



# University of Pretoria Yearbook 2019

## MMed Ophthalmology (10250112)

**Minimum duration of study** 4 years

**Total credits** 624

**Contact** Prof PMS Makunyane [prisilla.makunyane@up.ac.za](mailto:prisilla.makunyane@up.ac.za) +27 (0)123541619

### Programme information

#### Please note:

- i. All MMed students must register for, and attend (TNM 802) Applied research methodology 802 satisfactorily, preferably during the intermediate phase/ after completion of Part 1 and before sitting for Part 2 of the MMed.
- ii. All MMed students must submit a dissertation (MMS 890) which must be assessed as satisfactory by an external examiner, or a research article that has been accepted for publication in a subsidised periodical. The student must be the first author of the article. An ordinary literature review will not be accepted. The research proposal must be approved by the MMed Protocol Committee prior to the intermediate exam (surgical disciplines) or otherwise within two years of enrolment ( other disciplines). It is in the best interest of the candidate to complete the research component prior to the exit exam and if not possible, preferably to postpone the exam. If the exam is to be written in Semester 2 of the 4th year the dissertation should be submitted 1 September of the 4th year. If this is not the case, the supervisor should complete and sign the necessary documentation, stipulating that the candidate will complete the project within the next 3 to 6 months. The dissertation must be submitted prior to the taking of the CMSA fellowship examination.
- iii. A systematic literature review (Cochrane type) on an approved subject, which is undertaken in such a manner that bias is minimised, may be presented as an alternative to the dissertation for awarding the MMed (Public Health Medicine) degree. It requires, inter alia, a protocol with clearly formulated objectives and methods. Inclusion and exclusion methods for the study must be determined. Where applicable, the data must be summarised (meta analysis), with applicable statistical methods. This alternative is in special cases applicable to other MMed degrees.

#### Registrarship:

- Inquire at the relevant head of department regarding the availability of registrarships for the specialisation Medical Oncology.
- Inquire at the Head of the Department of Family Medicine regarding the availability of registrarships for the specialisation Emergency Medicine.
- Inquire at the relevant head of department regarding the availability of registrarships for the specialisation Radiation Oncology.

#### Each student must prove to the University that he or she

- i. has successfully filled the required full-time training post for a period of four or five years according to the requirements of the relevant department at the Steve Biko Academic Hospital, (in case of pathology registrars) or Kalafong Hospital or at an institution recognised by the University as equivalent;
- ii. has completed the theoretical, practical, clinical and applicable training as stipulated;

- iii. has passed the prescribed written, oral, practical and/or clinical university examinations, and
- iv. has successfully completed the research component of the degree.

## Admission requirements

A prospective student for the MMed degree programme must be in possession of the MBChB degree of this University or a qualification deemed by the University to be equivalent to the MBChB degree for at least two years. In addition such a student must be registered as a physician with the Health Professions Council of South Africa for at least one year.

International students must have qualifications verified by SAQA. Contact department before applying for government positions. Contact department before application.

## Other programme-specific information

**“Major subject”** refers to the recognised field of study in Medicine in which the student specialises. The study of the major subject extends over four or five years, as prescribed by the relevant department.

## Examinations and pass requirements

- i. The sequence of the examinations in the prerequisite subjects will be determined by the head of the department under which the major subject falls.
- ii. The nature, duration and time of the examinations in the prerequisite subjects are determined in cooperation with the heads of the departments under which the prerequisite subjects fall – with the proviso that, except in cases where stipulated otherwise, the examinations in the prerequisite subjects may be held at any time prior to or concurrently with the major subject. The examinations in the major subjects are held as follows:
- iii. In the case of four-year programmes: not before the end of the third year.
- iv. In the case of five-year programmes: not before the end of the fourth year.
- v. A minimum final mark of 50% is required by all departments to pass in a subject and in the clinical section of the examination, a subminimum of 50%. General Regulations apply.
- vi. A student is not admitted to the examination in a prerequisite subject (second examinations excluded) more than twice, nor is he or she admitted to the examination in the major subject more than twice.

**Note:** Certificates of satisfactory preparation and progress are required in respect of the fourth year of four-year programmes in which an examination is held at the end of the third year.

### Second examinations

Second examinations for MMed students will only be held after at least six months have elapsed since the conclusion of the examination in which the student had failed.

### Rules governing the writing of the examinations of the College of Medicine of South Africa [CMSA]

- i. Only candidates who have met all requirements for the MMed degree except for the major subject (final examination), i.e. passed all prerequisite subjects (the latter to be interchangeable; can be passed either at the University or as primary and intermediary examinations at the College of Medicine of South Africa [CMSA], completed all practical, clinical and applicable training of four or five years as prescribed by the relevant academic department (continuous evaluation of the candidate, in an approved registrar post, by the head of department of the candidate); and completed the required research component for the degree in accordance with the Faculty Yearbook regulations, i.e. Applied research methodology 800 (TNM 800) and the dissertation



(MMS 800) or an article (not an ordinary literature review) that has been accepted for publication in a subsidised periodical, will be allowed to write the college examination (exit examination), after which they will obtain both the CMSA fellowship and the MMed as specialist qualifications.

- ii. The rules have been effective as from 1 January 2011. As a transitional measure, cases will be considered on an individual basis where necessary.

## Exemption

### Exemption

- i. The Faculty Board may grant partial exemption from the training and work mentioned under par. (b) and (c)(i) and (ii) above on the grounds of comparable training and experience completed in another post or at another recognised institution – with the proviso that exemption from a maximum period of 18 months may be granted with regard to four-year and five-year programmes.
- ii. Exemption from a maximum of three years may be granted by the Department of Medical Oncology for the MMed in Medical Oncology [MMed(MedOnc)] on the grounds of the MMed(Int) or MMed(Paed) degree of this University, or experience recognised by the University as equivalent.
- iii. Specific prerequisite subjects must be passed within 24 months after commencement of the programme.

## Pass with distinction

The degree is conferred at the end of the prescribed training period (i.e. three, four or five years, respectively). The degree is conferred with distinction on a student who has obtained a final mark of at least 75% in his or her major subject.

## General information

### Registrars

Departments expect registrars to participate increasingly in the examining and treatment of patients in the hospital, both in-patients and out-patients, as well as performing and interpreting tests in the laboratory (where applicable); initially under supervision and later increasingly at their own responsibility. Lectures/symposia with closely related departments are organised, as well as discussions of literature, etc.



## Curriculum: Year 1

Minimum credits: 624

### Core modules

#### Anatomy 876 (ANA 876)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 lecture per week, 1 discussion class per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Anatomy
<b>Period of presentation</b>	Year

#### Anatomical pathology 871 (ANP 871)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Anatomical Pathology
<b>Period of presentation</b>	Year

#### Physiology 801 (FSG 801)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physiology
<b>Period of presentation</b>	Year

#### Geometrical optics 800 (GMO 800)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 lecture per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physics
<b>Period of presentation</b>	Year



## Module content

Mathematical description of waves; Light as an electromagnetic wave; Nature of sources of light; Wave fronts (Huygens principle); Snell's Law; Index of refraction; Exploration of the laws of reflection and refraction at planar and curved surfaces; Ray tracing methodology to find position, Nature of images and magnification; Thin lens formula; Conjugate foci formula; Lensmaker's formula; Ophthalmic prisms: characteristics, classification and refractive power; Thin lenses: types, image formation; Cylindrical lenses: Introduction; Optical Systems: Lens combinations (notation, toric lenses); Thick lenses (cardinal points, system power); The Eye: structure and function, reduced eye; Aberrations in general; Eye defects: myopia, hyperopia, presbyopia, astigmatism; Optical apparatus for ophthalmology: invasive / non-invasive, ophthalmic laser, ophthalmoscope, fundus camera, light coagulator.

## Dissertation 890 (MMS 890)

**Module credits** 180.00

**Language of tuition** Module is presented in English

**Department** School of Medicine

**Period of presentation** Year

## Ophthalmology 800 (OHK 800)

**Module credits** 300.00

**Prerequisites** ANP 871, ANA 876, FSG 801, GMO 800

**Language of tuition** Module is presented in English

**Department** Ophthalmology

**Period of presentation** Year

## Applied research methodology 802 (TNM 802)

**Module credits** 0.00

**Language of tuition** Module is presented in English

**Department** Health Sciences Deans Office

**Period of presentation** Year

## Module content

\*Attendance module only.



## Curriculum: Year 2

Minimum credits: 624

### Core modules

#### Anatomy 876 (ANA 876)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 lecture per week, 1 discussion class per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Anatomy
<b>Period of presentation</b>	Year

#### Anatomical pathology 871 (ANP 871)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Anatomical Pathology
<b>Period of presentation</b>	Year

#### Physiology 801 (FSG 801)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physiology
<b>Period of presentation</b>	Year

#### Geometrical optics 800 (GMO 800)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 lecture per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physics
<b>Period of presentation</b>	Year



## Module content

Mathematical description of waves; Light as an electromagnetic wave; Nature of sources of light; Wave fronts (Huygens principle); Snell's Law; Index of refraction; Exploration of the laws of reflection and refraction at planar and curved surfaces; Ray tracing methodology to find position, Nature of images and magnification; Thin lens formula; Conjugate foci formula; Lensmaker's formula; Ophthalmic prisms: characteristics, classification and refractive power; Thin lenses: types, image formation; Cylindrical lenses: Introduction; Optical Systems: Lens combinations (notation, toric lenses); Thick lenses (cardinal points, system power); The Eye: structure and function, reduced eye; Aberrations in general; Eye defects: myopia, hyperopia, presbyopia, astigmatism; Optical apparatus for ophthalmology: invasive / non-invasive, ophthalmic laser, ophthalmoscope, fundus camera, light coagulator.

## Dissertation 890 (MMS 890)

**Module credits** 180.00

**Language of tuition** Module is presented in English

**Department** School of Medicine

**Period of presentation** Year

## Ophthalmology 800 (OHK 800)

**Module credits** 300.00

**Prerequisites** ANP 871, ANA 876, FSG 801, GMO 800

**Language of tuition** Module is presented in English

**Department** Ophthalmology

**Period of presentation** Year

## Applied research methodology 802 (TNM 802)

**Module credits** 0.00

**Language of tuition** Module is presented in English

**Department** Health Sciences Deans Office

**Period of presentation** Year

## Module content

\*Attendance module only.



## Curriculum: Year 3

Minimum credits: 624

### Core modules

#### Anatomy 876 (ANA 876)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 lecture per week, 1 discussion class per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Anatomy
<b>Period of presentation</b>	Year

#### Anatomical pathology 871 (ANP 871)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Anatomical Pathology
<b>Period of presentation</b>	Year

#### Physiology 801 (FSG 801)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physiology
<b>Period of presentation</b>	Year

#### Geometrical optics 800 (GMO 800)

<b>Module credits</b>	36.00
<b>Prerequisites</b>	No prerequisites.
<b>Contact time</b>	1 lecture per week
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Physics
<b>Period of presentation</b>	Year





## Module content

Mathematical description of waves; Light as an electromagnetic wave; Nature of sources of light; Wave fronts (Huygens principle); Snell's Law; Index of refraction; Exploration of the laws of reflection and refraction at planar and curved surfaces; Ray tracing methodology to find position, Nature of images and magnification; Thin lens formula; Conjugate foci formula; Lensmaker's formula; Ophthalmic prisms: characteristics, classification and refractive power; Thin lenses: types, image formation; Cylindrical lenses: Introduction; Optical Systems: Lens combinations (notation, toric lenses); Thick lenses (cardinal points, system power); The Eye: structure and function, reduced eye; Aberrations in general; Eye defects: myopia, hyperopia, presbyopia, astigmatism; Optical apparatus for ophthalmology: invasive / non-invasive, ophthalmic laser, ophthalmoscope, fundus camera, light coagulator.

## Dissertation 890 (MMS 890)

**Module credits** 180.00

**Language of tuition** Module is presented in English

**Department** School of Medicine

**Period of presentation** Year

## Ophthalmology 800 (OHK 800)

**Module credits** 300.00

**Prerequisites** ANP 871, ANA 876, FSG 801, GMO 800

**Language of tuition** Module is presented in English

**Department** Ophthalmology

**Period of presentation** Year

## Applied research methodology 802 (TNM 802)

**Module credits** 0.00

**Language of tuition** Module is presented in English

**Department** Health Sciences Deans Office

**Period of presentation** Year

## Module content

\*Attendance module only.



## Curriculum: Final year

Minimum credits: 480

### Core modules

#### Dissertation 890 (MMS 890)

<b>Module credits</b>	180.00
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	School of Medicine
<b>Period of presentation</b>	Year

#### Ophthalmology 800 (OHK 800)

<b>Module credits</b>	300.00
<b>Prerequisites</b>	ANP 871, ANA 876, FSG 801, GMO 800
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Ophthalmology
<b>Period of presentation</b>	Year

#### Applied research methodology 802 (TNM 802)

<b>Module credits</b>	0.00
<b>Language of tuition</b>	Module is presented in English
<b>Department</b>	Health Sciences Deans Office
<b>Period of presentation</b>	Year

#### Module content

\*Attendance module only.

The information published here is subject to change and may be amended after the publication of this information. The [General Regulations \(G Regulations\)](#) apply to all faculties of the University of Pretoria. It is expected of students to familiarise themselves well with these regulations as well as with the information contained in the [General Rules](#) section. Ignorance concerning these regulations and rules will not be accepted as an excuse for any transgression.