Optometry, as a primary health care profession, covers a wide range of responsibilities. From corporate to individual practice, and from community to hospital locations, optometrists are on the front line when it comes to caring for the vision of New Zealanders. Your studies in Optometry and Vision Science will equip you for the challenges you will face and the lifelong learning needed to achieve a satisfying career. While the study of Optometry and Vision Science has a professional focus, key strands of basic science and health science are maintained throughout the programme. By graduating with a Bachelor of Optometry (BOptom) you will be equipped with the knowledge, experience and skills required to either enter practice or to continue with your postgraduate studies.

We are the only Optometry school in New Zealand, and one of six schools in Australasia with accreditation from The Optometry Council of Australia and New Zealand. Our accreditation enables graduates to practice optometry in New Zealand and in Australia without the need to undertake additional examinations.

Optometry at Auckland began in 1965 within the Faculty of Science and moved to the Faculty of Medical and Health Sciences in 2012. Our primary location on the Grafton campus supports our links with allied clinical disciplines such as Ophthalmology, and our staff’s collaborative research in areas such as physiology and neuroscience. Here we occupy modern, well-appointed space which includes dedicated clinical facilities and state-of-the-art research laboratories.

We use a variety of teaching methods and have a variety of teaching venues to support the BOptom programme. In addition to work within the clinical facilities at Grafton, students work at other clinics and locations in the Auckland region. Final year students are encouraged to spend one or more externships in private practice, at other Optometry Schools, or at other approved venues.

The School also has a strong commitment to research and offers study towards the Postgraduate Diploma in Science, and the Master of Science and Doctor of Philosophy degrees.

Whether you are a student participating in the undergraduate BOptom programme or a graduate student continuing your education, I wish you every success in your endeavours. I and my staff assure you that you have our support in reaching your goals.

Professor Steven Dakin
Head, School of Optometry and Vision Science
Optometry as a Career

As a primary health care professional, an optometrist is specifically educated and clinically trained to examine the eyes and integrity of the visual pathways, to diagnose vision problems or impairments, and to prescribe and provide treatment. After thorough examination, if necessary with advanced instruments, the optometrist 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 practice, 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 industry.

Opportunities also exist for those wishing to undertake postgraduate education, research and teaching, not only in New Zealand but also at overseas universities.

Optometry practice in New Zealand

Completion of the University of Auckland BOptom programme will enable a graduate to apply for registration to practice 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 practice 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 through Student Records in the ClockTower.

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 practice 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.

Website: www.ocanz.org

New Zealand Masters or PhD qualifications in Optometry or in Vision Science are not accepted for registration as an Optometrist in New Zealand.

Emilie Langley, Part V student 2014 with Kerry Atkinson at externship practice site, Mortimer Hirst, St Heliers.
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 Optom), Doctor of Philosophy (PhD), Postgraduate Diploma in Science (Optometry). Staff also offer Continuing Education Programmes.

**Physical address**

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

**Postal Address**

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, clinical teaching and learning spaces are located on the Grafton Campus, and on the Tamaki campus in East Auckland. 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 digital photo documentation that has 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 prescribining spectacles, contact lenses or low vision aids, managing eye diseases with topical medicines, treating eye disorders with exercises or giving advice on lighting and screen based equipment. Where necessary, patients are referred to medical practitioners.

The Optometry Clinics are “teaching laboratories”, 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 twenty-four 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 and other ophthalmology practices. During their final year, students are encouraged to spend time in approved externship locations. These might include optometric practices, optometry schools, hospitals or other institutions in New Zealand and overseas.

**Admission criteria for the BOptom**

New Zealand and Australian Citizens and Permanent Residents

Entry to Part II of the programme is limited. Applications close on 1 October 2016 for 2017 places. Applicants are considered through one of two entry pathways: the undergraduate entry pathway, the graduate entry pathway.

Five places are available for applicants of Maori and Pacific Island descent if they meet the required academic criteria. To be considered for these places Maori and Pacific Island applicants would apply through the Maori and Pacific Admission Selection (MAPAS) scheme which will involve an interview by MAPAS staff.

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

The required Otago papers are: BIOC 192, CELS 191, CHEM 110, and PHSI 191. The University of Auckland’s course requirements set out in the University Calendar are also acceptable.

Other New Zealand universities do not currently have a 15 point General Science requirement. It is recommended that a 15 point General Science requirement be included as part of the 30 points.

Selection process

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

**Undergraduate programme: admission pathways**

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 and offers of places can be through either the undergraduate or graduate entry pathways.

For more information students should contact:
Auckland International
The University of Auckland
Private Bag 90109
Auckland 1142
New Zealand
Phone: +64 9 373 7051
Fax: +64 9 373 7055
Email: int-questions@auckland.ac.nz

Maori and Pacific Admission Scheme (MAPAS)

Applicants 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 degree and apply as a graduate.

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

- Stage 1 BSc (Biomedical Science) and Alternative Admission applicants applying to Optometry under MAPAS will be required to attend a MAPAS Optometry Interview in December.
- The MAPAS Optometry Interview will assess each candidate using six domains – academic, whanau/family, culture, problem solving, awareness and knowledge of MAPAS. This interview will be with a MAPAS academic representative.

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 BSc – Biomedical Science programme:

- BISC1101 Essential Biology: From Genomes to Organisms Semester One
- BISC1102 Biology for Biomedical Science: Cellular Processes and Development Semester One
- BISC1106 Foundations of Biochemistry Semester Two
- CHEM110 Chemistry of the Living World Semester One or Semester Two
- PHYSICS160 Physics for the Life Sciences Semester One or Semester Two
- MEDSCI140 Biology for Biomedical Science: Organ Systems Semester Two

The additional 30 points of courses required for full time enrolment can be completed from any other courses listed in the Bachelor of Science schedule. It is recommended that a 15 point General Education course be part of these 30 points.

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, HEAL 190, HUBS 190, HUSB 190 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 six prerequisite courses. Interviews will be required and will be offered to those who meet the minimum requirement. These will be conducted in late November and early December. 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 6.5. 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 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.

The University of Auckland |
Faculty of Medical and Health Sciences |
Optometry Handbook 2016 |
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End of Document
Credit and concessions for students entering the BOptom

Credit regulations are listed in the University of Auckland Calendar.
- If you are transferring from another NZ university.
- If you have undertaken previous study at Auckland and apply for credit at the time of enrolment.

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

Structure of the Bachelor of Optometry degree

The University of Auckland academic year consists of two semesters. Some 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 I of the degree, a student must have taken or have been credited 120 points of courses as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOC101</td>
<td>Essential Biology: From Genomes to Organisms</td>
<td>15</td>
</tr>
<tr>
<td>BIOO106</td>
<td>Foundations of Biochemistry</td>
<td>16</td>
</tr>
<tr>
<td>BIOC107</td>
<td>Biology for Biomedical Science: Cellular Processes and Development</td>
<td>15</td>
</tr>
<tr>
<td>CHEM110</td>
<td>Chemistry of the Living World</td>
<td>16</td>
</tr>
<tr>
<td>PHYS160</td>
<td>Physics for the Life Science</td>
<td>16</td>
</tr>
<tr>
<td>MEDSCI140</td>
<td>Biology for Biomedical Science: Organ Systems</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>plus 15 points from General Education courses listed in the Open or EMHS Schedule.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>plus 15 points from the BSc schedule compatible with the Biomedical Science programme or POPLHTH111.</td>
<td></td>
</tr>
</tbody>
</table>

BOptom Part II

A student must take all of the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTOM215</td>
<td>Optics of the Eye</td>
<td>15</td>
</tr>
<tr>
<td>OPTOM220</td>
<td>Clinical Imaging and Evaluation Techniques</td>
<td>15</td>
</tr>
<tr>
<td>OPTOM262</td>
<td>Optics of Lenses and Lens Systems</td>
<td>15</td>
</tr>
<tr>
<td>OPTOM261</td>
<td>Physical Optics</td>
<td>15</td>
</tr>
<tr>
<td>OPTOM270</td>
<td>Visual Science: Structure and Function of the Visual System</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td>30</td>
</tr>
<tr>
<td>MEDSCI203</td>
<td>Mechanisms of Diseases</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>plus 15 points from General Education courses listed in the Open or EMHS Schedule.</td>
<td></td>
</tr>
</tbody>
</table>

BOptom Part III

A student must take all of the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTOM314</td>
<td>Optometry</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM345</td>
<td>Principles of Ocular Pharmacology</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM353</td>
<td>Ocular Pathology</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM366</td>
<td>Clinical Optics and Dispensing</td>
<td>15</td>
</tr>
<tr>
<td>A&amp;B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM375</td>
<td>Visual Science 2</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>MEDSCI202</td>
<td>Microbiology and Immunology</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>plus 15 points from General Education courses listed in the Open or EMHS Schedule.</td>
<td></td>
</tr>
</tbody>
</table>

BOptom Part IV

A student must take all of the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTOM416</td>
<td>Clinical Optometry</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM430</td>
<td>Contact Lens Practice</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM441</td>
<td>Optometry for Special Populations</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM450</td>
<td>Diseases of the Eye and Visual System</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Diagnosis and Management</td>
<td></td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM475</td>
<td>Visual Science 3</td>
<td>15</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
</tbody>
</table>

BOptom Part V

A student must take all of the following courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Course Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPTOM510</td>
<td>Advanced Clinical Optometry 1</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM520</td>
<td>Advanced Clinical Optometry 2</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM560</td>
<td>Optometry in Practice</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
<tr>
<td>OPTOM570</td>
<td>Research in Advanced Optometric Science</td>
<td>30</td>
</tr>
<tr>
<td>A &amp; B</td>
<td>Semester One and Semester Two</td>
<td></td>
</tr>
</tbody>
</table>

Overview of Bachelor of Optometry degree

The Bachelor of Optometry programme is a set programme that consists of five years of undergraduate study at the University of Auckland.

The first year, Part I, comprises the six prerequisite courses from the BSc Biomedical Science first year and the 30 points of other courses detailed below.

Details about the BSc 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 (the courses are listed below).

Parts IV and V of the programme are largely devoted to clinical practice, including comprehensive eye examinations, clinical 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 (from 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 shown below.

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

Points structure

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

A student must pass a total of 600 points (including the required number of points in General Education Courses if applicable) over the entire BOptom programme to graduate with a BOptom degree.

Credit and concessions for students entering the BOptom

Credit regulations are listed in the University of Auckland Calendar:
- If you are transferring from another NZ university.
- If you have undertaken previous study at Auckland and apply for credit at the time of enrolment.

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

“I had been drawn to visual science during my previous studies in biological sciences. The BOptom programme allowed me to merge this background with my passion. Although we generally take our sense of sight for granted, when we do suffer visual problems we realise the impact it has on our lives. The prospect of helping those with visual deficiencies is what drives me.

“Imerge this background with my passion. Although we generally take our sense of sight for granted, when we do suffer visual problems we realise the impact it has on our lives. The prospect of helping those with visual deficiencies is what drives me.

Nikku Singh is studying towards a Bachelor of Optometry.
Undergraduate course prescriptions

The University of Auckland academic year consists of two semesters. Some 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.

Bachelor of Optometry Part II

**OPTOM 215**

35 points

**Optics of the Eye**
Semester Two


Restriction: OPTOM 110
Course Coordinator: Dr Misha Vorobyev

**OPTOM 220**

35 points

**Clinical Imaging and Evaluation Techniques**
Semester Two

The theory and practice of specific clinical assessment techniques and instrumentation for imaging, measuring and evaluating the function of being optical systems will be the core of this course. The assessment of visual function and optical performance of the eye from the clinical perspective using advanced equipment is emphasised. An introduction to image processing, the production of clinically relevant outcomes and diagnosis-supportive hypotheses is included in this course.

Course Coordinators: Dr Elisan Vaghefi and Associate Professor Rob Jacobs

**OPTOM 262**

35 points

**Optics of Lenses and Lens Systems**
Semester One

Optics relevant to optometry, but of interest to other science students seeking a background in geometrical optics. Includes a study of the principles of image formation by lenses and lens systems, mirrors and prisms. In addition to an introduction to ophthalmic lenses, includes basic instruments such as telescopes, microscopes and projection systems.

Restriction: OPTOM 110
Course Coordinator: Dr Jason Turwhenua

**OPTOM 265**

15 points

**Physical Optics**
Semester Two

Includes physical optics relevant to optometry but is also directed towards students taking other science courses. Gives an understanding of the basic principles of physical optics and will involve a study of phenomena including interference, diffraction and polarization.

Restriction: OPTOM 160, 165
Course Coordinator: Dr Rainer Leonhardt

**OPTOM 272 A & B**

30 points

**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 ear 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 131, 170, 171
Course Coordinator: Dr Monica Acosta

**OPTOM 292 A & B**

15 points

**Issues in Optometry**
Semester One and Semester Two

Topics of special interest to students entering Optometry from overseas and from the graduate entry quota.

This is not a compulsory course.
Prerequisite: Permission of Head of School

**MEDSCI 203**

15 points

**Mechanisms of Disease**
Semester One

Pathogenesis of various types of disease at the molecular, cellular and tissue levels. Provides an introduction to: cell injury, inflammation, healing, neoplasia and circulatory disturbances, and includes the pathogenesis of selected specific diseases which are common in New Zealand or are the focus of current biomedical research.

Course Coordinator: Dr Graeme Finlay

**Bachelor of Optometry Part III**

**OPTOM 314 A & B**

30 points

**Optometry**
Semester One and Semester Two

A clinically-focused course introducing students to the wide-ranging scope of optometric practice. Both the theoretical basis and clinical practice of the optometric examination will be addressed in lectures and skills-based practical sessions. Topics covered include: introduction to the optometric examination; vision and visual acuity, visual fields, colour vision, slit lamp biomicroscopy, ophthalmoscopy, the refractive examination using both objective and subjective methods, near visual examination, routine binocular examination, history taking, communication skills and clinical problem solving.

Restriction: OPTOM 211, 212, 213
Enrolment in laboratory streams or Student Services Online is for administrative purposes only and places in a particular laboratory stream cannot be guaranteed prior to the commencement of a course as we need to ensure all students have access to equipment and teaching staff during laboratory times. Tutorials, labs and clinic streams will be finalised by the Course Coordinator and confirmed on CECIL/CANVAS early each semester.

Course Coordinator: Dr Nicola Anstice

**OPTOM 345 A & B**

15 points

**Principles of Ocular Pharmacology; General Principles of Pharmacology**
Semester One and Semester Two


Prerequisite: OPTOM 275
Restriction: OPTOM 245
Course Coordinators: Dr John Phillips and Dr Bruce Russell

**OPTOM 353 A & B**

15 points

**Ocular Pathology**
Semester One and Semester Two


To complete this course students must enrol in OPTOM 353 A & B.
Restriction: OPTOM 251
Course Coordinator: Dr John Phillips

**OPTOM 366 A & B**

30 points

**Clinical Optics and Dispensing**
Semester One and Semester Two

An integrative approach to optical theory and its clinical application, particularly in the areas of correction of refractive error and dispensing of optical appliances. Topics addressed include: optical measurement of refractive error by objective and subjective techniques, optical correction of refractive error, ophthalmic lens materials, coatings and treatments. Optics of ophthalmic lenses, including advanced multifocal lens design. Magnification, aberrations, and lens design. Optical instrumentation and clinical application.

Course Coordinator: Andrew Collins

**OPTOM 375 A & B**

15 points

**Visual Science 2**
Semester One and Semester Two


Course Coordinator: Dr Misha Vorobyev

**OPTOM 392 A & B**

15 points

**Issues in Optometry 2**
Semester One and Semester Two

Topics of special interest to students entering Optometry from overseas and from the graduate entry quota.

This is not a compulsory course.
Prerequisite: Permission of Head of School

**MEDSCI 202**

15 points

**Microbiology and Immunology**
Semester One

An introduction to the nature and roles of bacteria, viruses, fungi and parasitism as the causative agents of human disease. The defence mechanisms of the body, the immune system including autoimmune and allergy. Control of disease by antimicrobials. Sterilisation, disinfection, and sterile manufacturing practice.

Course Coordinator: Associate Professor Geoffrey Krissansen

Bachelor of Optometry Part IV

**OPTOM 416 A & B**

30 points

**Clinical Optometry**
Semester One and Semester Two

This course facilitates the transition from student to professional optometrist. Topics addressed include: constructing 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 392, 415
Course Coordinator: Bhav Solanki

**OPTOM 430 A & B**

15 points

**Contact Lens Practice**
Semester One and Semester Two


Restriction: OPTOM 330
Course Coordinator: Dr Wanda Lam
Important information for undergraduates

Additional costs (equipment, instruments, insurance and books)

The total cost of pursuing the undergraduate programme in Optometry, will be more than the tuition and student service fees. Additional costs include the purchase of essential equipment, instruments and prescribed texts. Current estimates of these additional costs are as follows:

- Optometry Part III $3500
- Optometry Part IV $4500
- Optometry Part V $5000

For Parts IV and V, there is also Professional Indemnity (P.I.) insurance at a per annum cost of approximately $70 to $300 and Professional Association Fees of approximately $100.

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 programme 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 (P.I.) insurance is viewed as the responsibility of students about to enter the optometry profession and is compulsory before students enter the clinic. Continuity of P.I. 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 P.I. insurance through this professional association.

The forms for student membership of NZAO and Professional Indemnity (Malpractice) insurance will be mailed 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.

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. An immunisation programme is carried out prior to you entering the clinic and we require you to take part.

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.

Fitness to practice

The University has a “Code of Practice for Fitness to Practice” that applies to students in the health professions programme. 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 professions programme whenever 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. A document describing the code, its policy scope and associated processes is to put in place where the student is deemed to be unable to perform the relevant profession due to Fitness to Practice considerations.

Note that 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.
Assessment information

Academic progress

Before or at the commencement of the class concerned, students must be informed of the coursework allocations and other decisions on coursework requirements. This should include dates of:

- Tests
- Submission of assignments

Such advice will be included in the course information document. Any changes to this will be posted on electronic noticeboards and advised by your lecturer in class. A record of these notices is available through CCEL/CANVAS, the computer supported learning environment of the University.

Forms of assessment

It is accepted that assessment is an integral part of any education or training programme. It ensures the lecturers, students and the public that having gone through a programme of study and subsequently been assessed, the student has achieved the minimum standard of knowledge and skill set by the institution concerned. In the Bachelor of Optometry programme, assessment takes various forms including:

- Final written examinations.
- Written tests during semester, practical tests, oral examinations.
- Assignments, laboratory reports, clinical examinations etc.

The assessment methods attempt to reflect the variety of skills required of the student and to measure the level of skills attained.

The different assessment methods for courses in the Bachelor of Optometry programme can be generally categorised into those used in basic sciences, clinical sciences and clinical optometry. Whereas basic sciences and to a lesser degree, clinical sciences require minimal people contact, clinical optometry is almost entirely people directed. The skills required in these different areas are not the same. Consequently, the assessment methods reflect this difference.

Excellent communication skills are vital to the successful completion of the Bachelor degree. The grades assigned to written assignments, tests and examinations in all parts of the programme include an evaluation of the student’s abilities in written English. The grades assigned in oral and clinical assessments and examinations include evaluation of the student’s abilities to communicate with patients and an evaluation of how well communication skills are displayed.

Weighting

In some courses, several educational goals are desired. It is therefore likely that assessment may take several forms and appropriate weights will be assigned to each assessment method. If it is felt that practical skills are the most desired outcome for the course, then the practical tests or examinations will be weighted substantially higher than the written tests or examinations.

Feedback

Formative feedback is usually available for work completed during semester, while end of semester or final examinations are usually summative only and no detailed feedback is provided. Please refer to information about examinations scripts (p.13).

The final grade

The final grade for each course will reflect the degree to which the student has achieved the most desired outcome of the course. If the most desired outcome of the course is the ability to do a refraction, then a student who is able to do about doing refraction, but is unable to do one, is likely to have a final grade below the passing mark. Where there are several components in an assessment, which are considered essential outcomes of the course, then failure of any of the components will generate a failure grade for that course. In some courses these essential components are labelled “red flags” but this is not universal. Excellent performance in other components will not offset a failed essential component.

In summary, crucial outcomes will be weighted more. Information provided at the beginning of the year in the course documents will indicate which outcomes cannot be failed. Failure in any of these desired outcomes will automatically generate a failing (F) grade. Marks from the various components of the assessment are not added together unless the essential components are passed.

Attendance at laboratories

Attendance at practical classes, including clinics, is compulsory. Students’ laboratory marks will be based on their report and attendance at the laboratory.

Examinations

All coursework marks will be made available via CCEL/CANVAS before the final examinations.

First semester final examinations will be held in the exam period at the end of semester one. Where a course is run over two semesters (a double semester course), final results will not generally be available until the end of the Second Semester. In double semester courses, results from semester one may be available as provisional exam results.

Referencing material

The School of Optometry and Vision Science uses the bibliography style as shown in the journal, Clinical & Experimental Optometry, which conforms to the Vancouver style. For example, in the reference list:


Calculators in examinations

The School of Optometry and Vision Science has adopted the following policy on the use of specified calculators in tests and examinations.

Students may use only CASIO FX 82 calculators (any version of FX-82) in tests and examinations. It is the students’ responsibility to supply and maintain the operation and operating power of their own calculators.

A staff member may inspect all calculators at the start of each test and final examination. For final examinations, students may use their own calculators (CASIO FX 82 ONLY). Any other models will be confiscated for the duration of the test or final examination.

Books in examinations

Unless the examination is an Open Book, or Restricted Book examination, a candidate must not bring to an examination any written or printed matter or any blank paper except by direction of the examiner. Candidates will be informed in the Course Information of specific books or materials allowed for particular examinations.

Special need in examinations and assessment

If you believe you have special needs for your assessment, please see the FMHS Student Services Online when processed.

Deferred results

Where a weakness occurs in the clinical practice component in any of the following Part V or Part VI courses:

- OPTOM 465A & B Clinical Optometry
- OPTOM 460A & B Contact Lens Practice
- OPTOM 444A & B Optometry for Special Populations
- OPTOM 510A & B Advanced Clinical Optometry 1
- OPTOM 504A & B Advanced Clinical Optometry 2

- OPTOM 560A & B Optometry in Practice

the result of the course or courses will be deferred. In these circumstances, the candidate will be required to complete additional work to the satisfaction of the examiners. The work will be examined in the following February. Students will need to enrol in a 10 point summer course, OPTOM494 or OPTOM495 and pay the fees for this course.

Recount of marks

By making an application within four weeks from the date of the mailing of a student’s official result of the examinations, any student sitting an examination for a degree, diploma or certificate of proficiency, may have the marks awarded to his/her scripts recounted in any course in which he/she has failed.

The fee for a recount is listed in the Calendar under Fees Regulations.

A recount of marks covers a careful recheck of the marks recorded by the examiner and ensures that no errors have been made. Any additional points that may have been overlooked. No information pertaining to the application will be placed before the examiner.

Availability of examination scripts

By making application to the Examinations Office, during the three-month period from the date of the exam a student may apply for a photocopy of his or her final examination script. If the assessment processes have been completed and the fees paid. In the fourth month the original script can be requested.

Students are not permitted to seek a remarking of the script. If it has been fully marked, the examiner’s judgement must stand. If failure in any of these desired outcomes will automatically generate a failing (F) grade. Marks from the various components of the assessment are not added together unless the essential components are passed.

Consideration, a student may apply for Aegrotat or Compassionate Consideration. Applications for Aegrotat and Compassionate Consideration, by candidates

Applications for Aegrotat or Compassionate Consideration

An application may be made for aegrotat or compassionate consideration, by candidates who may have been prevented from being present at an examination, or who consider that their preparation for or performance in an examination has been seriously impaired by temporary illness or injury or exceptional circumstances beyond their control. This also applies to tests, but not assignments.

Awards of marks and grades

There are ten pass and fail grades as set out below.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Point</th>
<th>Scale</th>
<th>Honours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>9</td>
<td>A</td>
<td>Honours</td>
</tr>
<tr>
<td>A</td>
<td>8</td>
<td>B</td>
<td>Honours</td>
</tr>
<tr>
<td>A-</td>
<td>7</td>
<td>C</td>
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</tr>
<tr>
<td>B+</td>
<td>6</td>
<td>D</td>
<td>GPA 9.5</td>
</tr>
<tr>
<td>B</td>
<td>5</td>
<td>D</td>
<td>GPA 9.0</td>
</tr>
<tr>
<td>B-</td>
<td>4</td>
<td>D</td>
<td>GPA 8.5</td>
</tr>
<tr>
<td>C+</td>
<td>3</td>
<td>D</td>
<td>GPA 8.0</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
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</tr>
<tr>
<td>D+</td>
<td>0</td>
<td>D</td>
<td>GPA 6.5</td>
</tr>
<tr>
<td>D</td>
<td>-1</td>
<td>D</td>
<td>GPA 6.0</td>
</tr>
</tbody>
</table>

NB: Pass grades may have different numerical equivalents in the Optometry Clinical Year and in other University Departments.

Calculation of the Honours score is based on the following weighting:

- a. Part IV: 60%
- b. Part V: 30%
- c. Part III: 10%
Undergraduate scholarships and prizes

New Zealand Association of Optometrists (NZAO) Awards

New Zealand Association of Optometrists Undergraduate Awards

From 1992 undergraduate scholarships known as the New Zealand Association of Optometrists Undergraduate Awards will be 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 Award, $500 - Awarded to the student who obtains the highest combined grade in the course OPTOM 441, Clinical Optometry, of a student entering BOptom Part II. The award will go to the eligible student gaining the highest GPE in the previous year.
- The Raymond Harry Hawkins Prize of $500 will be awarded to the student gaining the highest combined grade in the course OPTOM 441, Clinical Optometry, of a student entering BOptom Part IV. The award will go to the student gaining the highest GPA in the previous year.
- The Paul Dunlop Scholarship of $5,000 will be awarded to a University of Auckland student achieving a minimum GPA of 6.5 or at least an A- average across their courses in Part V.
- The Anna Pritchard Prize for Optical Dispensing of $150 is awarded to the student who achieves the highest grade in Optical Dispensing.

Undergraduate Scholarships

Westfund Health

Westfund Health offer a scholarship to provide travel, accommodation and expenses for Part V students participating in an externship offered by Westfund Health in Australia. Details are publicised to Part V students. Applications close at the end of March.

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 GradDipOpt, 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 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 at the end of August, and close at the end of September. Applicants must be full-time students with at least one year of an undergraduate degree. Students must have at least a Grade Point Average of 6.5 or have received no more than 1 previous summer scholarship. The School offers one or two summer scholarships.

Raymond Harry Hawkins Prize

This award is for the best project in Course OPTOM 570 to the value of $500.00

New Zealand College of Optometrists (NZCO) Prize

Prizes will be awarded annually to full-time students achieving the highest marks for their presentations in OPTOM 570. The Prizes will be of the value of $500 and $50. First Prize of $500.00 for each member of the winning group. Second Prize of $50.00 for each member of the second group. The in the event of a tie, the Head of School of Optometry and Vision Science shall determine if the prizes may be shared.

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 with the School who are all 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 Sport and Exercise Science
- Auckland Bioengineering Institute
- the 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.

Recent postgraduate student (now staff member) Lisa Hamill is designing a set of symbols for testing visual acuity.
Bachelor’s degree

Bachelor’s degree with Second Class Honours Div 2 or higher

Bachelor’s degree with First Class Honours or Second Class Honours Div 1

MSc (Taught) 120 pts

MSc (Research) 180 pts

PhD in Optometry

Demonstrated ability to undertake research

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 Degree of Master of Science – Optometry, providing the student meets the regulations current at that time. One further thesis year will then be required to complete the Degree of Master of Science – Optometry. The Postgraduate Diploma in Science requires the student to pass at least 120 points and the course of study must be approved by the Head of School.

Degree of Master of Science (MSc)

The MSc degree provides students with an opportunity to explore an area or problem in detail. Students pursuing the MSc by research receive training in research design, quantitative methods and computing by performing original research and preparation of a thesis under the supervision of academic staff. The thesis should demonstrate a capacity for independent thinking and also make a contribution to existing knowledge. Students pursuing the MSc by the taught masters select courses of clinical specialty. PGDipSci or BSc (Hons) graduates or applicants with equivalent qualifications are eligible to apply for the MSc. Students who propose to undertake the MSc degree must consult the postgraduate advisor towards the end of the year prior to enrolment.

By research

Students are required to pass 120 points: OPTOM 796 MSc Thesis in Optometry.

Taught Clinical Masters

Students are required to pass 120 points: OPTOM 791 (90 points) and OPTOM 757 (30 points).

Applicants must be registered NZ optometrists.

Degree of 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.

By research

Students are required to enrol in OPTOM 796 A & B.

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 $7,500 for a Doctoral candidate who is pursuing full-time postgraduate studies in Optometry or Visual Science.

OPTOM 751 A&B Special Study in Vision Science 30 points

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.

To complete this course students must enrol in OPTOM 751 A & B.

Course Coordinator: Professor Steven Dakin

OPTOM 752 A&B Special Study 30 points

OPTOM 757 A&B Special Study in Optometry 30 points

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.

To complete this course students must enrol in OPTOM 757 A & B.

Course Coordinator: Associate Professor Rob Jacobs

OPTOM 759 A&B Special Study 30 points

Advanced Clinical Optometric Specialisation

Advanced clinical optometry study 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.

To complete this course students must enrol in OPTOM 759 A & B.

Course Coordinator: Dr Nicola Anstice

OPTOM 796 MSc Thesis in Optometry 120 points

PhD in Optometry

To complete this course students must enrol in OPTOM 796 A & B.

PhD student Duncan Wu is pursuing research on computational modelling of the lens.
to defocus, to measures which are relevant in performance such as visual acuity and sensitivity.

His research interests are in the clinical vision sciences and in specialist clinical practice. He has four areas of research interest:

- Spatial vision: How the brain extracts information from natural images. This includes visual problems within the aviation industry and vision standards.
- Visual processing in neuropsychiatric and neurodevelopmental 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 aging, including improving diagnosis of glaucoma and investigating the effects of spatial distortion associated with macular degeneration.

Academic Director

Associate Professor Robert J Jacobs

MSc, PhD, LGOC, FAAO, FADO, Grad Dip Bus, CertOcPharm, TPA endorsed

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 bisection. He is a previous head of School and is an honorary member of the New Zealand Association of Optometrists.

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. Assoc Prof Jacobs has acted as an advisor in the area of visual ergonomics including visual problems within the aviation industry and vision standards.

Senior Lecturer

Clinic Director Gerard Phillips

BSc (Hon), MCOptom, DCLP, OD, CertOcPharm, TPA endorsed

Email: g.phillips@auckland.ac.nz

Phone: +64 9 923 6503

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

Dr. Phillips teaches Diagnoses of the Eye within Part IV and ocular therapeutics within Part V of the Bachelor of Optometry programme. Dr. Phillips is also a Course Coordinator of two Part V courses including Specialist Optometry and Optometry in Practice.

Senior Lecturer

John R Phillips

BSc, (M. Eng), 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 and also the physiological processes which control eye size and which normally ensure that the eye grows it remains emmetropic (i.e., without a refractive error). Dr. Phillips teaches ocular anatomy physiology, pathology and optometry in the undergraduate Optometry programme.

Senior Lecturer

Misha Vorobyev

PhD

Email: m.vorobyev@auckland.ac.nz

Phone: +64 9 923 6531

Plants often use brightly coloured flowers to advertise a reward of nectar and pollinate 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 camouflaging 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 plant 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 59 papers, have attracted over 1300 citations (451 citations in 2008, 1h index: 20, average citations per paper: 25).

Senior Lecturer

Monica Acosta

BSc, MSc, PhD

Email: m.acosta@auckland.ac.nz

Phone: +64 9 923 6069

The work conducted in the Retinal Cell and Molecular Biology Laboratory aims at understanding the mechanisms that participate in the survival and/or death of retinal cells, which delicate balance is altered in patients with vision loss. Particularly, we want to explore strategies for prevention and intervention through identification of the cellular events that cause cell death. The laboratory is exploring a model of vision loss in animals induced by chemical and environmental factors with the aim of simulating blinding conditions encountered in humans.

Senior Lecturer

Nicola Anstice

BOptom (Hons), PhD, TPA endorsed

Email: n.anstice@auckland.ac.nz

Phone: +64 9 923 6590

Dr Anstice obtained her BOptom (Honors) degree from the University of Auckland in 1998 and then worked in private optometry practice for six years. She returned to the School in 2005 to undertake her PhD looking at a new contact lens to slow myopia progression in children.

She submitted her PhD in 2009 and spent a year working as a paediatric optometrist in the Department of Ophthalmology, Manukau Super Clinic before returning to take up a lecturer’s position in the School.

Lecturer

Joanna Black

BOptom (Hons), PhD, TPA endorsed

Email: j.black@auckland.ac.nz

Phone: +64 9 923 3405

Dr Black teaches in the areas of clinical optometry, vision science, ocular disease and therapeutics. He also acts as the BOptom Part III coordinator and is a member of a number of committees of the New Zealand Optometric Standards Association.

His research interests include visual development and rehabilitation, including the diagnosis and treatment of amblyopia.

Senior Tutor

Andrew Collins

MSc, BOptom, CertOcPharm, TPA endorsed

Email: a.collins@auckland.ac.nz

Phone: +64 9 923 6484

Mr Collins teaches in the areas of clinical optics, vision science, ocular disease and therapeutics. He also acts as the BOptom Part III coordinator and is a member of a number of committees of the New Zealand Optometric Standards Association.

His research interests are in the areas of environmental and genetic factors affecting myopia development, vision in animals, and vision in transportation. He is currently undertaking a PhD investigation into the effects of light on myopia development.

Lecturer

Jason Turuwhenua

PhD

Email: 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.

Jason 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 Jason is working on developing the ‘virtual eye’, which is a physics based system for investigating eye disease.

Lecturer

Ehsan Vaghefi

PhD

Email: e.vaghefi@auckland.ac.nz

Phone: +64 9 923 3774

Dr Vaghefi obtained his PhD from Auckland Bioengineering Institute, researching the nutritional supply system and the optical homeostasis of the corneal layer, 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 utilizing his set of expertise in quantitative 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.

Professional Teaching Fellows – Clinic Tutors

Kerry Allinson BSc(Hons), FCOptom, DipCLP, CertOcPharm, TPA endorsed

Dr Tom Cossack OD, TPA endorsed

Jonathan O’hara BSc, BOptom(Hons), TPA endorsed

Richard Johnson BOptom, TPA endorsed

Dr Wanda Lam OD, BSc, TPA endorsed

Robert Hg BOptom(Hons), TPA endorsed

Michelle O’Hanlon BOptom(Hons), TPA endorsed

Jonathan Payne BOptom(Hons), TPA endorsed

Jaymie Rogers BSc, BOptom(Hons), TPA endorsed

Bhavin Solanki BSc(Hons), MSc, TPA endorsed

Kathryn Sands BOptom, CertOcPharm, TPA endorsed

Lecturer

Elisa Obarrio

BSc(Hons)

Endorsed

BSc(Hons)

Endorsed
## Important dates

### Closing date for applications for admission 2016

Application for Admission closes for all students applying to the School of Optometry and Vision Science. 1 October 2015

### Academic Year dates

<table>
<thead>
<tr>
<th>Semester One – 2016</th>
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<tbody>
<tr>
<td>Semester One Begins</td>
<td>Monday 29 February</td>
</tr>
<tr>
<td>Easter Break</td>
<td>Friday 25 March – Tuesday 29 March</td>
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<tr>
<td>Mid-semester Break</td>
<td>Monday 18 April – Saturday 23 April</td>
</tr>
<tr>
<td>ANZAC Day</td>
<td>Friday 25 April</td>
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<tr>
<td>Graduation</td>
<td>Friday 6, Monday 9, Wednesday 11 May</td>
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<tr>
<td>Lectures End</td>
<td>Friday 3 June</td>
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<tr>
<td>Study Break</td>
<td>Saturday 4 June – Wednesday 8 June</td>
</tr>
<tr>
<td>Queen's Birthday</td>
<td>Monday 6 June</td>
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<tr>
<td>Examinations</td>
<td>Thursday 9 June – Monday 27 June</td>
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<tr>
<td>Semester One Ends</td>
<td>Monday 27 June</td>
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<tr>
<td>Inter-semester Break</td>
<td>Tuesday 28 June – Saturday 16 July</td>
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</table>

<table>
<thead>
<tr>
<th>Semester Two – 2016</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester Two Begins</td>
<td>Monday 18 July</td>
</tr>
<tr>
<td>Mid-semester Break</td>
<td>Monday 29 August – Saturday 10 September</td>
</tr>
<tr>
<td>Graduation</td>
<td>Tuesday 27 September</td>
</tr>
<tr>
<td>Lectures End</td>
<td>Friday 21 October</td>
</tr>
<tr>
<td>Study break</td>
<td>Saturday 25 October – Wednesday 26 October</td>
</tr>
<tr>
<td>Labour Day</td>
<td>Monday 24 October</td>
</tr>
<tr>
<td>Examinations</td>
<td>Thursday 27 October – Monday 14 November</td>
</tr>
<tr>
<td>Semester Two Ends</td>
<td>Monday 14 November</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Semester One – 2017</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester One Begins</td>
<td>Monday 6 March 2017</td>
</tr>
</tbody>
</table>

### 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 2016, 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.