

## **MASTER OF SCIENCE (Structured – 5801) / (Clinical – 5807)**

### **G.50 ADMISSION**

Unless Senate decides otherwise, candidates will be required to meet the following criteria to be enrolled for the programme: **Master of Science – MSc (as indicated in G.53.1)**

An appropriate Honour's degree, or a Bachelor's degree (eg BDS/BChD) with proof of research experience and must be a dentist registered as a dentist/specialist or where applicable, medical practitioner/specialist, with the Health Professions Council of South Africa.

### **G.51 SELECTION**

As only a limited number of students can be admitted to the programme, applicants will be subject to a selection procedure.

### **G.52 DURATION**

Unless Senate decides otherwise the duration for the degree shall extend over two/three years full-time study or over three years part-time study.

### **G.53 DISCIPLINES**

**G.53.1** Master of Science programme is offered in the following areas in dentistry:

- Master of Science in Dental Public Health
- Master of Science in Forensic Dentistry
- Master of Science in Maxillofacial Radiology
- Master of Science in Oral Medicine
- Master of Science in Periodontology
- Master of Science in Oral Medicine & Periodontology (Not Offered)
- Master of Science in Oral Pathology
- Master of Science in Paediatric Dentistry
- Master of Science in Restorative Dentistry

**G.53.2** A structured MSc programme consists of the following:

- Prescribed Coursework
- Research involving the presentation of a mini-thesis. The protocol for such a mini-thesis must be submitted to the Research Committee of the Faculty by the latest June of the first year of study
- Clinical training and work where appropriate

**G.53.3** The structure is different for each specialisation area and is outlined below (Note that the structured MSc programme is only offered in limited specialisation areas.

**G.53.4** The structured (clinical) MSc option is in general, designed to meet the needs of dentists from foreign countries who are also academics and have difficulty in obtaining post-graduate training in their own countries.

## **G.54 PROGRESS RULES**

Registration for the following year of study will be recommended only if all the required modules for the current year have been completed and passed and if the supervisor in his/her opinion recommends that adequate progress has been made during the current year.

## **G.55 RENEWAL OF REGISTRATION**

The renewal of registration will be governed by the Rule A.4, as stipulated in the University Calendar: General Information Part 1.

## **G.56 CURRICULUM**

### **G.56.1 Master of Science in Dental Public Health**

This Masters programme in Dental Public Health is a flexible learning programme for students on campus or living and working elsewhere in the world.

#### **G.56.1.1 Aims and Objectives of the programme**

To improve district oral health services by developing the capacity of health personnel to plan, manage and deliver oral health services. The course focuses on the provision of knowledge, skills and qualities required to run successful oral health programmes. It aims to develop proficiency in community diagnosis, assessment of oral health needs, developing and managing strategies to meet those needs and methods for evaluating oral health services. You will graduate from this course with a unique combination of health care management and applied DPH knowledge and skills that will build on your previous training and experience in oral health.

After completing this programme you will be able to:

- demonstrate knowledge, skills and qualities related to priority DPH issues
- address the underlying social and environmental determinants of health and oral health
- contribute to DPH policy, planning and programmes
- plan and supervise health research to support oral health promotion and care
- develop a community profile and diagnosis
- establish and use a DPH health management information system
- prepare and implement budget plans and funding proposals
- communicate and work effectively with individuals and groups using different media

#### **G.56.1.2 Programme Structure**

The programme comprises four main components, namely an Introductory Module, a Dental Public Health Module, a Research Preparation Module and the Research Report (mini-thesis). The Introductory Module at the start of the programme is designed (1) to orientate the student to all aspects of the learning process, (2) to assist the student to contextualise the course material within the broader conceptual environment of health, public health and development, and (3) to initiate the thesis research process. The programme includes activities that will enhance academic literacy during this time, including reading, writing and learning skills and computer literacy. The student will prepare a short situation analysis of their community for submission and evaluation by the end of this period. Aims of the Dental Public Health Module is to (1) study 10 high priority DPH problems, (2) to provide an integrated learning activity where each DPH case is examined using the tools provided by a variety of dental health and public health disciplines, and (3) to contextualise DPH within the broader environment of public health and society.

Students will work through these different DPH scenarios guided by the calendar of deadlines and goals provided. Each case is designed so that students engage the resources of a variety of different disciplines in order to understand and respond to the issues at the core of each DPH case. Three written tasks will be submitted for evaluation during this period. The Research Preparation Module sets out (1) to prepare students for the necessary research skills to design, carry out and write up a piece of research as their MSc thesis, and (2) to utilise this integrated task as a common theme in the learning of a variety of academic literacy, numeracy, computer and research skills. The assignment tasks include the preparation of a literature review and a completed protocol.

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Introduction to Dental Public Health	DPH810	20
1	DPH Cases 1-6	DPH821	20
2	DPH Cases 7-10	DPH851	20
1-2	Research Methods	RMT811	20
2	Dentistry Mini-Thesis	DNT803	70
		<b>TOTAL</b>	<b>150</b>

### **G.56.1.3 Evaluation**

An average assignment mark is obtained from six marked assignments weighted equally. This average mark is combined with the examination mark in the proportion, 60% average assignment and 40% examination mark to produce a coursework mark. The coursework mark is combined with the mini-thesis mark in the proportion, 50% coursework and 50% mini-thesis, to produce the final mark for the programme.

### **G.56.1.4 The Research Report**

The completed Research Report must be submitted at least three months before the Graduation at which the student wishes to receive his/her degree. To graduate, a pass mark must be attained for both the coursework, and the Research Report.

### **G.56.2 Master of Science in Forensic Dentistry**

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Forensic Dentistry	FOR811	40
	Oral Pathology	PAT811	15
	Oral Biology 811	ORB811	15
	Research Methods	RMT811	20
2	Dentistry Mini-thesis	DNT803	70
		<b>TOTAL</b>	<b>160</b>

### **G.56.3 Master of Science in Maxillofacial Radiology**

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Oral Pathology	PAT811	15
	Radiation Physics/Radiation protection	RAD821	10
	Gross Anatomy – Capita Selecta	ANA825	20
	Radiographic Techniques	RAD822	20
	Research Methods	RMT811	20
	Signs in Maxillofacial Imaging	RAD823	35
2	Maxillofacial Radiology and Diagnostic Interpretation	RAD824	80
	Dentistry Mini-Thesis	DNT803	70
		<b>TOTAL</b>	<b>270</b>

#### **G.56.4 Master of Science in Oral Medicine**

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Oral Biology	ORB811	15
	Oral Pathology	PAT811	15
	Research Methods	RMT811	20
	Oral Medicine 1A	OMD811	70
2	Oral Medicine 2A	OMD812	80
	Dentistry Mini-Thesis	DNT803	70
	<b>TOTAL</b>		<b>270</b>

#### **G.56.5 Master of Science in Periodontology**

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Oral Biology	ORB811	15
	Oral Pathology	PAT811	15
	Research Methods	RMT811	20
	Periodontology 1A	PER821	70
2	Periodontology 2A	PER822	80
	Dentistry Mini-Thesis	DNT803	70
	<b>TOTAL</b>		<b>270</b>

#### **G.56.6 Master of Science in Oral Medicine & Periodontology (Not Offered)**

This course is structured as a part-time MSc (Dent) programme comprising two sections (minimum duration 2 academic years, maximum period of 3 academic years unless otherwise approved by the Faculty's Higher Degrees Committee or Senate).

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Oral Biology	ORB811	15
	Oral Pathology	PAT811	15
	Research Methods	RMT811	20
	Oral Medicine 1B	OMD821	35
	Periodontology 1B	PER823	35
2	Oral Medicine 2B	OMD822	40
	Periodontology 2B	PER824	40
	Dentistry Mini-Thesis	DNT803	70
	<b>TOTAL</b>		<b>270</b>

Upon completion of the programme, the student should demonstrate a clear understanding of subject matter in a three hour written examination paper and a 30 minute oral examination. A research report of 5 000 – 7 000 words will be assessed to determine the graduate's ability to conduct independent research and should be publishable in a refereed scientific journal.

#### **G.56.7 Master of Science in Oral Pathology**

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Basic Pathology	PAT841	15
	Applied Histology for Anatomical Pathology	ORP841	10
	Molecular Pathology	ORP821	10
	Postgraduate Oral Pathology for MSc	PAT811	15
	Measuring Health & Disease II	SPH856	15
	Research Methods	RMT811	20
	Anatomical Pathology for MSc I	ANP811	45
2	Anatomical Pathology for MSc II	ANP812	40
	Oral Microbiology & Immunology	ORM813	15
	Oral Biology	ORB811	15
	Clinical Oral Pathology	ORP833	10

	Oral & Maxillofacial Pathology for MSc I	MPO811	30
3	Oral & Maxillofacial Pathology for MSc II	MPO812	60
	Clinical Oral Pathology	ORP824	10
	Academic Placement in Oral Pathology	ORP815	10
	Dentistry Mini-Thesis 803	DNT803	70
		<b>TOTAL</b>	<b>390</b>

## **G.56.8 Master of Science in Paediatric Dentistry**

### **G.56.8.1 AIM**

The aim of this programme in paediatric dentistry (PD) is to improve the oral health care of infants, children, adolescents and children with special needs through appropriate preventive, educational and treatment services.

### **G.56.8.2 Goals of the programme for Paediatric Dentistry:**

- To be competent and confident in all areas of Paediatric Dentistry for the growing and developing child.
- To meet the oral health need of infants, children, adolescents and patients with special care needs.
- To be able to communicate and collaborate in multidisciplinary teams concerned with the welfare of children in both private and hospital settings.

### **G.56.8.3 Programme objectives**

The objectives of the training in PD are to produce students who:

- Are competent in the skills of dentistry pertaining to the care of infants, children, adolescents and patients with special care needs.
- Are competent and experienced in behaviour-management techniques, so that the majority of their patients can be treated without the use of adjunct medications.
- Are trained in the theory and application of sedation for use in hospital and dental office practice.
- Are competent and experienced in all aspects of hospital practice, the admission and care of children in hospital and the carrying out of full mouth restorative care and minor oral surgery in the hospital setting.
- Are competent and experienced in the provision of restorative, prosthetic and interceptive orthodontic care for infants, children, adolescents and patients with special care needs.
- Are competent and experienced in the care of orofacial trauma in infants, children and adolescents.
- Have experience and knowledge of developmental and/or acquired abnormalities and be able to recognize problems that can be treated or refer such patients.
- Are competent and experienced in the provision of dental care for patients with special needs and are able to treat the majority of such patients in the dental practice.
- Know the principles of research design and methodology. Each student should be able to conduct library research and literature searches and to design research studies. They should, on completion of the course, have carried out a research project of their own, under supervision, completed a Masters thesis or equivalent and prepared a paper suitable for publication in an internationally recognized and refereed journal.

#### G.56.8.4 General Conditions:

- The programme requires full time attendance.
- Students must treat patients under the supervision of qualified senior dentists with an expertise in paediatric dentistry.
- Students must gain experience in the treatment of patients who require a multidisciplinary approach.
- Students must conduct a research project and the report should be publishable in an accredited journal.
- Final examinations will take place at the end of the programme. It will consist of a three-hour examination, an OSCE, a diagnoses and treatment planning of a clinical case, an oral examination and a presentation of the student's clinical case portfolio (oral or powerpoint).
- As part of the final examination an external examiner from a recognized university or institute is to be consulted.

Year	Modules Name / Activities	Alpha Code	Cred
1	Paediatric Dentistry 1	PED811	60
	Oral Biology	ORB811	15
	Research Methods	RMT811	20
	Interceptive Orthodontics I	INO821	10
	Oral Pathology	PAT811	15
2	Paediatric Dentistry 2	PED812	80
	Dentistry Mini-Thesis	DNT803	70
	Interceptive Orthodontics II	INO822	5
	<b>TOTAL</b>		<b>275</b>

The clinical coursework is conducted at various sites, which include a community health setting, academic setting and a children's hospital.

#### G.56.8.5 Assessment components

- Coursework (assignments/seminars/presentations)
- Clinical work (including case presentation and portfolio)
- Final examination (written, oral and clinical exam)
- Mini-thesis

Final mark: 60% coursework + 40% final examination (includes case reports and mini-thesis)

Written (40%)	OSCE (20%)	Unknown Case (20%)	Oral (20%)	Exam Total (100%)	40% of Exam	60% of CAM	Final Mark for PED812
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#### G.56.9 Master of Science in Restorative Dentistry

This Masters programme in Restorative Dentistry is a full-time programme over 3 years designed for foreign nationals who are highly motivated general practitioners who would like to further develop their knowledge, clinical and technical skills in a component of Restorative Dentistry. It is offered by the department in association with specialists in private practice.

The components presently catered for include:

- Endodontics
- Basic Operative Dentistry

- Advanced Fixed Restorative Dentistry
- Implantology
- Dental Materials
- Prosthetics

The programme comprises the following modules.

<b>Year</b>	<b>Modules Name / Activities</b>	<b>Alpha Code</b>	<b>Cred</b>
1	Oral Biology 811	ORB811	15
	Radiology 812	RAD812	5
	Restorative Dentistry 811	RST811	100
	Research Methods 811	RMT811	20
2	Restorative Dentistry 812	RST812	100
3	Restorative Dentistry 813 or	RST813	80
	Prosthetics 853	PRS853	80
	Dentistry Mini- Thesis 803	DNT803	70
		<b>TOTAL</b>	<b>390</b>

The student will be expected to have an in-depth knowledge of and be proficient in all aspects of diagnosis, treatment planning, clinical treatment and follow up of patients requiring advanced comprehensive care in the selected sub-discipline. All cases must be fully documented and presented to the Department prior to the commencement of the treatment.

#### **G.56.9.1 ASSESSMENT**

The evaluation process is based on examinations and continuous evaluation as follows:

Coursework	40%
Mini-thesis	25%
Final examination (RST813 or PRS853)	35%

According to the university rules a sub-minimum of 50 % (28/70) for the final examination is required and a final mark of at least 50% is required for a pass to be awarded.