPTOM 450 A & B 30 pts
Diseases of the Eye and Visual System:
Diagnosis and Management
Semester One and Semester Two

OPTOM 783 A & B 30 pts
Research Project in Vision Science
Semester One and Semester Two

BOptom Part V

A student must take all of the following courses:

OPTOM 510 A & B 30 pts
Advanced Clinical Optometry 1
Semester One and Semester Two

OPTOM 520 A & B 30 pts
Advanced Clinical Optometry 2
Semester One and Semester Two

OPTOM 561 A & B 60 pts
Optometry in Practice
Semester One and Semester Two

**JASMINE
FENG**

Student: Bachelor of Optometry



Undergraduate course prescriptions

Bachelor of Optometry Part II

OPTOM 216 A & B 30 pts

Introduction to Optometry

Semester One and Semester Two

A clinically-focused course introducing students to optometric practice and addressing, at an introductory level, the ethical, cultural, theoretical and clinical aspects of the optometric examination. Topics covered include: preliminary tests from the eye examination, communication skills and clinical problem solving. The course will emphasise assessment, utilising advanced equipment and the production of clinically relevant outcomes and diagnosis-supportive hypotheses.

Course Coordinators: Dr Ehsan Vaghefi and Dr Phil Turnbull

OPTOM 263 A & B 30 pts

Essential Optics

Semester One and Semester Two

An introduction to optics relevant to optometry and necessary to understand the optical performance of the eye, the design of ophthalmic lens applications, and the principles of operation of clinical instrumentation. Topics include: the basic principles of physical optics, the principles of image formation by lenses and lens systems mirrors and prisms, optics of the eye, ocular ametropia and aberrations.

Restriction: OPTOM 215, 262, 265

Course Coordinators: Dr Ehsan Vaghefi and Dr Jason Turuwheua

OPTOM 272 A & B 30 pts

Visual Science 1: Structure and Function of the Visual System

Semester One and Semester Two

Anatomy and physiology of the eye and visual pathway covering topics ranging from the composition and structure of the tear film through to neural processing in the visual cortex. Aspects of visual function including spatial and temporal vision, motion perception and colour vision.

Investigation of visual perception using psychophysical and electrophysiological techniques.

Restriction: OPTOM 151, 170, 171

Course Coordinator: Dr Monica Acosta

MEDSCI 203 15 pts

Mechanisms of Disease

Semester One

Outlines the basic mechanisms, operating at the molecular, cellular and tissue levels, by which human disease develops. These include genetic factors, cell injury, inflammation, repair, circulatory disturbances, and neoplastic change. These mechanisms are illustrated by descriptions of the pathogenesis of specific diseases that are relevant to the New Zealand situation, or are the focus of current biomedical research.

Prerequisite: BIOSCI 107, MEDSCI 142

Course Coordinator: Dr Graeme Finlay

Please note: Students who have passed any of the above courses prior to the entry into BOptom, must cross credit, reassign or credit the course to BOptom. Students may be required to take an alternative course – please consult the faculty Student Centre for details.

Bachelor of Optometry Part III

OPTOM 316 A & B 60 pts

Optometry

Semester One and Semester Two

An integrative approach to the scope of optometric practice, addressing both the theoretical basis and clinical practice of the optometric examination, correction of refractive error and dispensing of optical appliances. Topics covered include: visual acuity, visual fields, colour vision, biomicroscopy, ophthalmoscopy, refractive examination, binocular examination, optical correction, lens materials and coatings, history taking, communication skills and clinical problem solving.

Restriction: OPTOM 211, 212, 265, 313, 314, 365, 366

Course Coordinator: Melinda Calderwood

OPTOM 345 A & B 15 pts

Principles of Ocular Pharmacology: General Principles of Pharmacology

Semester One and Semester Two

General principles of pharmacology. Pharmacodynamics. Drug absorption, distribution and metabolism. Mechanism of drug action at receptors. Drugs and their application on ophthalmic practice. The autonomic nervous system: anatomy and physiology. Mechanisms of action of ocular pharmaceutical agents.

Principles of pharmacological treatment of ocular disease. Drug interactions. Legislation on use of ocular pharmaceutical agents by optometrists in New Zealand and internationally. Introduction to therapeutic agents in optometric practice. Scope of treatment. Shared care.

Prerequisite: OPTOM 272

Restriction: OPTOM 245

Course Coordinators: Dr John Phillips and Dr Bruce Russell

OPTOM 353 A & B 15 pts

Ocular Pathology

Semester One and Semester Two

Pathophysiology of the eye. Histopathology of eye disease. Pathology of orbit, lacrimal system, conjunctiva, cornea, uvea, lens and retina. Developmental anomalies of the eye.

Restriction: OPTOM 251

Course Coordinator: Dr John Phillips

OPTOM 375 A & B 15 pts

Visual Science 2

Semester One and Semester Two

To provide an understanding of visual information processing in the human brain. In particular the cortical processing of shape, motion and colour, and development of the visual cortex will be addressed. A problem-oriented approach will develop critical thinking and problem solving skills. Students will acquire the ability to seek, evaluate and retrieve scientific information on which to base their clinical practice.

Restriction: OPTOM 270

Course Coordinator: Dr Misha Vorobyev

MEDSCI 202 15 pts

Microbiology and Immunology

Semester One

An introduction to the nature and roles of bacteria, viruses, fungi and parasites as the causative agents of human disease. Topics include: the defence mechanisms of the body, the immune system including autoimmunity and allergy, Control of disease by antimicrobials, sterilisation, disinfection, and sterile manufacturing practice.

Prerequisite: BIOSCI 107, MEDSCI 142

Restriction: OPTOM 241, PHARMACY 203

Course Coordinator:

Associate Professor Geoffrey Krissansen

Bachelor of Optometry Part IV

OPTOM 416 A & B 30 pts

Clinical Optometry

Semester One and Semester Two

Facilitates the transition from student to professional optometrist. Topics addressed include: structuring the routine optometric examination in a clinical setting, diagnosis and management of disorders of the visual system, case analysis, myopia control, visual ergonomics, vision screening, and visual standards. This course culminates in students examining and managing clients in the public University Clinics under supervision.

Restriction: OPTOM 312, 415

Course Coordinator: Bhav Solanki

OPTOM 430 A & B 15 pts

Contact Lens Practice

Semester One and Semester Two

Principles of contact lens fitting and clinical procedures used in contact lens practice. Topics include: current designs of contact lenses, soft and rigid materials used in contact lens manufacture, contact lens optics and verification techniques, contact lens fitting, patient contact lens care, and complications associated with contact lens wear.

Restriction: OPTOM 330

Course Coordinator: Dr Wanda Lam

OPTOM 442 A & B 15 pts

Optometry for Special Populations

Semester One and Semester Two

An advanced clinical course including consideration of clinical examination, diagnosis and management of visual disorders specific to children, adults with binocular vision abnormalities, or those with visual impairment with a focus on the older population. Topics include: developmental aspects and assessment of infants/children, investigation and management of binocular eye-movement disorders; and diagnosis and management of vision problems in visually impaired patients including electronic, optical and non-optical low vision appliances.

Restriction: OPTOM 341, 440, 441

Course Coordinator: Dr Joanna Black

OPTOM 450 A & B 30 pts

Diseases of the Eye and Visual System: Diagnosis and Management

Semester One and Semester Two

Signs, symptoms and diagnosis of diseases of the eye, ocular adnexa and visual system, including neurological dysfunction and signs of systemic disease. Management of diseases of eye, ocular adnexa and visual system, including the use of therapeutic agents. Indications, contraindications and side effects of therapeutic agents for the treatment of ocular disease.

Restriction: OPTOM 351, 352, 355

Course Coordinator: Dr Andrew Collins

OPTOM 783 A & B 30 pts

Research Project in Vision Science

Semester One and Semester Two

Supervised research that represents the personal scholarly work of a student based on a coherent inquiry at an advanced level into an approved topic related to vision science.

Restriction: OPTOM 470, 475, 480, 570

Course Coordinator: Dr Monica Acosta

Bachelor of Optometry Part V

OPTOM 510 A & B 30 pts

Advanced Clinical Optometry 1

Semester One and Semester Two

Clinical work with responsibility, under supervision, for patients.

Restriction: OPTOM 410

Course Coordinator: John McLennan

OPTOM 520 A & B 30 pts

Advanced Clinical Optometry 2

Semester One and Semester Two

Clinical work with greater emphasis on particular areas in optometry including: contact lenses, low vision, binocular vision, paediatric optometry and practice management.

Restriction: OPTOM 420

Course Coordinator: Michelle O'Hanlon

OPTOM 561 A & B 60 pts

Optometry in Practice

Semester One and Semester Two

Advanced clinical work experience in locations external to the Grafton Campus Optometry Clinic. These locations may include University satellite clinics, private optometry practices, hospital eye departments, private ophthalmology practices, overseas institutions, or other approved locations. Topics include; therapeutic management of eye disease, legislation relevant to healthcare including registration and competency, occupational safety and health, ethics, practice management, small business management.

Restriction: OPTOM 462

Course Coordinator: Dr Geraint Phillips

Research looking at visual illusions and consciousness is essential for understanding some of the more fundamental aspects of what it is “like” to be a human. Some questions that appear simple, like “How does our brain make visual judgments about size?” and “How does our brain use visual information to perform a movement?” are enormously complex problems and subjects of heated debate in the scientific community.


I chose to do my PhD at the School of Optometry and Vision Science because I have an opportunity to help answer some of these questions.

Poutasi W. B. Urale is a PhD candidate in Optometry and Vision Science.

**POUTASI W. B.
URALE**

PhD in Optometry



A close-up, profile view of a man with a beard, wearing a blue sweater over a plaid shirt. He is focused on a task, looking down at a blue component within a black mechanical frame. The frame has various adjustment knobs and a vertical rod. The background is dark and out of focus.

“Doing your PhD can keep you busy. Studying here has been great - I’ve been able to maintain a work-life balance”

Important information for undergraduates

Additional costs (equipment, instruments, insurance and books)

The total cost of pursuing the Bachelor of Optometry will be more than the tuition and student service fees. Additional costs include the purchase of essential equipment, instruments and prescribed texts and for Part V students, potential costs associated with travelling to off-site placement and externship locations. Current estimates of these additional costs are as follows:

Optometry Part II	\$1000
Optometry Part III	\$3500
Optometry Part IV	\$5000
Optometry Part V	\$2000

For Parts IV and V, there is also Professional Indemnity (PI) insurance at a per annum cost of approximately \$70 to \$300 and Professional Association Fees of approximately \$10.

In addition, students should budget for personal photocopying, stationery and other books. These costs can be from around \$500 per year.

Clinical practice requirements

Students entering Parts IV and V of the BOptom will be issued with: Clinic Procedures Manual, Electronic Health Records System Manual and the Guide to Clinical Assessment manual. All students must agree to read these manuals before commencing duties in any optometry clinic.

Professional Indemnity (PI) insurance is viewed as the responsibility of students about to enter the optometry profession and is compulsory before students enter the clinic. Continuity of PI insurance is essential for responsible professionals. Accordingly, arrangements have been made to enable students to become members of the New Zealand Association of Optometrists Inc. (NZAO) and obtain PI insurance through this professional association.

The forms for student membership of NZAO and Professional Indemnity (Malpractice) Insurance will be made available to students prior to their entering clinic.

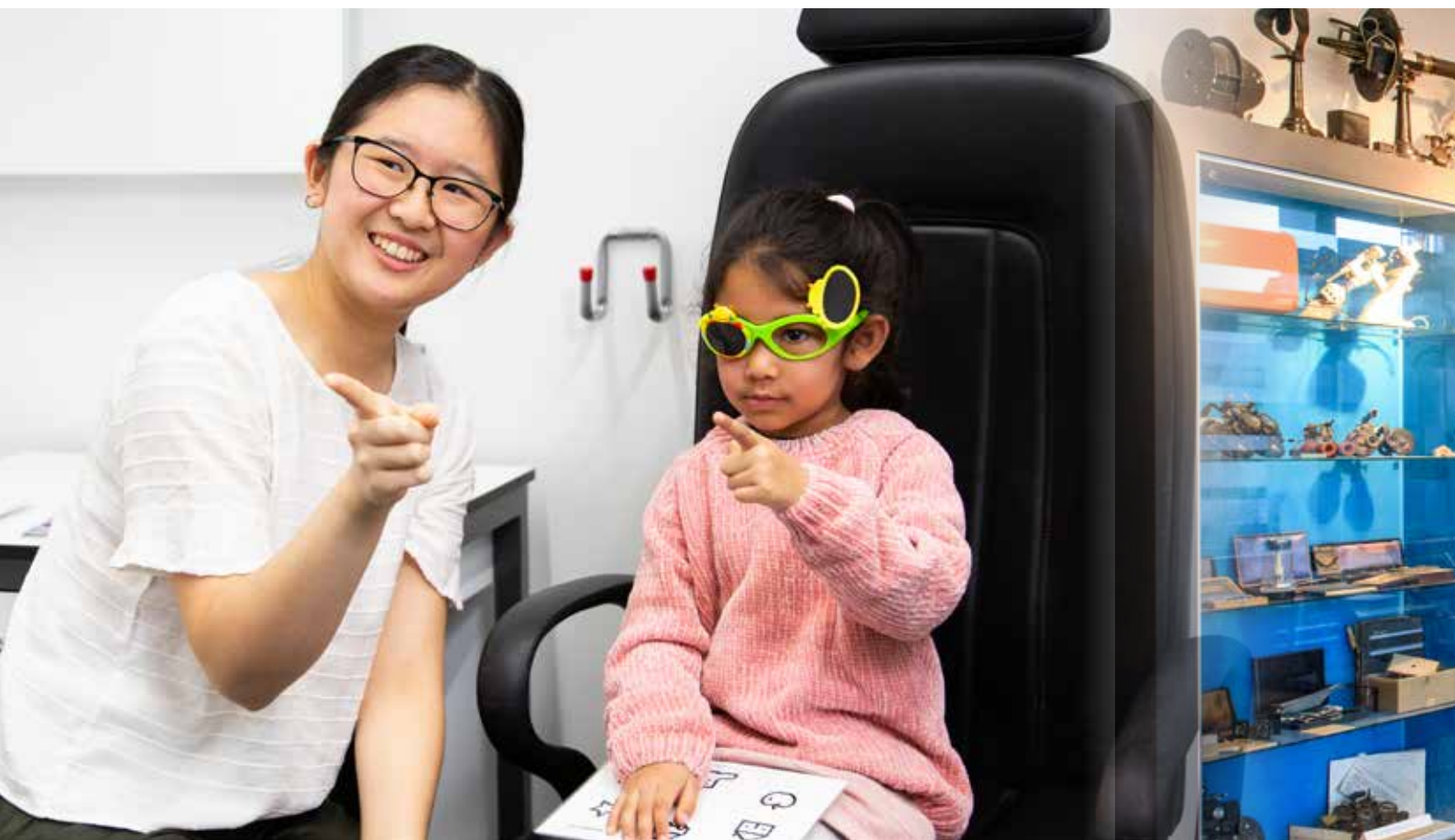
Students undertaking an externship in another country must have appropriate Professional Indemnity Insurance arrangements in place well before leaving New Zealand.

Identity Check, Police Vetting, Vulnerable Children Act and Confidentiality Agreement

The Vulnerable Children's Act 2014 requires students who will work with children during their studies to undergo identity checks and police clearance, as well as an interview. Questions relating to working with children are asked as part of the applicant interview and identity-checking process. When students are invited to the interview process, they are asked to provide the names of referees. If students are offered a place in the Bachelor of Optometry, the referees will be asked to complete an online form by early January.

During Part IV, well in advance of entering Part V, it is necessary for students to undergo an identity check and have the police clearance renewed. Students must also agree to maintain the confidentiality of patient information.

1. In addition to identity and police checks, the Vulnerable Children Act 2014 requires students who will work with children during their studies to be interviewed. Questions relating to working with children are asked



as part of the applicant interview and identity checking process. When students are invited to the interview process, they are asked to provide the names of referees. If students are offered a place in the Bachelor of Optometry, the referees will be asked to complete an online form by early January.

2. The identity check requires two kinds of identification. The primary ID document must be either a passport or an original birth certificate. Examples of the other form of ID include a driver's licence or an 18+ card. At least one of the forms of ID must include a photograph. If students have changed their name (e.g., by deed poll or marriage) evidence of this must be provided.
3. Faculty staff will obtain the police clearance check for students. Consent forms for these processes need to be completed by students and returned to the school.
4. A signed confidentiality agreement covering patient information is required to be submitted.

Immunisation and transmission of infectious diseases

As an optometry student, and later as an optometrist, you will be exposed to infection, especially when you have close contact with patients. A compulsory immunisation programme is carried out prior to you entering the clinic in Part III.

As you will be undertaking hospital placements the University of Auckland requires all students to have maximum cover from disease, to protect yourself and patients with whom you may come into contact. All students must be adequately protected against measles, mumps, rubella, pertussis, varicella zoster and hepatitis B. You will also be required to ascertain your tuberculosis status. To ascertain immunity and infection status, blood tests will be carried out. The testing costs will be met by the faculty if they are conducted through the University Health Services. For those found to have negative immunity, vaccination will be required and you will need to arrange and pay this cost. Note that positive tuberculosis results may require further investigation.

All the test results (including post vaccination results) will be collated on the Immunisation Status Report Form and provided to you. You will then need to submit the completed form to the school.

It is also recommended that students should review immunisations against diphtheria, tetanus and poliomyelitis. It will be helpful to show evidence of the immunisations you have previously had from your doctor so the details can be ascertained and incorporated.

Students are strongly advised to obtain an annual influenza vaccine which is provided free for students in Part III or higher.

For assistance with any immunisation matters please contact:

Grafton Campus
University Health and Counselling Services
Phone: +64 9 923 7681

Please ascertain from your parents or doctor which immunisations you have had. This will

help to determine which immunisations you will require now or in the future.

Fitness to practise

The Health Practitioners Competence Assurance Act (2003) places an obligation on the provider of the educational programme to notify the appropriate registration board of any student who is completing their course and who is deemed to be unable to perform the functions required for the practice of the relevant profession due to Fitness to Practice considerations.

The Faculty of Medical and Health Sciences has a Code of Fitness to Practise that applies to students in the health profession programmes including the Bachelor of Optometry. The goal of the policy and associated processes is to put in place remedial or support mechanisms that will enable the student to remain in the health profession programme wherever possible, and where the proposed remedial action does not place the public, the student, or the University at risk either as a student or following graduation.

At the commencement of their studies within the professional programme, each student must confirm their knowledge of the requirements of the Code of Fitness to Practise.

More information is available at
www.auckland.ac.nz/fitness-to-practise



Undergraduate scholarships and prizes

New Zealand Association of Optometrists (NZAO) Awards

New Zealand Association of Optometrists Undergraduate Awards

Since 1992, undergraduate scholarships known as the New Zealand Association of Optometrists Undergraduate Awards have been awarded annually to students enrolled for the Bachelor of Optometry Programme and ordinarily resident in New Zealand.

- One Award of \$1,000 to be presented to the top student entering BOptom Part III with the highest aggregate mark in Part II whilst not repeating Part II.
- Two Awards of \$1,000 – each one to be presented to a student entering BOptom Part IV. One Award will be made to the student gaining the highest aggregate mark in Part III whilst not repeating Part III, and one award will be made to the student showing most improvement during study for Part III whilst not repeating Part III.
- Three Awards of \$1,000 – each one to be presented to a student entering BOptom Part V. Two awards will be made to the students gaining the top two aggregate marks in Part IV whilst not repeating Part IV, and one award will be made to the student showing most improvement during study for Part IV whilst not repeating Part IV.
- One Award of \$1,000 to be presented to a Māori/Pacific Island student entering BOptom Part II. In the event of more than one Māori/Pacific Island student entering BOptom Part II, the award will go to the eligible student gaining the highest GPA in the previous year.
- The Peg Wood Prize of \$500 – awarded to the student who obtains the highest combined grade in the course OPTOM 442 Optometry for Special Populations, of the Bachelor of Optometry Programme.

No applications for the above awards are necessary.

Other Awards

Dean's Medal

This award is made to a graduand who makes an outstanding contribution to the academic development of the faculty during their optometry studies.

Senior Scholar

These \$500 awards are made by the University Council, on the recommendation of the Head of School of Optometry and Vision Science, to students who are eligible to graduate with an undergraduate degree and have achieved the top GPAs over their last 90 or more points of their degree. To be eligible recipients must have achieved a minimum GPA of 6.5 or at least an A-average across their courses in Part V.

Anna Pritchard Prize for Optical Dispensing

This award of \$500 (subject to approval) is made to the student who achieves the highest grade in optical dispensing in Part V.

Raymond Harry Hawkins Prize

This award is for the best project in Course OPTOM 783 to the value of \$550.

New Zealand College of Optometrists (NZCO) Prize

This prize will be awarded annually to full-time students achieving the highest marks for their presentations in OPTOM 783. The prize will be a maximum of \$300 to each member of the winning group.

Excellence in Clinical Optometry Prize

This prize is funded by Mr Chee Seang Loh, an alumnus of the BOptom and Honorary Teaching Fellow. The \$500 prize is awarded to the student achieving the highest GPA across the Part V clinical courses.

The Buchanan Charitable Foundation Research Project Prize (subject to approval)

This prize of \$1,000 will be awarded annually to the student achieving the highest mark in an honours project in the area of public eye health research.

Undergraduate Scholarships

Summer Research

- **New Zealand Optometric Vision Research Foundation (NZOVRF) Scholarship**
NZOVRF provides funds for local research and vision care projects. Each year the NZOVRF awards one summer studentship of \$5,000. To be eligible students must be enrolled in a BSc, BSc (Hons), BTech, BOptom, or GradDipSci, studying approved science disciplines. Selection will take into account the project, availability of an appropriate supervisor over the summer period and the student's academic record. Applications close early in September each year.
- **Paul Dunlop Scholarship**
The New Zealand Association of Optometrists (NZAO) established a scholarship to recognise Paul Dunlop's dedication to the advancement of Optometry and Vision Science Education and Research. Applicants must be an NZAO student member undertaking a summer research project under supervision of the School of Optometry and Vision Science. Applications close at the end of August each year. Value is \$5,000 stipend and \$1,000 research expenses.
- **Faculty summer scholarships**
Each year the Faculty of Medical and Health Science funds several summer scholarships. Applications open in July and close mid-August. Applicants must be completing at least year two of an undergraduate degree, have a Grade Point Average at or above 6 and have received no more than one previous summer scholarship. Note: When funds allow the School of Optometry and Vision Science also offers one or two summer scholarships to suitable students who were not awarded another scholarship.

Postgraduate study

A variety of study options are available for new BOptom graduates, practising optometrists and vision scientists to gain postgraduate qualifications in optometry and vision science.

The school encourages both new and less-recent graduates to consider postgraduate study as it provides an opportunity to gain advanced knowledge in a specialised field. The school's postgraduate programmes are designed to assist and enhance clinical, biomedical and vision science research.

There are a number of active research groups within the school undertaking leading-edge clinical, biomedical and vision research. In addition there are research study collaborations with a number of specialist groups:

- New Zealand National Eye Centre
- Department of Ophthalmology
- School of Medical Sciences
- School of Biological Sciences
- Department of Physiology
- Department of Exercise Sciences
- Auckland Bioengineering Institute
- Liggins Institute
- Department of Psychology

Postgraduate study in the school offers:

- Outstanding clinical, biomedical and psychophysical research facilities
- Leading researchers in various fields of clinical, and biomedical and vision research
- Access to collaborators, equipment and excellent facilities

If you are contemplating postgraduate study you should consult with the school's postgraduate advisors about the options available to you.

They will work with you to design a programme suitable to your personal needs and situation. Note that study options can be undertaken full-time or part-time and some programmes allow primarily distance based study. This is an attractive option for practising optometrists.

Postgraduate study does not lead to registration (permission to practise) as an optometrist in New Zealand.

Postgraduate Diploma in Science (PGDipSci)

This is a one-year postgraduate programme of study comprising a coherent set of courses. BSc graduates, or those who have attained an equivalent qualification approved by Senate, are able to apply. The Postgraduate Diploma in Science provides the opportunity to acquire a postgraduate qualification in a specific subject.

The Postgraduate Diploma in Science requires the student to pass at least 120 points. The personal programme of study of each student must have the approval of the Head of School.

A student who successfully completes the requirements for this diploma may apply for entry to the Master of Science in Optometry, providing the student meets the regulations current at that time. One thesis year will be required to complete the Master of Science in Optometry.

Postgraduate study does not qualify graduates to practise as optometrists in New Zealand

Master of Health Science (MHSc)

This is a one year full-time/two years part-time (120 points) programme open to New Zealand registered optometrists who meet the MHSc admission criteria and who hold a current annual practising certificate. The programme allows practising optometrists to undertake advanced study in a chosen sub-specialist area, e.g., advanced contact lens fitting, paediatric optometry and binocular vision, low vision, therapeutic management of eye diseases and clinical application of myopia control.

Students are required to pass 120 points from OPTOM 757 – OPTOM 791. Applicants must be registered New Zealand optometrists.

Postgraduate study does not qualify graduates to practise as optometrists in New Zealand.

Master of Science (MSc)

registered optometrists who meet the MHSc admission criteria and who hold a current annual practising certificate. Current areas of research available include clinical optometry, anatomy and physiology of the lens and retina, visual psychophysics and ocular imaging.

Students are required to pass 120 points: OPTOM 796 Msc thesis as part of the programme of study.

Postgraduate study does not qualify graduates to practise as optometrists in New Zealand.

Doctor of Philosophy (PhD)

The PhD degree is generally accepted as the appropriate qualification for a career in scientific research or in academia. It consists of advanced study and supervised research leading to the presentation of a thesis. This thesis must be an original contribution to knowledge and meet recognised international standards of scientific research. This course of study is usually undertaken early in one's research career, following the attainment of a degree with honours, a masters degree, or an equivalent preliminary qualification.

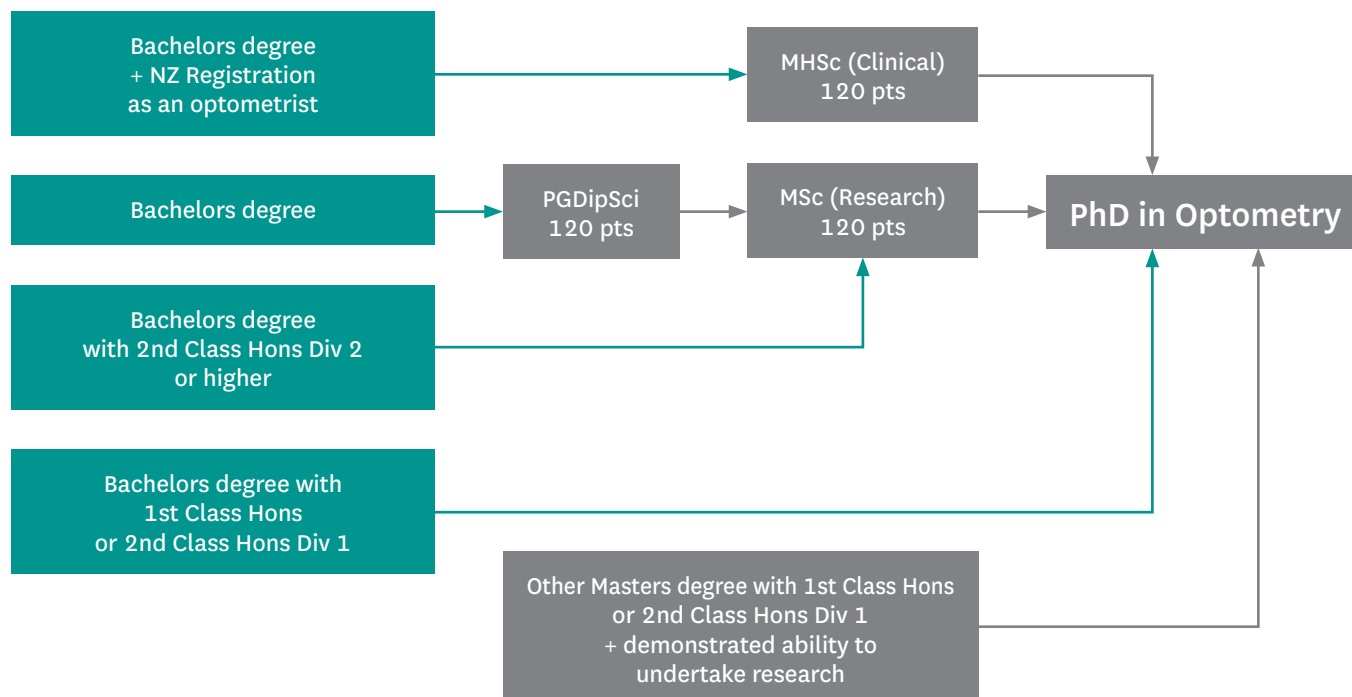
The PhD statute governs this programme.

Each year students are required to enrol in and pass 120 points: OPTOM 898 A & B Optometry PhD Thesis.

Postgraduate study does not qualify graduates to practise as optometrists in New Zealand.

Please refer to the current University Calendar for full details of the admission requirements for these postgraduate programmes.

Postgraduate programme pathways



Course prescriptions

The University of Auckland academic year consists of two semesters. Most courses are run over both semesters and are labelled A & B accordingly. To complete these double semester courses, students must enrol in both A & B courses.

OPTOM 751 A & B 30 pts

Special Study in Vision Science

The study of selected fields of vision science at an advanced level with detailed study of one particular field. The topic will be prescribed by the Head of School.

Course Coordinator: Dr Misha Vorobyev

OPTOM 752 A & B 30 pts

Special Study

Course Coordinator: Dr Monica Acosta

OPTOM 757 A & B 30 pts

Special Study in Optometry

The study of selected fields of optometry at an advanced level with detailed study of the particular field. The topic will be prescribed by the Head of School.

Course Coordinator: Associate Professor Rob Jacobs

OPTOM 759 A & B 30 pts

Special Study

Course Coordinator: Dr Joanna Black

OPTOM 791 A & B 90 pts

Research Portfolio in Clinical Optometry

Advanced clinical optometry research in a chosen sub-specialist area of optometric practice. The area of special interest may include contact lenses, low vision, paediatric optometry, binocular vision, ocular disease management, or any other area approved by the Head of School.

Course Coordinator: Dr John Phillips

OPTOM 796 MSc A & B 120 pts

Thesis in Optometry

Course Coordinator: Dr Monica Acosta

Postgraduate scholarship in optometry

HC Russell Memorial Postgraduate Scholarship

The New Zealand Association of Optometrists (previously the New Zealand Optometrical Association) established a scholarship in memory of Mr Harry C. Russell in recognition of his services to the advancement of optometric education in New Zealand.

The scholarship has a value of \$4,500 for a masters student and \$10,000 for a doctoral candidate who is pursuing full-time postgraduate studies in optometry or visual science.

Postgraduate Advisors

Dr Monica Acosta

(MSc/PhD)

Email: m.acosta@auckland.ac.nz

Dr John Phillips

(MHSc Clinical)

Email: j.phillips@auckland.ac.nz

Staff list

Academic staff and their research interests

Head of School Professor Steven Dakin

BSc (Hons), PhD

Email: s.dakin@auckland.ac.nz

Phone: +64 9 923 8898

Professor Dakin is Course Director for OPTOM 272 and 375, the two visual science courses.

He has four areas of research interest:

- Spatial vision: How the brain extracts information from natural images. This includes reading, face-processing, shape-recognition, and how these processes break down in peripheral vision.
- Visual processing in neuropsychiatric and neurodevelopment disorders: He has current projects looking at the vision of people with schizophrenia and autism spectrum disorders.
- Paediatrics: In particular, automated methods for assessing the visual function of infants and the development of new treatments for amblyopia.
- Vision in ageing, including improving diagnosis of glaucoma and investigating the effects of spatial distortion associated with macular degeneration.

Deputy Head of School Senior Lecturer Joanna Black

BSc, BOptom (Hons), PhD, CertOcPharm, TPA endorsed

Email: j.black@auckland.ac.nz

Phone: +64 9 923 2405

Dr Black teaches in the areas of clinical optometry and binocular vision. She is involved in teaching the undergraduate binocular vision and ocular pathology courses as well as supervision within the optometry clinic. Her research interests include visual development and rehabilitation, including the diagnosis and treatment of amblyopia.

Academic Director Senior Tutor Andrew Collins

BOptom, MSc, PhD, CertOcPharm, TPA endorsed

Email: a.collins@auckland.ac.nz

Phone: +64 9 923 6484

As Academic Director, Dr Collins is responsible for the smooth delivery of the BOptom

programme. Dr Collins teaches in the areas of clinical optometry, vision science, ocular disease and therapeutics. He is director of Optometry Council of Australia and New Zealand. Dr Collins' research interests are in the areas of environmental and genetic factors affecting myopia development, vision in animals, and vision in transportation. He has recently completed a PhD investigation into the effects of light on myopia development.

Clinic Director Senior Lecturer Geraint Phillips

BSc, MCOptom, DCLP, OD, CertOcPharm, TPA endorsed

Email: g.phillips@auckland.ac.nz

Phone: +64 9 923 6503

As Clinic Director, Dr Phillips is responsible for the smooth running of the University Optometry Clinic.

Dr Phillips teaches Diseases of the Eye within Part IV and ocular therapeutics within Part V of the Bachelor of Optometry programme. Dr Phillips is also Course Coordinator of one Part V course involving Optometry in Practice.

Associate Professor Robert J Jacobs

MNZM, MSc, PhD, PGDipBus, CertOcPharm, TPA endorsed, LOsc, FAAO, FACO

Email: r.jacobs@auckland.ac.nz

Phone: +64 9 923 6019

Associate Professor Jacobs is involved in the clinical vision sciences and in specialist clinical areas including colour vision and low vision. He is a previous Head of School and is an honorary member of the New Zealand Association of Optometrists. Rob was awarded the New Zealand Order of Merit in 2017 for his services to optometry and education.

His research interests are in the clinical vision sciences relating fundamental measures of visual performance such as visual acuity and sensitivity to defocus, to measures which are relevant in clinical and practical situations. Visual defects such as defocus, colour vision anomalies, and age related visual changes are the subject of research projects. Associate Professor Jacobs has acted as an advisor in the area of visual ergonomics including visual problems within the aviation industry and vision standards.

Associate Professor Samuel Schwarzkopf

BSc (Hons), PhD

Email: s.schwarzkopf@auckland.ac.nz

Phone: +64 9 923 89734

The main goal of Associate Professor Schwarzkopf's research is to understand how we experience the world around us through our senses. Each person is unique and our perception varies quite dramatically both between and even within individuals. For instance, perceptual experience can vary between contexts (visual illusions), across different times, and also simply between locations in the environment. A major part of Dr Schwarzkopf's research investigates how this variability in perceptual experience arises in the human brain. He combines psychophysical experiments with functional neuroimaging and computational methods for measuring the fine-grained organisation of sensory brain areas. He also explores which non-perceptual factors govern people's perceptual judgements and decision-making.

In addition to leading to a better knowledge of how perceptual processing works in general, the principles discovered can also advance our understanding of how brains function in different populations or in different clinical conditions. Dr Schwarzkopf's research also studies perception in different healthy populations, in disorders of the visual system (e.g., amblyopia), or in autism spectrum disorders and schizophrenia.

Associate Professor Jacqueline Ramke

BAppSci(Optom), MPH, MSHM, PhD

Email: j.ramke@auckland.ac.nz

Phone: +64 9 923 [TBC]

Associate Professor Jacqui Ramke has two decades of experience working in global eye health. Her primary research focus is on quantifying and understanding inequality in eye health and seeking solutions to promote equity. Jacqui has served as a Commissioner on the Lancet Commission on Global Eye Health, contributing to several Technical Working Groups of the World Health Organization and a member of the Gender Equity Working Group for the International Agency for the Prevention of Blindness.

Jacqui's research in Aotearoa New Zealand focuses on developing and testing strategies to improve access to eye care and reduce health inequity. A key component of this work is gaining a better understanding of eye health, vision impairment and access to eye care in Aotearoa, using routinely collected health information as well as population-based data. A second component is using this information to work collaboratively with communities, service providers, researchers and policymakers to identify priorities and develop testable solutions to address eye care inequity.

Senior Lecturer Monica Acosta

BSc, MSc, PhD

Email: m.acosta@auckland.ac.nz

Phone: +64 9 923 6069

Dr Acosta is the Principal Investigator of the Cell and Molecular Biology of the Retina (CMBR) Laboratory. She studies the mechanisms of retinal damage in ocular and neurological diseases. Dr Acosta teaches biomedical topics, vision science, and evidence-based updates in retinal pathology. She is the BOptom Part II Coordinator and the Postgraduate Advisor for the PhD and Research Masters programmes. Dr Acosta's research interest and expertise includes retinal degeneration in neurological diseases. She is a Principal Investigator in the Centre of Research Excellence (CoRE)- Brain Research New Zealand/Rangahau Roro Aotearoa and an investigator in the Centre for Brain Research (CBR).

Senior Lecturer Clairton de Souza

MD, PhD, CBO

Email: c.desouza@auckland.ac.nz

Phone: +64 9 373 7999

Dr de Souza is also a Consultant Vitreoretinal Surgeon at Auckland District Health Board. He obtained his medical degree and ophthalmology specialist qualifications in Brazil, a Master in Retina in Spain, and undertook both surgical and medical fellowships in Adelaide, Perth, Auckland and London. He obtained his PhD at the University of Auckland in 2012. His main research interests are the cellular phenomena involved in retinal remodelling in human retinal detachment and other retinopathies.

Senior Lecturer John R Phillips

BSc, BSc (Optom), MSc, PhD, MCOptom,
CertOcPharm TPA endorsed

Email: j.phillips@auckland.ac.nz

Phone: +64 9 923 6073

Dr Phillips' research interests are in the areas of childhood myopia development and progression, as well as the physiological processes which control eye size and which normally ensure that as the eye grows it remains emmetropic (i.e., without a refractive error). Dr Phillips teaches ocular anatomy and physiology, pathology and optometry in the Bachelor of Optometry.

Senior Lecturer Misha Vorobyev

PhD

Email: m.vorobyev@auckland.ac.nz

Phone: +64 9 923 6591

Plants often use brightly coloured flowers to advertise a reward of nectar and pollen to insects and birds that pollinate them. Birds use colourful plumage to attract mates. Similarly, colourful patterns of fish skin are used to

communicate with other fish. Animals also use coloured patterns to protect themselves—a coloured pattern may help conceal or disguise an animal, or advertise that it is toxic. The main theme of our research is the relationship between colour vision systems and colourful patterns of plants and animals. We use psychophysical methods to study colour vision of man and animals. To understand the ecological significance of diversity of colour vision systems we combine mathematical modelling with measuring spectra of biologically important objects – flowers, fruits, birds' plumage and fish skin. Dr Vorobyev's studies, published since 1996 in 53 papers, have attracted over 1300 citations.

Senior Lecturer Ehsan Vaghefi

BSc, MSc, PhD

Email: e.vaghefi@auckland.ac.nz

Phone: +64 9 923 3174

Dr Vaghefi obtained his PhD from Auckland Bioengineering Institute, researching the nutritional supply system and the optical homeostasis of the ocular lens, with a long term goal of understanding the molecular and physiological basis of the onset and progression of cataracts. He currently holds a joint appointment as a lecturer in physiological optics (School of Optometry and Vision Sciences) and a research fellow (Molecular Vision Lab and Auckland Bioengineering Institute). His appointment is a strategic initiative to develop a joint research led teaching programme in physiological optics. He is using his expertise in quantitative ocular imaging and computational modelling to create a digital tool to aid in the development of effective preventive therapies to combat cataracts, the leading cause of blindness worldwide.

Senior Lecturer Philip Turnbull

BOptom (Hons), PhD, TPA endorsed

Email: p.turnbull@auckland.ac.nz

Phone: +64 9 373 7599 ext 85499

Dr Turnbull obtained his BOptom (Hons) from the University of Auckland in 2008, the first year in which the undergraduate course included therapeutic prescribing rights as part of the five year programme. After working in private practice, he returned to complete a PhD thesis in 2014 which investigated whether the convergently evolved eye of the squid can emmetropise. He teaches in the area of clinical optics, and is involved in fifth year clinical assessments. His research interests include the application and development of new technologies, such as high-speed eyetracking and virtual reality, and how they can be used to improve the clinical measurement of visual function.

Senior Research Fellow Jason Turuwhenua

BSc, MSc, PhD

Email: e.j.turuwhenua@auckland.ac.nz

Phone: +64 9 923 5807

Dr Turuwhenua is a research fellow who works between the Auckland Bioengineering Institute and the School of Optometry and Vision Science. Dr Turuwhenua is interested in how engineering methods might be applied to problems of interest in vision. To date this has involved work on corneal topography (videokeratography), simulating retinal images, as well as image processing. At present Dr Turuwhenua is working on developing 'the virtual eye', which is a physics based system for investigating eye disease.

Lecturer Tina (Yitian) Gao

BOptom (Hons), PhD

Email: t.gao@auckland.ac.nz

Phone: +64 9 923 2955

Dr Gao obtained her PhD from the University of Auckland, with a focus on the neural mechanisms and treatment of amblyopia (lazy eye) in children and adults. She teaches in areas of binocular vision and clinical optometry, and has research interests in binocular vision assessment, amblyopia treatments, eye tracking, and psychophysics.



Professional Teaching Fellows – Clinic Tutors

Kerry Atkinson BSc(Hons), FCOptom, DipCLP, CertOcPharm

Zaria Bradley, BOptom(Hons)

Melinda Calderwood BOptom, PGDipSci

Jason Dhana MSc, BOptom(Hons)

Ashley Gray, BOptom (Hons), BSc

Kristine Hammond, RDONZ FBDO O/S

Wanda Lam OD, BSc

John McLennan BSc, Dip Opt, Cert Oc Pharm.

Robert Ng BOptom (Hons)

Michelle O'Hanlon BOptom(Hons)

Bhavna Patel, BOptom (Hons)

Jaymie Rogers BSc, BOptom(Hons)

Kathryn Sands BOptom, CertOcPharm

Lisa Silva BMedSci(Hons), BSc(Hons)Optometry

Bhavini Solanki BSc(Hons), MSc

Marcy Tong OD, BSc

Postdoctoral Research Fellows

Lucy Goodman, PhD

Lisa Hamm MSc, PhD

Catherine Morgan, PhD

Keith R Pine BSc, MBA, PhD

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Timetable Co-ordinator

Kyle Kratochvila, BSc (Hons)

Teaching Laboratory Technical Manager

Adina Giurgiu, MSc (Chemistry)

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Optical Assistant

Emily Benefer, BSc Biomedical Science, PGC

Disclaimer: Although every reasonable effort is made to ensure accuracy, the information in this document is provided as a general guide only for students and is subject to alteration. All students enrolling at the University of Auckland must consult its official document, the University of Auckland Calendar 2019, to ensure that they are aware of and comply with all regulations, requirements, and policies. We advise that the University of Auckland is not involved in the employment of completing health professional students and can make no guarantee of post-qualification registration or employment in New Zealand or any other country.

Dates to remember

Applications to the University of Auckland should be received no later than the published closing date. If there are places available, applications received after the closing date will be considered on the basis of academic merit.

FMHS Undergraduate application dates	
Programme	Application closing date
Bachelor of Optometry	1 October 2020

Academic year 2021*	
Summer School – 2021	
Lectures begin	Wednesday 6 January
Auckland Anniversary Day	Monday 27 January
Waitangi Day holiday	Monday 8 February
Lectures end	Friday 12 February
Study break/exams	Study Break: Saturday 15 February Exams: Monday 15 – Wednesday 17 February
Summer School ends	Wednesday 17 February
Semester One – 2021	
Semester One begins	Monday 1 March
Mid-semester break	Friday 2 – Friday 16 April
ANZAC Day	Monday 26 April
Graduation	Monday 3, Wednesday 5, Friday 7 May
Queen's Birthday	Monday 7 June
Lectures end	Friday 4 June
Study break/exams	Study Break: Tuesday 8 – Wednesday 9 June Exams: Thursday 10 June – Monday 28 June
Semester One ends	Monday 28 June
Inter-semester break	Tuesday 29 June – Friday 16 July
Semester Two – 2021	
Semester Two begins	Monday 19 July
Mid-semester break	Monday 30 August – Friday 10 September
Graduation	Tuesday 28 September
Lectures end	Friday 22 October
Labour Day	Monday 25 October
Study break/exams	Study Break: Tuesday 26 October Exams: Thursday 28 October – Monday 15 November
Semester Two ends	Monday 15 November
Semester One – 2022	
Semester One begins	Monday 28 February

Orientation

Orientation takes place the week before lectures start each semester. Faculty Orientation Day is designed to help you feel more connected with your faculty of study, while allowing you to meet staff and students who you will come across during your time at the University. You will be buddied up with your UniGuide who will be there to answer any questions you may have about university life.

For more information see www.auckland.ac.nz/orientation

For information on International Orientation Week visit

www.auckland.ac.nz/international_orientation





Contact

Faculty of Medical and Health Sciences
The University of Auckland
85 Park Road
Grafton
Auckland
New Zealand

Phone: 0800 61 62 63

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