



**SCHOOL OF DENTISTRY**  
Prospectus 2022

**FACULTY OF HEALTH SCIENCES  
& VETERINARY MEDICINE**

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**NOTE**

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This Prospectus is only valid for 2022 as regulations and syllabi may be amended for 2022. The general regulations and further information appear in the General Information and Regulation Prospectus.

Although the information contained in this Prospectus has been compiled as accurately as possible, it is possible that errors and omissions have inadvertently occurred, for which we apologise in advance. The University reserves the right to amend any regulation or stipulation without notice. The information is correct up to 30 November 2021.

The fact that particulars of a specific module or programme have been included in this Prospectus does not necessarily mean that the module or programme will be offered in 2022.

This Prospectus must be read in conjunction with the General Information and Regulations Prospectus 2022.

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**STRUCTURE AND PERSONNEL**

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**OFFICE OF THE DEAN**

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Dean	Prof T Rennie
Associate Dean School of Medicine	Prof N Gutknecht
Deputy Associate Dean SOM	Vacant
Deputy Director - Administration and Finance	Mr A Flederbascher
Campus Administrator	Ms D Titus
Faculty Officer	Ms F Mario
Secretary/Administrator	Ms T Kadhila
Examination Officer	Ms L Xoagus
Student Records Officer	Mr M Nowaseb
Student Support Officer	Mr J Erastus
Field Officer	Vacant
Security Officer	Mr H Nakadiva
ICT Officer	Mr A Shikongo
ICT Officer	Mr S Shilongo

General enquiries regarding the school of Dentistry and the qualifications offered by the School should be directed to:

Ms F Mario

The Faculty Officer

Hage Geingob Campus

University of Namibia

Private Bag 13301

WINDHOEK

Telephone: +264-61-2065015

E-mail: [fmario@unam.na](mailto:fmario@unam.na)

Matters regarding specific subjects and departments should be addressed to the relevant Head of Department.

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## SCHOOL OF DENTISTRY PREAMBLE

The mission of the School of Dentistry is to be a Regional centre of excellence in preparing graduates for a life-long professional career in the provision of dental care that is in tune with the needs of society. The School shall provide a quality learning environment conducive to the pursuit of professional competence, while providing services to the community and undertaking relevant translational research for the enhancement of health. The School will continually strive for the establishment of training programs in the field of dentistry, lending support to the human resource development initiatives of the country; this will include the provision of Continuing Professional Development and postgraduate education of dentists, and the training and education of specialists and scientists. Finally, the School will seek high tech dental solutions for the treatment of children and patients with dental phobia and handicapped persons by using dental Laser devices systems for diagnostics and painless and bloodless surgery, which will be unique not only in Namibia but also in the surrounding countries.

The key objectives of the School of Dentistry are:

- To promote equity of access to health care services for all;
- To promote affordable health care service delivery by strengthening health care systems that are sustainable, cost-effective, efficient, culturally relevant and acceptable;
- To institute dental care measures to counter major health risks including the prevailing communicable diseases;
- To develop academically and professionally qualified dentists in sufficient numbers to support the health care infrastructure of Namibia;
- To conduct research directed to the health care needs of the Namibian society at large, and which is instrumental in ensuring quality health care service delivery;

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## SCHOOL OF DENTISTRY OATH

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**All (Students and Faculty):**

We pledge to serve our patients, their families, our community and each other with respect, competence, compassion, and humility. We hold as our ideal to care and treat all of our patients. From them we will learn. We hold as our ideal the advancement of knowledge. Through it disease will be understood, prevented and cured. We hold as our ideal open-minded collaboration. To this we are collectively committed.

We hold as our ideal critical self-evaluation. Through this we will grow.

**Faculty:**

We, your faculty, promise to serve as worthy role models, as our own teachers have before us.

**Students:**

We, your students, recognize the excellence and commitment of those from whom we learn.

**Faculty:**

We promise to support your personal and professional growth, in health care settings, in the clinics, in the community, and through your own teaching.

**Students:**

We promise to pursue responsibly our calling to patient care, to service, and to research.

**Faculty:**

We promise to maintain an environment where scientific integrity and ethical standards sustain your trust in us.

**Students:**

We commit ourselves to the highest standards of academic honesty, scientific integrity and ethical practice as students and in our professional lives.

**All (students and faculty members):**

We honour The University of Namibia, the Health Professions Councils of Namibia and our Government's history of service to the people of this nation. We accept the challenges and opportunities of those alumni whom we follow. We vow to be professional, punctual and courteous. We vow to honour and respect life on earth, in all forms, crawling and reasoning, with intellect or with handicap, to be ambassadors of healthy living and a prosperous future. We vow to take to heart and mind that all men are created equal. We vow to uphold this pledge and our assistance to others who do the same.

**Due Dates for the 2021 Academic Year**

<b>DATE</b>	<b>GENERAL DATES</b>
17 January	Last day for appeals (Semester 2 & Double modules – Regular and Supplementary/Special examinations of November 2019)
7 February	Last day for application of retention of continuous assessment (CA) mark and Last day for application for exemption(s)
7 February	Last day for Late Registration (Late fee payable)
7 February	Last day for approval of exemption(s)
7 February	Last day for approval of module(s) & qualification changes
12 February	Last day for recommendation of retention of continuous assessment mark and Promotion Examinations by Faculties
14 February	Last day for approval of retention of continuous assessment mark and Promotion Examination by Examinations Department



28 February	Promotion Examination
29 April	Last day for change of offering types at Regional Centres (Semester 1 modules)
3 August	Last day for Appeals (Semester 1 Modules - Regular and Supplementary/Special examinations of June 2019)
21 August	Last day to submit outstanding documentation
20 September	Last day to change offering types at Regional Centres (Semester 2 modules)
18 September	Last day to cancel enrolment
30 October	Last day to submit Theses and Dissertations for examinations
<b>DATE</b>	<b>CANCELLATION DUE DATES</b>
30 April	Last day to cancel Semester 1 modules
18 September	Last day to cancel Semester 2 modules
18 September	Last day to cancel Double modules (module that extends normally over one academic year)
<b>DATE</b>	<b>FINANCE DUE DATES</b>
2 March	Last day to cancel Semester 1 and Double modules with 100% credit
03 April	Last day to cancel Semester 1 modules with 50% credit
5 June	Last day to cancel Double modules with 50% credit
07 August	Last day to cancel Semester 2 modules with 100% credit
31 August	Last day to cancel Semester 2 modules with 50% credit

## ACADEMIC CALENDAR – UNAM CORE DATES 2021

### FIRST SEMESTER:

11 January	University Open
12 January	Start of Summer School (until 2 February)
12 January	Academic staff resumes office duties
01 March	Lectures commence for FIRST SEMESTER (Year 1)
06 April	First semester BREAK starts
12 April	Lectures resume after first semester break
08 May	Lectures end for FIRST SEMESTER
14 May	Regular Examinations commence
5 June	Regular Examinations end
15 June	Special/Supplementary Examinations start (until 19 June)
26 June	End of first semester
05 July – 09 July	Start of Winter School
05 July – 09 July	Mid-year Recess

### SECOND SEMESTER

19 July	Lectures commence for SECOND SEMESTER
23 August	Second semester BREAK starts
30 August	Lectures resume after second semester break

30 October	Lectures end for SECOND SEMESTER
05 November	Regular Examinations commence
27 November	Regular Examinations end
07 December	Special/Supplementary Examinations start (until 14 Dec)
14 December	End of second semester
17 December	End of academic year
13 January 2022	University opens (2021 academic year)
14 January 2022	Academic staff resumes office duty

## IMPORTANT ACADEMIC ACTIVITIES 2020

DATE	Activity
01 <sup>st</sup> April	COBES community and health facilities rotations commence
19 <sup>th</sup> June	Hand in complete 50% of log book
16 <sup>th</sup> October	Hand in complete 100% logbook
30 <sup>th</sup> October	Family profile presentation
27 <sup>th</sup> April - 15 <sup>th</sup> May 2020	Clinical practice i ( clinical rotation I)
28Sept – 16 <sup>th</sup> Oct 2020	Clinical practice ii ( clinical rotation II)
7 <sup>th</sup> Dec – 11Dec 2020	District hospital dentistry I
14 <sup>th</sup> Dec- 18 <sup>th</sup> Dec 2020	Community practice I

## ACADEMIC DEPARTMENTS

### Associate Dean School of Dentistry

☎ (+264 61) 2065082

[jrutabazibwa@unam.na](mailto:jrutabazibwa@unam.na)

✉ Private bag 13301, Windhoek, Namibia

Associate Dean: Vacant

### DEPARTMENT OF RESTORATIVE DENTISTRY AND PROSTHODONTICS

☎ (+264 61) 2065114

[fschwardmann@unam.na](mailto:fschwardmann@unam.na)

✉ Private bag 13301, Windhoek, Namibia

Head of Department: Dr. Frank Schwardmann, State Examination, University Giessen. Germany, Dr. Med. dent, University Kiel Germany Dip.Odont in Oral Surgery, University Pretoria.

Lecturer (Restorative): Dr. Bremer van Eyk, B.Ch. D. University Stellenbosch

Lecturer (Prosthodontics): Dr. Chamunorwa Marufu, MDS Prosthodontics, University of Nairobi

Lecturer (Periodontology): Dr. Ngouri Hjarunguru, B.Ch.D. University Western Cape

Dental assistant: Mr Eliud Mandume SHIWAYU – Registered Nurse, Registered Accoucheur, Registered Community Health Nurse, Registered Psychiatric Nurse, Dental Nurse & Developmental Specialist [Master in Development Studies, University of the Free States, Bloemfontein, Republic of South Africa, Bachelor of Nursing Science (Advanced Practice) Community Health Nursing Science & Health Service Management, University of Namibia (UNAM) and University Diploma in Nursing Science (General, Psychiatric & Community Health) and Midwifery Science, University of Namibia (UNAM) Republic of NAMIBIA.

## DEPARTMENT OF COMMUNITY DENTISTRY AND ORTHODONTICS

☎ (+264 61) 2065022    [jrutabazibwa@unam.na](mailto:jrutabazibwa@unam.na)    ✉ Private bag 13301, Windhoek, Namibia

Senior Lecturer (HOD): Dr Juvenary Jonh Rutabanzibwa- Public Health Specialist, Masters in Public Health, University of the Western Cape(UWC), Doctor of Dental Surgery(DDS), University of Dar es salaam. Certificate in Project Management, University of cape Town (UCT), Certificate in Monitoring and Evaluation (M&E), University of Cape Town(UCT), Former Chief Dentist for Namibia.

Lecturer Community Dentistry: Dr Francis Mburu- Bachelor of Dental Surgery, Nairobi University, Masters of Community Dentistry, University of the Western Cape

Lecturer Orthodontics: Dr Rehema Tumaini Muro, Bachelor Degree in Doctor of Dental Surgery (DDS), University of Dar es Salaam. Master in Public Health (MPh), UNAM. Postgraduate Diploma in Interceptve Orthodontics, UWC. Certificate in Clinical Management of HIV/AIDS, University of Washington. Intern Curator, Intermediate Hospital Oshakati.

Clinical instructor: Vacant

Dental assistant: Vacant

## DEPARTMENT OF MAXILLOFACIAL AND ORAL SURGERY

☎ (+264 61) 2065001    [sbere@unam.na](mailto:sbere@unam.na)    ✉ Private bag 13301, Windhoek, Namibia

Head of Department: Dr S K Bere

Lecturer: Dr Silas Kudakwashe Bere Specialist Maxillofacial and Oral Surgeon. Masters in Maxillofacial and Oral Surgery (MChD), University of Nairobi Kenya. Arbeitsgemeinschaft für Osteosynthesefragen Craniamaxillofacial Surgery (AOCMF) Fellow. Bachelor of Dental Surgery(BChD) University of Zimbabwe. Registered Specialist Maxillofacial Surgeon at Health Professions Council of Namibia ( HPCNA) and Medical and Dental Practitioners Council of Zimbabwe(MDPCZ). Member of International association of Oral and Maxillofacial Surgeons. Research interest : Maxillofacial trauma ,Cleft lip and palate and ameloblastoma

Professor: Vacant

Senior Lecturer: Vacant

Lecturer: Dr R Hange Maxillo facial and Oral surgeon Chir-Maxfac-Dent (University of Witswatersrand)Fellow Colleges of Maxillofacial and Oral surgeons of SA (MFOS(SA))Special interest : Cleft lip and palate and head and neck oncology

Clinical instructor: Vacant

Dental assistant: Vacant

DEGREE: BACHELOR OF DENTAL SURGERY (BChD) 18BCHD

**1. Purpose and Rationale of the Qualification**

## Introduction

### Purpose and rationale of the qualification

Purpose:

The program aims to develop professional dentists who are knowledgeable, skilled and ethically positioned to:

- provide evidence-based oral health care (EBOHC);
- promote oral health as an integral part of total health, and, oral healthcare as an integral part of comprehensive healthcare;
- apply the community-based, patient-centered approach to clinical care within the dental team (which includes hygienists, dental assistants, and dental technicians);
- direct the dental team as team leader and manager to promote efficient and cost-effective service provision by all team members;
- apply appropriate knowledge, skills and abilities, and behaviors to practise safely and efficiently;
- practise concept of prevention and primary care in dentistry;
- provide oral health care to various populations and communities (including marginalized communities);
- adopt a reflective practitioner approach committed to the active pursuit of life-long learning.

The degree program is organized into competence areas that include knowledge and skills on general medicine, oral biology, dental materials, concepts on society and its management; good diagnostic, practical and interaction skills; clinical and research data gathering concepts, interpretation and critique as well as general concepts on humanity. The competences reflect the seven domains that are described by Association for Dental Education in Europe (ADEE). These have been identified to represent the broad categories of professional activity and concerns that occur in the general practise of dentistry.

1. Professionalism
2. Interpersonal, Communication and Social Skills
3. Knowledge Base, Information and Information literacy
4. Clinical Information Gathering
5. Diagnosis and Treatment Planning
6. Therapy: Establishing and Maintaining Oral Health
7. Prevention and Health Promotion

### Rationale

The graduates of the BChD programme will increase access and equity to Oral health and dental surgery services to all Namibians particularly the rural populations where such services are limited **and/or** poorly resourced. Thus moving towards fulfilling the 2030 Vision of comprehensive health care provided by the Namibian people.

## EXIT PROGRAMME OUTCOMES

On completion of the Bachelor of Dental Surgery (BChD) programme students are able to:

Knowledge and understanding:

- Understand the scientific basis of dentistry, including relevant biomedical sciences, mechanisms of knowledge acquisition, scientific methods and evaluation of evidence.
- Analyse critically the disease processes of infections, inflammation, disorders of the immune system, degeneration, neoplasia, metabolic disturbances and genetic disorders.
- Obtain an understanding of the organisation and provision of dental health care in the community and in hospital.
- Demonstrate an understanding of the broader issues of dental practise, including ethics, medico-legal considerations, management, and the maintenance of a safe working environment.

Professional skills:

- Respect patients and colleagues that encompasses without prejudice, diversity of background, language and culture.
- Show respect to the community and sensitive to issues of the community.
- Demonstrate an understanding of patients' rights, particularly with regard to confidentiality and informed consent, and of patients' obligations.
- Act with integrity, honesty and trustworthiness.
- Understand that dentists should strive to provide the highest possible quality of health and patient care at all times.
- Manage own learning in the context of continuing professional development in order to ensure a high levels of clinical competence and knowledge are maintained.
- Apply leadership and teamwork skills with colleagues and other oral health personnel in the delivery of oral health care.
- Manage a dental practise effectively and efficiently.
- Practise dentistry in a professional manner with consideration of ethical and legal responsibilities involved in the provision of care to individual patients and to communities.

Practical skills:

- Obtain and record a comprehensive history, perform an appropriate physical examination, interpret the findings and organise appropriate further investigations.
- Apply medical and clinical sciences to ensure appropriate diagnosis and treatment of patients.
- Apply evidence-based treatment when giving care.
- Undertake a range of clinical procedures within a dentist's area of competence to carry out specific treatment interventions, including techniques required to prevent, restore or maintain patient's oral health.
- Acquire, analyse, process and communicate information in a scientific manner to solve problems and to guide clinical decision-making.
- Provide counselling for clients in situations where ethical issues arise and participate in discussions of ethical issues in health care, as they affect health professions and communities.
- Communicate effectively with patients, their families and associates, and with their other health professionals involved in their care.
- Share with patients provisional assessment of their problems and formulate plans for their further investigation and management.

Transferable/generic skills:

- Exercise initiative skills and personal responsibility.
- Apply critical thinking and problem solving while providing the oral health care of patients.
- Make decisions based on sound ethical, moral and scientific principles.
- Use information technology as a means of communication, collecting and analysing data, and for self-directed learning.
- Communicate effectively at all levels in both the scientific and professional contexts using verbal, non-verbal and written means.
- Work effectively as a member of a team.
- Manage time, set priorities and work to prescribed time limits.

**National health policy related skills:**

- Assess, prevent and mitigate the impact of environmental hazards on dental health.

- Demonstrate appropriate communication skills with patients, their families, colleagues and other health care professionals for effective delivery and promotion of oral health.
- Evaluate the evidence published in refereed scientific journals and other publications for sound experimental design and statistical analysis. Incorporate and balance cost and quality in the decision-making processes.
- Assess and implement preventive approach to all oral health care activities, both on individual and population level.

## CRITERIA FOR ADMISSION

### Admission Criteria

Admission to the School of Dentistry for the BChD is based on the applicant's academic standing (see admission requirements below), essay writing skills, letters of recommendation, and a successful interview. All admissions are made collectively by the Committee on Admissions and must be approved by the Faculty Board on recommendation from the Board of the School of Medicine.

### Admission Requirements

- (i) To admission for the BChD, a candidate must hold a valid NSSC (Namibian Senior Secondary Certificate) or any other equivalent qualification with at least 35 points on the UNAM scale with a grade 2 or better on higher level or a grade B or better on ordinary level for Mathematics and Physical Sciences, and a grade B or better on ordinary level for Biology and English (please refer to the scale used by the University to calculate the UNAM score);
- OR
- (ii) To admission for the BChD, a candidate must have successfully completed the entire first year of the BSc curriculum with at least a score of 60% in each of the Mathematics, Biology, Chemistry and Physics modules;
- OR
- (iii) To admission for the BChD, a candidate must have successfully completed a relevant<sup>1</sup> degree program in Health Science.
- (iv) Mature Entry: Candidates aspiring for admission to the BChD through the Mature Age Entry Scheme must satisfy the following conditions:
- a. They should be at least 25 years old on the first day of the academic year in which admission is sought
  - b. They should have successfully completed senior secondary education
  - c. They should have proof of at least five years related work experience
  - d. They should pass the prescribed Mature Age Entry Test
  - e. Candidates, who, in the opinion of the Faculty, merit further consideration, may be called for an oral interview before the final selection is made.

### Essay Writing

An applicant shall be required to submit an essay on a topic or topics so determined by the Committee on Admissions of the School of Medicine. The main objective of an essay so demanded of an applicant, besides evaluating one's writing skills and ability of formulating thoughts, is to gauge the candidate's potential as a health service provider to support the sick and disabled. During essay writing all applicants are required to also complete the School of Medicine Health Questionnaire.

### Letters of Recommendation

An applicant seeking admission to the School of Medicine shall submit three (3) letters of recommendation from his/her teachers, professors and/or employer(s). A special form is available for this purpose, and all recommendations submitted shall strictly follow the guidelines so provided in the form. It is the responsibility of the applicant to avail the form to his/her teachers/professors or employers and ensure that all recommendations are submitted on time.

### Interviews

Eligible applicants shall normally be invited for interviews to be conducted by the Committee on Admissions. Special interviews including the use of video conferencing may be considered for students outside Namibia. All interviews shall be conducted in order to assess the following attributes of the candidates:

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<sup>1</sup> "relevant" means any degree requiring the same Grade 12 subjects as the BChD, i.e. Mathematics Higher level, Physical Science Higher level, Biology Ordinary level and English Ordinary level.

- i. **Academic standing:** An interview shall seek to determine the candidate's academic competitiveness plus communication skills;
- ii. **Extra-curricular activity:** An interview shall also look into the candidate's records on extra-curricular activities and, if applicable, in job performances. Extra-curricular engagements in civic and community works shall be examined. Direct patient-care experience can be helpful but not essential.
- iii. **General awareness and sense of values:** A candidate's awareness of the community he/she lives in and the sense of values, sensitivities, and concerns he/she might have on social and cultural issues shall be assessed.
- iv. **General physical/mental condition of the aspiring student:** The evaluation of candidate's overall physical and mental status will be made without conducting a formal medical examination.

#### **DURATION OF STUDY**

The minimum duration for the Bachelor of Dental Surgery (BChD) is five (5) years. Candidates must complete the BChD programme within seven (7) years of full-time study.

#### **ASSESSMENT CRITERIA**

A student will be eligible to write the final examination in each module if they have obtained a Continuous Assessment Mark of at least 50%. The regular UNAM requirement (40%) will apply to the UNAM core modules.

Unless otherwise indicated in the module descriptor, the Continuous Assessment Mark (CA mark) will count 50% towards the final mark while the examination mark will contribute 50%.

A student will pass a module when he/she has obtained a final mark of at least 50%.

A student may qualify for a supplementary examination in a module if he/she obtained a final mark of 45%-49%. A student who qualifies for a supplementary examination in a clinical module, should undergo a remedial clinical training period of minimum four weeks per module before the supplementary examination.

From the 2<sup>nd</sup> year dental subject modules will be given in block with exams at the end of each block.

Four separate competence tests will be arranged from third year onwards where students are tested to have acquired adequate competence to treat patients. A student must pass competence tests to prove that he/she has adequate knowledge and clinical skills to perform selected oral health procedures before being allowed to start treating patients with such oral health problems.

Additionally, two integrated examinations will be arranged during the last two years of studies to supplement module exams. In integrated exams students prove to have the ability to combine the knowledge obtained from different dental disciplines and is able to form comprehensive diagnosis and treatment plan.

For detailed examination and promotion rules see the General Information and Regulations Prospectus.

#### **MINIMUM REQUIREMENTS FOR RE-ADMISSION INTO THE PROGRAMME**

A student will not be re-admitted into the programme if she/he has not earned:

1. At least 84 credits by the end of the first year of registration
2. At least 166 credits by the end of the second year of registration
3. At least 256 credits by the end of the third year of registration and required competence tests
4. At least 361 credits by the end of the fourth year of registration and required competence tests
5. At least 528 credits by the end of the fifth year of registration and required competence tests
6. At least 696 credits by the end of the sixth year of registration and required competence tests

In addition to the above regulations, a student will only be allowed to repeat a particular module twice – failure to clear any module after the third registration of the particular module, will result in termination of studies.



## ACADEMIC ADVANCEMENT AND PROGRESSION RULES

### First Year to Second Year of Dentistry

A student who has passed at least 112 credits of the first year, will proceed to second year of study. A student who has passed at least 84 but less than 112 credits will be allowed to register for a maximum of 56 second year credits, provided that all pre-requisites are met and the maximum number of credits is not exceeded.

### Second Year to Third Year of Dentistry

A student who has passed all first year modules and at least 108 credits of the second year, will be allowed to register third year modules, provided that all pre-requisites are met and the maximum number of credits is not exceeded. The student has to pass third year competence tests before being allowed to start third year clinical service provision.

### Third Year to Fourth Year of Dentistry

A student who has passed all first and second year modules and at least 110 credits of the third year, will be allowed to register for non-rotation modules, provided that all pre-requisites are met and the maximum number of credits is not exceeded. The student has to pass fourth year Competence tests before being allowed to start fourth year clinical service provision.

### Fourth Year to Fifth Year of Dentistry

A student must pass all the fourth year modules in order to advance to the final year.

Students repeating a year

A student who is repeating a year may be allowed to take non-conflicting modules from the next academic year, subject to the above requirements and the section 20.

### MAXIMUM NUMBER OF CREDITS PER YEAR

Year 1: 168 credits Years 2-5: A student will be allowed to register for a maximum of 32 credits more than the total credits of the particular curriculum year.

### REQUIREMENTS FOR QUALIFICATION AWARD

A student can graduate with the BChD upon completion of the prescribed number of credits (811) in the curriculum. Following graduation, graduates will be required to successfully proceed into a possible internship in Namibia as per national requirements at the time of graduation.

### CAREER OPPORTUNITIES

BChD holders enjoy a wide spectrum of career opportunities nationally and internationally. As a dental practitioner, the graduate may be employed in the public sector usually at the state run hospital or be employed as a General Practitioner in the private sector. Once registered, the dental practitioner has also the option of being self-employed in his/her own dental clinic.

## Part B: STRUCTURE OF THE DEGREE

### Bachelor of Oral Health and Dental Surgery

#### CURRICULUM STRUCTURE

##### **Breakdown by year of study:**

##### YEAR 1

The first year introduces the students to study skills, before embarking on the biomedical sciences at University level. This will include all the relevant basics for a foundation in applied sciences as applicable to dentistry. Therefore, the first year includes a mix of University taught modules that orientate the student to studies at tertiary level, biomedical sciences such as biochemistry, physiology and anatomy that build on knowledge acquired in secondary level education, and an introduction to dentistry through tailored modules. This will furnish the student with a good foundation for entry into the second year.

##### YEAR 2

The second year bridges the biomedical sciences taught in the first year with areas of general health and with specific relevance to dentistry. For example, anatomy, physiology and biochemistry lead into pharmacology, whereas the general introduction to dentistry leads into clinical, public health, and professional aspects of the profession. A number of pre-clinical modules are taught during the course of the year. At the end of the academic year exposure to clinical work starts through observation.

##### YEAR 3

In the third year the modules will transit from biomedical sciences introducing and preparing the student to clinical practise. Several preclinical modules will be undertaken such as clinical periodontology and dental prosthetics. The student will be introduced to the clinical setting in a number of areas of practise. The third year involves and precedes a number of practise rotations (field attachments) in the rural and community settings, giving also exposure to the varying needs of preventive and health promotion actions in the country. The third year includes increased exposure to clinical work, also through self-performed clinical procedures.

##### YEAR 4

In the fourth year, emphasis on clinical training is strengthened and aligned with the elective attachments. Students may also undertake a field attachment of their choice in an area of interest or relevance. Students are given exposure to a number of sub-specialties including clinical treatment of relevant and suitable patient cases. Students perform also comprehensive treatment planning and provide both curative and preventive services according to the comprehensive plans, as directed by The National Oral Health Policy.

##### YEAR 5

A final year of preparation for practise has strong emphasis on strengthening the student's ability to observe and determine community level oral health problems and to plan and implement oral health services and health promotion activities on individual and community levels. The final years of study also give the students the opportunity to develop research skills by undertaking a research project. Alongside this, taught modules continue to give students exposure to clinical and specialty areas.

### Summary Table

The curriculum of the BChD is made up of the following components:

<b>YEAR 1</b>					
<b>SEMESTER I</b>					
<b>Module Title</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs./week</b>	<b>Pre/Co requisites</b>
Computer Literacy	CLC3509	5	8	2	
Contemporary Social Issues	CSI3580	5	4	1	
Embryology and Introduction to Anatomy	ATM3511	5	16	3+4P	
English for Academic Purposes	LEA3519	5	16	4	
Medical Physics	PLG3501	5	8	2	
Organic Chemistry	BCM3501	5	8	2+2P	
Systemic Physiology I	PLG3511	5	16	3+4P	
Introduction to Dentistry and Ethics	PHP3580	5	4	1	
<b>SEMESTER CREDITS</b>			<b>80</b>		

<b>SEMESTER II</b>					
<b>Module Title</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs./week</b>	<b>Pre/Co requisites</b>
Contemporary Social Issues	CSI3580	5	4	1	
General Biochemistry I	BCM3512	5	16	3+4P	
Sociology of Health & Disease	PCS3512	5	16	3+4P	
Statistics for Health Sciences	RID3512	5	16	2+2P	
Systemic Anatomy of Head and Neck	ATM3512	5	16	3+4P	ATM3511
Systemic Physiology II	PLG3512	5	16	3+4P	PLG3511
Introduction to Dentistry and Ethics	PHP3580	5	4	1	
<b>SEMESTER CREDITS</b>			<b>88</b>		

<b>YEAR 2</b>					
<b>SEMESTER I</b>					
<b>Module Title</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs./week</b>	<b>Pre/Co requisites</b>
Dental Morphology and Occlusion	RDT3601	6	8	1+2P	
COBES	PHP3600	6	8	4	
Dental Materials Sciences	RDT3611	6	16	3+4P	BCM3501
Oral Health Promotion/Preventive dentistry	PHP3611	6	16	3+4P	
Oral Radiology I	DSG3611	6	16	3+4P	ATM3512, PLG3512
Facial Growth and Occlusal Development	PHP3671	6	16	3+4P	ATM3512
<b>SEMESTER CREDITS</b>			<b>80</b>		

<b>SEMESTER II</b>					
<b>Module Title</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs./week</b>	<b>Pre/Co requisites</b>
General Pathology	DSG3682	6	4	1	
Medical Microbiology	MCB3612	6	16	3+4P	
Dental Pharmacology	DSG3612	6	16	4	PLG3512
Occlusal Dysfunction and Pathophysiology	DSG3692	6	12	2+3P	
Epidemiology	RID3711	7	16	3+1P	
COBES	PHP3600	6	8	4	
<b>SEMESTER CREDITS</b>			<b>72</b>		

<b>YEAR 3</b>					
<b>SEMESTER 1</b>					
<b>Module Title</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs./week</b>	<b>Pre/Co requisites</b>
Periodontology	RDT3731	6	16	3+4P	ATM3512
Research Methods and Proposal Writing	CRS3740	7	4	1+2P	RID3512
Oral Microbiology	DSG3711	7	16	3+4P	MCB3612
Oral Medicine and Oral Pathology	DSG3731	7	16	3+4P	ATM3512
Restorative Dentistry I	RDT3711	7	16	3+4P	
Clinical Practise I	RDT3791	7	12	120 total hours	Competence test
<b>SEMESTER CREDITS</b>			<b>84</b>		

<b>SEMESTER II</b>					
<b>Module Title</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs./week</b>	<b>Pre/Co requisites</b>
Research Methods and Proposal Writing	CRS3740	7	4	1+2P	RID3512
Oral Radiology II	DSG3702	7	8	2+2P	DSG3611
Restorative Dentistry II and Endodontics	RDT3772	7	16	3+4P	RDT3711
Periodontology II	RDT3702	7	8	2+2P	RDT3631
Orthodontics	PHP3702	7	8	2+2P	PHP3612
Dental Prosthetics I	RDT3722	7	8	2+2P	RDT3611
Dental Prosthetics II	RDT3742	7	8	2+2P	RDT3611
Clinical Practise II	RDT3782	7	12	120 total hours	Competence test
Clinical Dentistry	RDT3712	6	16	3+4P	ATM3512
<b>SEMESTER CREDITS</b>			<b>88</b>		

<b>PRACTICUM I</b>					
<b>Module</b>	<b>Code</b>	<b>NQF Level</b>	<b>Credits</b>	<b>Hrs/week</b>	<b>Pre /Co-requisites</b>
District Hospital Dentistry I	DSG3789	7	4	200 total hours*	RDT3612 and Competence test
Community Practise I	RDT3789	7	4	200 total hours*	RDT3612 and Competence test
<b>CREDITS</b>			<b>8</b>		

YEAR 4					
SEMESTER I					
Module Title	Code	NQF Level	Credits	Hrs./week	Pre/Co requisites
Research Project	RDT3810	8	16	4	CRS3740
Oral & Maxillo-facial Surgery I	DSG3811	8	16	3+4P	DSG3731
Dental Prosthetics III	RDT3881	8	12	2+3P	RDT3611
Leadership and Management	PHP3801	8	8	1+2P	
Gerodontics and Special Needs	RDT3801	8	8	1+2P	DT3611
Clinical Practise III	RDT3891	8	25	250 total hours	Competence test
<b>SEMESTER CREDITS</b>			<b>85</b>		

SEMESTER II					
Module Title	Code	NQF Level	Credits	Hrs./week	Pre/Co requisites
Dental Prosthetics IV	RDT3802	8	8	1+2P	RDT3881
Pediatric Dentistry	PHP3882	8	12	2+3P	PHP3702
Dental Practise Management	PHP3802	8	8	1+2P	
Research Project II	RDT3810	8	16	4	CRS3740
Clinical Practise IV	RDT3882	8	40	400 total hours	Competence test
<b>SEMESTER CREDITS</b>			<b>84</b>		

ELECTIVES					
Module	Code	NQF Level	Credits	Hrs./week	Pre /Co-requisites
Elective Attachment	ELA3889	8	4	200 total hours**	
<b>CREDITS</b>			<b>4</b>		

YEAR 5					
SEMESTER 1					
Module Title	Code	NQF Level	Credits	Hrs./week	Pre/Co requisites
Oral & Maxillo-facial Surgery II	DSG3831	8	16	3+4P	DSG3881
Restorative Dentistry III	RDT3821	8	8	2+2P	RDT3712
Periodontology III	RDN3801	8	8	2+2P	RDT3702
Clinical Practise V	RDN3881	8	45	450 total hours	Competence test
<b>SEMESTER CREDITS</b>			<b>77</b>		
PRACTICUM II					
Module	Code	NQF Level	Credits	Hrs./week	Pre /Co-requisites
District Hospital Dentistry II	DSG3819	8	4	200 total hours*	DSG3789
<b>CREDITS</b>			<b>4</b>		

ELECTIVES					
Module	Code	NQF Level	Credits	Hrs./week	Pre /Co-requisites
Elective Attachment	ELA3899	8	4	200 total hours**	
<b>CREDITS</b>			<b>4</b>		
<b>COURSE CREDITS</b>			<b>811</b>		

SEMESTER II					
Module Title	Code	NQF Level	Credits	Hrs./week	Pre/Co requisites
Public Health Dentistry	PHP3892	8	8	1+2P	
Dental Prosthetics V	RDT3892	8	4	1	RDT3802
Clinical Practise VI	RDN3882	8	45	450 total hours	Competence test
<b>SEMESTER CREDITS</b>			<b>57</b>		

PRACTICUM II					
Module	Code	NQF Level	Credits	Hrs./week	Pre /Co-requisites
Community Practise II	RDT3889	8	4	200 total hours*	RDT3789
<b>CREDITS</b>			<b>4</b>		

\* Hours are on-call. The actual work load will depend on patient cases that will need attention and treatment during these on-call hours.

\*\* The actual work load will depend on the elective studies the student and the instructor determine.

## Module Title: English for Academic Purpose

<b>Code:</b>	<b>ULEA3519</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	4 hours per week for 14 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	LCE3419
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Course Description:

This module develops a student's understanding and competencies regarding academic conventions such as academic reading, writing, listening and oral presentation skills for academic purposes. Students are required to produce a referenced and researched essay written in formal academic style within the context of their university studies. Students are also required to do oral presentations based on their essays. The reading component of the course deals with academic level texts. This involves students in a detailed critical analysis of such texts. The main aim is therefore, to develop academic literacy in English.

### Assessment Strategies

Continuous Assessment: 60 %  
Examination: 40 % (1 x 3 hours paper).

## Module Title: Contemporary Social Issues

<b>Code:</b>	<b>CSI3580</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	1 hour per week for 2 semesters (offered Online)
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	none
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semesters 1 & 2

**Assessment strategies:** This is a 100% continuous assessment module with a variety of assessments which evaluate and test the students' individual learning and mastering of the course content (subject knowledge) through quizzes, tests, Moodle assignments, journal entries, reflections as well as service and experiential learning projects.

**Course Content:** The module, **Contemporary Social Issues (CSI3580)**, is designed to encourage behavioral change among UNAM students and inculcate the primacy of moral reasoning in their social relations and their academic lives. In providing students with critical and analytical thinking the module enables students to grow and develop into well rounded citizens, capable of solving contemporary social challenges experienced in their communities and societies. The teaching of the module takes three dimensions: the intellectual, the professional and the personal dimensions. The intellectual dimension is fostered through engaging students with subject knowledge, independent learning and module assessment. The professional dimension, on the other hand, is fostered through exposing students to real life situations of case studies and practical exercises that draws attention to social issues that attract ongoing political, public and media attention and/or debate. Finally, the professional dimension is fostered through group work and online discussions.



## Module Title: Computer Literacy

<b>Code:</b>	<b>CLC3409</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	2 lecture hours
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	none
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Module Content:

**Understanding computer systems and technology:** The problem-solving approach. Structure and components of a modern computer - processor, memory, hard drives, disk drives, interfaces. The Windows environment.

**Principles of information processing:** word-processing, spreadsheets, presentations, databases. nature and use of software.

**Practical exercises:** Use of MS Word, Excel, PowerPoint. Communication using email. Overview of Internet.

**Assessment:** Continuous 100%:

## Module Title: Embryology and Introduction to Anatomy

<b>Code:</b>	<b>ATM3511</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3 +4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Module Aims

This module aims to provide a background to master certain principles of cell biology, histology, human embryology and introduction to anatomy. This module will establish the foundation for systems Anatomy.

### Module Content

The module provides building blocks to master the following topics i) man's place in the environment. ii) basic embryological concepts. iii) histological structure and function of the primary tissues in the body. iv) terminology and definitions in anatomy. The module includes an introduction to microscopy and methods in histology. Introduction to all the systems of the body with demonstrations in the dissection hall.

The module consists of four entities:

(1) Introduction to anatomy including topics: Organismic kingdom, evolution, humans and their environment, history of anatomy, anatomical concept and terms. Introduction to all eleven body systems (neurology-, cardiovascular-, respiratory-, digestive- and urogenital systems etc).

2) Cell biology, consisting of structure and function of cells and cell organelles and biological communication.

(3) Embryology, consisting of principles in basic anatomy and physiology of reproduction, fertilization, implantation, the placenta, and development of the embryo till trilaminar disc stage.

(4) Introduction to human histology including histology of the basic tissues, namely epithelial tissue, connective tissues, muscle tissue and nervous tissue, and introduction to hematology and immunology.

### Assessment Strategies

Continuous assessment mark: 60%

Examination mark: One 3-hour examination paper.

Final mark: 40% of exam mark and 60% of Continuous assessment mark.

## Module Title: English for Academic Purpose

<b>Code:</b>	<b>LEA3519</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	4 hours per week for 14 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Module Aims

This module develops a student's understanding and competencies regarding academic conventions such as academic reading, writing, listening and oral presentation skills for academic purposes. Students are required to produce a referenced and researched essay written in formal academic style within the context of their university studies. Students are also required to do oral presentations based on their essays. The reading component of the course deals with academic level texts. This involves students in a detailed critical analysis of such texts. The main aim is therefore, to develop academic literacy in English.

### Assessment Strategies

Continuous Assessment: 60 %  
Examination: 40 % (1 x 3 hours paper).

## Module Title: Medical Physics

<b>Code:</b>	<b>PLG3501</b>
<b>NQF level:</b>	5
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2 hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Module Aims

This module aims to equip the students with the concepts and principles of physics that have direct relevance in the learning and practise of dentistry.

### Module Content

In the context of dental application, the following topics will be covered: Units (standards, SI system, converting units, order of magnitude); Motion (displacement, velocity, acceleration, falling objects); Vectors (representation, adding, subtracting scalar product, vector product); Force (Newton's 1<sup>st</sup> on 3<sup>rd</sup> laws, mass, weight); Equilibrium (statics, equilibrium, elasticity); Fluids (density, specific gravity, pressure, Pascal's principle, measurement, flow, Bernoulli's Principle, viscosity, surface tension, pumps); Waves (wave motion, types of waves, energy, amplitude and frequency, reflection and interference, resource, refraction and diffraction); Temperature (atomic theory, temperature and thermometers, thermal expansion, thermal stress, diffusion); Electricity (charge, field, potential, currents, basic circuits); Magnetism (magnetic fields, electric currents, force, electric charge, ampere and out coulomb, Ampere's Law, torque); Electromagnetism (electromagnetic induction, transformers, transmission of power, production of electromagnetic waves, light and electromagnetic spectrum); Light (wave versus particles, diffraction, refraction, visible spectrum and dispersion); Molecules and Solids (bonding in molecules, weak bounds); Radioactivity (structure and properties of nucleus, binding energy and nuclear forces, radioactivity, alpha, beta, and gamma decay, half-life and rate of decay, radioactive dating).

### Assessment strategies

Continuous assessment	60%
Final Examination	40%

## Module Title: Organic Chemistry

<b>Code</b>	<b>BCM3501</b>
<b>NQF level</b>	5
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Module

### Aims

This module introduces students commencing studies in health sciences to the concepts of general, physical and organic chemistry which are foundational for the understanding of biochemical and physiological processes.

### Module

### Content

The materials covered in this module are: Periodic table and electronegativity scale, acid base properties of solutions, thermodynamics, nomenclature of hydrocarbons, basic reactions of organic compounds, introductory spectroscopy, preparation of solution, principles of laboratory safety and laboratory procedures.

### Assessment Strategies

The continuous assessment (CA): 40%

Examination: 60% Examination (1 x 3 hours written paper + 1½ h practical examination)

## Module Title: Systemic Physiology I

<b>Code:</b>	<b>PLG3511</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1

### Module Aims

The Systems Physiology Course is a two semester module designed to provide an understanding how cells, tissues, organs, and organ systems function together to create one human organism. The course lays the basis for understanding diagnosis and treatment of diseases. Laboratories include presentations of clinical cases, practicing of clinical procedures, and debriefing of problem-solving skills.

### Module Content

The study of physiology encompasses a number of fields of study; from molecules to ecosystems. Here we begin with an investigation of basic cell processes. The students will be expected to understand how molecular interactions are integral to the generation, storage and utilization of energy, signaling and cellular dynamics. Building upon this we will stress the importance of cellular and tissue compartmentation, and how information flows within a cellular and mass context. The integration of these systems and how they may impact homeostasis is also of critical importance. By the end of the course students will also be familiar with the components and mechanics of the:

1. Basic Cell Processes including cells and tissues, energy and cellular metabolism, membrane dynamics and finally, communication, integration, and homeostasis.
2. The cellular and network properties of neurons and how they function within the context of the central and peripheral nervous systems.
3. The Muscular Skeletal system in principle and that of head and neck in detail and the control of body movement  
The principles of the structure and function of following:
4. Endocrine system
5. Digestive System

6. Cardiovascular control including blood flow and the control of blood pressure
7. Respiratory mechanics and gas exchange
8. Blood and blood products
9. Renal function and control including fluid and electrolyte balance
10. Exercise and metabolism
11. Reproduction and development

#### **Assessment Strategies**

The continuous assessment (CA): 50 %

Examination: 50 % (1 X 2 hours paper)

Module Title: Introduction to Dentistry and Ethics

<b>Code</b>	<b>PHP3580</b>
<b>NQF level</b>	5
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	1 hour per week for 32 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 1 and semester 2

#### **Module**

#### **Aims**

This module introduces students commencing studies in oral health sciences to the principles of dentistry. Different dental specialty areas will be introduced. The principles of medical ethics and their application to dental treatment will be given. This will give the students a background to deal with ethical questions that will be encountered and studied in connection to different clinical disciplines.

#### **Module**

#### **Content**

The module will cover definitions of dentistry overall, different specialty areas in it and descriptions of studies when becoming oral health care professionals. Motivation to dental studies by giving an overview and understanding of the whole variety of disciplines and clinical practise in dentistry. Working environments and principles of provision of oral health care services both in public and private sector. The aims of National Guidelines on Oral Health Service Delivery and actions needed to implement it. Professional conduct and ethics of health care.

#### **Assessment Strategies**

100 % continuous assessment

## Module Title: General Biochemistry I

<b>Code:</b>	<b>BCM3512</b>
<b>NQF Level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 2

### Module Aims:

This module has focus on cellular organization, biomolecules and cellular function, cell communication and immune recognition, introductory clinical/medical/dental genetics and bioinformatics. The module will correlate changes in cell division, structure, function, biomolecules and genomes associated with homeostasis or disease state.

### Module Content

The module will cover the following topics Principles of Medical Biochemistry; cell structure and function; cell cycle; basic structure, biochemical properties and function of biomolecules in health and disease; glycoconjugates; complex lipids; eicosanoids and their role in inflammation; importance of lipoproteins in health and disease, definition of enzymes and their roles in cell function, therapeutics, diagnostics and inborn metabolic errors; cell signaling and communication; nucleotides and DNA organization; DNA replication, transcription and translation; mechanism of mendelian inheritance; mutations and disease; basic principles of chromosomal aberrations and cytogenetics; basic principles of bioinformatics; techniques in DNA isolation, pcr, sequencing and microarrays; DNA and protein electrophoresis; point of care diagnostics.

### Assessment Strategies

The continuous assessment (CA): 40%

Examination: 60% (1 x 3 hours written paper + 1½ h practical examination)

## Module Title: Sociology of Health and Disease

<b>Code:</b>	<b>PCS3512</b>
<b>NQF Level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hour per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 2

### Module Aims:

The module aims at equipping students with knowledge and skills necessary to practise in different social-cultural settings. Students will learn about the indirect pathways between sociology and health/disease with emphasis on the role of that beliefs and behaviors play in health and illness. The goal of the module is to acquaint students with the sociological construct of health, illness and disease which takes into account the structural and social factors not necessarily relying on biological and medical explanations of health and disease. The structural discourse will analyse political, economic, and sociocultural elements that foster ill/health as well as the forces that allow or constrain the healthcare system and individual's responses to illness.

### Module Content

Sociological understanding of health, illness and disease considers the structural and social factors and not largely relies on biological medical explanations of health and disease. The structural emphasis will entail consideration of the political, economic and social cultural elements that foster ill/ health, as well as the forces that allows/ constrain the health care system and individuals' responses to illness. The module also focuses on the indirect pathway between sociology and health/disease, and emphasizes the role that beliefs and behaviors play in health and illness.

Furthermore, the module will address the sociological definition of disease, explore major theoretical perspectives in health, behavioral science, and sociology, the influence of class, gender and ethnicity on health; global and rural health problems; health promotion and community health services among others. This will enable the students to understand the social determinants of health, social construction of illness, social meanings of illness, patterns in the distribution of health and illnesses, people health seeking behaviors; interaction between patients and the health provider. The course will also explore medicine as power and social control and the role of alternative medicines.

Students will also examine health-related behaviors and apply theories to specific behaviors, e.g. addictive behaviors and the factors that predict smoking and alcohol consumption as well as dietary and oral health habits that lead to deterioration of oral health.

#### Assessment Strategies

Continuous Assessment: 60%

Final Examination: 40%

### Module Title: Statistics for Health Sciences

<b>Code:</b>	<b>RID3512</b>
<b>NQF Level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 2

#### Module Aims:

This module aims at teaching the students how to gather and analyze data that can be used to provide honest information about unanswered biomedical questions and health status of populations. The module will aim at equipping the students with technical skills in applied statistics that is concerned with the application of statistical methods to medicine, clinical trials, demography, population estimation, modeling, community diagnosis, surveys and survival analysis.

#### Module Content

Describing Univariate Data: Central Tendency, Spread, shape and graphs. Describing Bivariate Data: Scatterplots, Introduction to Pearson's Correlation, Computational formula for Pearson's Correlation, Example values of  $r$ , Effect of linear transformations on Pearson's Correlation, Spearman's rho. Introduction to Probability (elementary): Simple probability, Conditional probability, Probability of A and B, Probability of A or B, Binomial distribution. Normal Distribution: What is it? The standard normal distribution: Why is it important? Converting to percentiles and back, Area under portions of the curve, Sampling Distributions. Sampling Distributions: Sampling distribution of the mean, Standard error, Central limit theorem, Area under sampling distribution of the mean, Difference between means, Proportion, Difference between proportions. Confidence Intervals: Overview, Mean,  $\sigma$  known, Mean,  $\sigma$  estimated, General formula, Difference between means of independent groups,  $\sigma$  known, Difference between means of independent groups,  $\sigma$  estimated, Pearson's correlation, Difference between correlations. The Logic of Hypothesis Testing: Ruling out chance as an explanation, The null hypothesis, Steps in hypothesis testing Why the null hypothesis is not accepted, The precise meaning of the p value, At what level is  $H_0$  really rejected? Statistical and practical significance, Type I and II errors, One- and two-tailed tests, Confidence intervals and hypothesis testing following a non-significant finding. Testing Hypotheses with Standard Errors: General formula Tests of  $\mu$ ,  $\sigma$  known, Tests of  $\mu$ ,  $\sigma$  estimated,  $\mu_1 - \mu_2$ , independent groups,  $\sigma$  estimated,  $\mu_1 - \mu_2$ , dependent means,  $\sigma$  estimated, Tests of Pearson's correlation, Differences between correlations Proportions Differences between proportions. Chi square: Testing differences between p and  $\pi$ , More than two categories, Chi square test of independence ( Introduction, Calculations, Assumptions ), Reporting results. Power: Factors affecting power; Size of difference between means, Significance level, Sample size, Variance Other factors, Estimating power. Measuring effects: Variance explained in ANOVA, Variance explained in correlation, Variance explained in contingency tables,

#### Assessment Strategies

The continuous assessment (CA): 40%

Examination: 60% (1 x 3 hours written paper)

## Module Title: Systemic Anatomy of Head and Neck

<b>Code:</b>	<b>ATM3512</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Co-requisite:</b>	ATM3511
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 2

### Module Aims

This module aims to provide students with detailed knowledge of the anatomy and histology of the head and neck necessary for future practise in dentistry.

### Module Content

Regional anatomy and topographical anatomy; organ development and histology of head, neck and brain; nervous system; mucous membranes; skin and musculo-skeletal system; dissections, microscopy and practical sessions. Clinical applications of the anatomical knowledge and clinical cases and clinical examination techniques will be covered.

### Assessment Strategies

Continuous assessment mark: 50%

Examination mark: One 3-hour theory examination paper (60%)

One 1,5 hour practical examination paper (40%)

Final mark: 50% of exam mark and 50% of Class mark.

## Module Title: Systemic Physiology II

<b>Code:</b>	<b>PLG3512</b>
<b>NQF level:</b>	5
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Co-requisite:</b>	PLG3511
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	1 <sup>st</sup> year semester 2

### Module Aims

The Physiology course is a two semester module designed to provide an understanding how cells, tissues, organs, and organ systems function together to create one human organism. The course lays the basis for understanding diagnosis and treatment of diseases. Laboratories include presentations of clinical cases, practicing of clinical procedures, and debriefing of problem-solving skills.

### Module Content

The study of physiology encompasses a number of fields of study; from molecules to ecosystems. Here we begin with an investigation of basic cell processes. The students will be expected to understand how molecular interactions are integral to the generation, storage and utilization of energy, signalling and cellular dynamics. Building upon this we will stress the importance of cellular and tissue compartmentation, and how information flows within a cellular and mass context. The integration of these systems and how they may impact homeostasis is also of critical importance. By the end of the course students will also be familiar with the components and mechanics of the:

1. Basic Cell Processes including cells and tissues, energy and cellular metabolism, membrane dynamics and finally, communication, integration, and homeostasis.
2. The cellular and network properties of neurons and how they function within the context of the central and peripheral nervous systems.
3. The Muscular Skeletal system in principle and that of head and neck in detail and the control of body movement.

The principles of the structure and function of following:

4. Endocrine system
5. Digestive System
6. Cardiovascular control including blood flow and the control of blood pressure
7. Respiratory mechanics and gas exchange
8. Blood and blood products
9. Renal function and control including fluid and electrolyte balance
10. Exercise and metabolism
11. Reproduction and development

### Assessment Strategies

The continuous assessment (CA): 50 %  
Examination: 50 % (1 X 2 hours paper)

## Module Title: Dental Morphology and Occlusion

<b>Code</b>	<b>RDT3601</b>
<b>NQF level</b>	6
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	1+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 1

### Module

This module introduces students commencing studies in oral health sciences to the concepts of normal morphology of the dentition, and how they are structured to form an occlusion. These all form the basis for studying the pathophysiology of occlusion.

### Aims



**Module****content**

The materials covered in this module are: Morphology of teeth. How teeth are in connection with each other and how they form a dentition. Movements of the lower jaw and how temporomandibular joint functions in jaw movements. Occlusal relationships of teeth in jaw movements. Masticatory muscle forces. Introduction to physiology of occlusion.

**Assessment strategies**

Continuous assessment of student participation 50%

Practical assignments and reports 50%

Module Title: Community Based Education and Service (COBES)

<b>Code:</b>	<b>PHP3600</b>
<b>NQF Level:</b>	6
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	4 hours of integrated learning and family attachment for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 2

**Module Aims:**

The aims of this module are to prepare the student to practise in different socio-economic cultural and technological settings in Namibia, the region or internationally. This module integrates core principles of community medicine and family medicine, including oral health and helps the student to gain knowledge and skills essential for evidence based delivery of a continuum healthcare services to an individual patient, family, community or population groups. The module also assists students to internalize the ethical values particularly the tenets of human dignity, social justice, equity and right based healthcare services. The module gives opportunities for the students to address the root causes of health conditions to improve the well-being of the family. The experience gained will help the students to identify resources in the household and leverage this for health in support of health promotion, prevention, control, treatment and rehabilitation. The module also allows students to learn how through the application of principles and practise of Community Based Education leads to transforming of individuals, families and communities into well-informed, self-reliant and empowered society. Dental students will carry out their field exercise together with medical students, but the focus of the dental COBES will be in oral health care issues.

**Module Content**

The construct of a family; urban household set up; socio-economic and cultural determinants of health at household setting i.e. the basic unit of society; health seeking behavior, access and demand factors as well as culturally mandated disposal of household income and allocation to health; longitudinal follow and observational techniques; health outcomes for disease as well among the elderly or aged persons; primary care elements, health education, health promotion; household resources and resource allocation; the oral health care for people with disabilities and mental illness or other vulnerable groups. In this way a student will apply holistic approach to healthcare delivery. This is also value-based approach that emphasizes on the role of family members in assessing and analyzing their own health problems, allocate resources to health and develop solutions; interaction of household, families, environment and influencing factors; community strengths, resources available at household levels, socio-economic conditions, cultural practises, educational levels, use of information to develop intervention strategies; participatory identification of health problems, identify appropriate tools to sustain programmes developed; application of principles and practise of community based education approach, health promotion theories, integrated health education application.

**Assessment strategies**

Continuous Assessment of practicals and assignments 100%

## Module Title: Dental Materials Sciences

<b>Code:</b>	<b>RDT3611</b>
<b>NQF level:</b>	6
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	BCM3501
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 1

### Module Aims

The goal of this module is to equip students with knowledge of materials used in oral health care, their practical applications and limitations in their use. Students will also learn how to handle the materials in dental practise and their chemical and physical characteristics. Students will learn how the behavior of each material is depending on its own physical characteristics and the conditions where it is used, eg. light, humidity, temperature, etc.

### Module content

This module covers topics on dental materials; their chemical content and physical characteristics. How the chemical structure of the materials changes during their management and the stability of this chemical structure in different conditions. Physical properties of the materials, how each material should be managed, how different types of waste should be safely disposed. Criteria for selection of appropriate materials to be used in oral health care and when constructing dental appliances.

### Assessment Strategies

Continuous assessment (50%)

Examinations (50%):

1 x 1½ h written paper	(25%)
1½ h practical examination	(25%)

## Module Title: Oral Health Promotion

<b>Code:</b>	<b>PHP3611</b>
<b>NQF level:</b>	6
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 1

### Module Aims

The objectives of this module are for students to acquire skills in health promotion and health education which are important strategies for preventing dental and oral disease, controlling disease and maintaining oral health and dental integrity throughout the lifecycle. The focus of this course is in community approach, so that students realize the importance of the involvement of not only individuals but also various stakeholders in order to achieve sustainable results. The roles of peer groups like schools, villages, community organizations, religious communities and others are covered. Global trends and differences in oral health are discussed. The role of oral health habits such as hygiene and diet are discussed in relation to individual and community. Students are helped to develop effective communication techniques and how to effect behavior change.

### Module content

The module covers the background to, and history of health promotion and health promoting schools; the theory and application of health promotion models; the importance of assessing information for health promotion; the roles of the media and other stakeholders in health promotion; the planning cycle identifying the needs, writing objectives, indicators and development of action plan, project implementation and methods of evaluation; concepts of health and disease; introduction to health education, disease prevention and health promotion; Oral health education, hygiene aids and tooth brushing; dietary habits; outreach visits to schools and other community organizations, community clinics, health education/promotion units.

### Assessment strategies

Continuous assessment of student participation 50%  
Assignments and tutorials 50%

## Module Title: Oral Radiology I

<b>Code:</b>	<b>DSG3611</b>
<b>NQF level:</b>	6
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	ATM3512, PLG3512
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 1

### Module Aims

The aim of this module is to equip the students with knowledge and technical skills of radiographic imaging in dentistry. Students will learn about the physics underlying production of radiographs, taking intra-oral radiographs, their interpretation and use in clinical decision making. Furthermore, students will learn about safety precautions in use of radiographs, as well as chemical and physical basics for radiological hazards.

### Module Content

Topics to be covered include: Structures of matter; atomic energy levels; electromagnetic radiation, production of radiographic rays; the radiographic tube: the anode, the cathode, transformers, voltage rectification, basic radiographic circuit; physics of production of radiographs: characteristics, energy spectrum and operating characteristics of radiographic devices; interaction of radiation with matter: ionization, photo electric effect, Compton scattering, pair

production; production of radiographic images: image formation and contrast; factors affecting the quality of radiographic images, radiographic contrast, scattered radiation, and contrast, radiographic receptors; measurement of absorbed dose: absorbed dose, dose measurements; Radiation protection: patient exposure and protection, personnel exposure and protection; the Radiographic film; intra-oral radiographic techniques; infection control in dental radiography; normal radiographic anatomy, diagnosing normal and pathological processes from radiographic images.

### Assessment strategies

Practical work (based on log book)	50%
Final examination (2 hours)	50%

### Module Title: Periodontology I

<b>Code</b>	<b>RDT3731</b>
<b>NQF level</b>	6
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	ATM3512
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 1

### Module Aims

This module aims at giving the student basic knowledge of the biology of a healthy periodontium, structure and function of periodontium. They will learn the pathology and pathological processes involved in periodontal inflammations and infections, the principles of preventing periodontal diseases and maintaining periodontal health. The module will introduce instruments and devices used in diagnoses and treatment of periodontal conditions, and demonstrate their adequate use in clinical dentistry, as well as their maintenance.

### Module content

This module covers the following topics; Anatomy, histology, physiology and pathology of periodontium. Methods to maintain oral hygiene. Clinical and histological characteristics of periodontal diseases. Development, diagnostics and treatment of uncomplicated periodontal treatment. Instruments and devices used in periodontal diagnosis and treatment.

### Assessment Strategies

Assessment of assignments and practicals	50%
Final examination	50% Examination (1 x 1,5 hours written paper + 1,5 hours practical examination)

## Module Title: General Pathology

<b>Code:</b>	<b>DSG3682</b>
<b>NQF level:</b>	6
<b>Notional hours:</b>	40
<b>Contact Hours:</b>	1 lecture hour per week for 16 weeks
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 2

### Module Aims

Pathophysiology is the study of disordered physiological processes associated with disease or injury. Pathophysiological processes are studied to explain the dysfunctions of different organs and tissues and how these are macroscopically and microscopically manifested. Pathology constitute an essential element of clinical services through the contribution it makes to the effective prevention, detection, diagnosis, treatment and management of disease.

### Module

### Content

The module contains; the general principles of pathological processes, differentiation of normal from disordered structure on microscopic and macroscopic levels, examination of specific features of diseased tissues and organs. Students will also study samples using microscopes to recognize normal histology and normal variations of common tissue types.

### Assessment Strategies

Continuous assessment	50%	
Study log book		50%

## Module Title: Medical Microbiology

<b>Code:</b>	<b>MCB3612</b>
<b>NQF level:</b>	6
<b>Notation:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 2

### Module Aims

The module aims to introduce the basic principles and application of medical microbiology and immunology with relevance to clinical disease in the preparation of students to become health care professionals. Also, the module aims to enable students to understand the nature, metabolism, nutrition, growth, pathogenicity, and prevention of bacteria of medical significance and understand their interactions with the human body to cause disease. Furthermore, the module will give insight to students on understanding the basic characteristics and functions of the immune system and its responses to intrusion of pathogens and or foreign bodies into the body and the application of immune factors in the prevention and treatment of disease.

### Module Content

This module will cover bacterial nomenclature, structure, growth, nutrition, metabolism, pathogenicity and pathophysiological changes resulting from bacterial infections as well as the immunological responses to infection will be

discussed; mechanisms of action of major classes of anti-microbial agents, drug resistance, multidrug resistant organisms and the physical and chemical methods used thereof in the prevention of infectious microorganisms; Basic concepts in immunology, components of the immune system, principles of innate and adaptive immunity, antigen recognition by B and T cells, development, maturation and survival of lymphocytes, adaptive Immunity to infection, failures of Host defense Mechanisms, (tolerance, allergy and hypersensitivity, autoimmunity, immunodeficiency, immunosuppression), tissue transplant, immune-surveillance, tumor immunity, transplant immunology, immunotherapy and immunization.

#### **Assessment strategies**

The continuous assessment 50 %

Final Examination 50 % (1 X 3 hours paper and 1 practical paper)

Module Title: Dental Pharmacology

<b>Code:</b>	<b>DSG3612</b>
<b>NQF level:</b>	6
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	4 lecture hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	PLG3512
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 2

#### **Module Aims**

Through this module the students will learn about the fundamentals of therapeutics, pharmacokinetics and pharmacodynamics of the commonly used drugs as well as the mechanisms of action, adverse effects and precautions. Students also learn about the side effects of drugs, drug interactions and the treatment of side effects.

#### **Module Content**

This module will cover the characteristics of different microbes, and particularly those which are relevant for pharmaceutical products to operate, pharmacodynamics and pharmacokinetics of various pharmacological products in medicine and dentistry, dose-response curves of pharmacological products, possible adverse effects of them and clinical management of these. The physiological effects and effects on pathological processes of each studied pharmacological product.

#### **Assessment strategies**

Continuous assessment 60%

Final Examination 40%

## Module Title: Occlusal Dysfunction and Pathophysiology

<b>Code</b>	<b>DSG3692</b>
<b>NQF level</b>	6
<b>Notional hours:</b>	120
<b>Contact Hours:</b>	2+3P hours per week for 16 weeks
<b>NQF Credits:</b>	12
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 2

### Module

### Aims

This module introduces the sensory, motoric and autonomous regulation of occlusion and function of masticatory organ. The principles of diagnoses and treatment of typical functional disorders of occlusion and temporomandibular joint are covered. The module aims also to cover the origin, diagnoses and treatment of oro-facial pain.

### Module

### content

The module covers sensory and motoric nervous system of oral tissues, autonomous regulation and function of masticatory organ, typical disorders and functional problems in masticatory organ, their origin, diagnoses and treatment. The module also covers the underlying reasons for dental and oro-facial pain, their diagnoses and treatment options.

### Assessment Strategies

Continuous assessment of student performance and assignments: 40%

Final examination: 60%

30% 1 x 1,5 hours written paper

30% 1 x 1,5 hours practical examination

## Module Title: Facial Growth and Occlusal Development

<b>Code</b>	<b>PHP3671</b>
<b>NQF level</b>	6
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	ATM3512
<b>Co-requisite:</b>	RDT3601
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	2 <sup>nd</sup> year semester 1

### Module

### Aims

In this module students will learn about normal development and growth of the head and face, development of the dentition, occlusion, and malocclusions, and developmental disturbances and syndromes of the face. The module also covers the biology of tissues reactions to orthodontic forces. The module establishes the biological foundation for orthodontics and pediatric dentistry.

### Module

### content

The module will cover the embryonic development of head and face, particularly the normal orofacial development as well as the developmental disturbances and syndromes that originate during the prenatal period. In addition, postnatal facial growth and development, the growth of the facial soft and hard tissues, the internal and external regulation of the growth, and the role of the orofacial functions in the growth regulation. Furthermore, the dental development, timing and stages of tooth eruption, development of normal deciduous and permanent occlusion, characteristics and development of malocclusions, and role of internal and external factors in the etiology of dentoalveolar and skeletal malocclusions.

### Assessment Strategies

Continuous assessment: 40%

Final examination: 60%

30% 1 x 1,5 hours written paper

30% 1 x 1,5 hours practical examination

## Module Title: Clinical Dentistry

<b>Code:</b>	<b>RDT3712</b>
<b>NQF level:</b>	6
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	ATM3512
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

### Module Aims

In this module students will learn about the daily practise of dentistry and the application of basic sciences in dentistry. Through this module the students learn how to provide safe and effective oral health care to different categories of patients. Students will learn how to encounter patients, their relatives, other health care workers, and collaborating parties in a professional manner. They will learn how to interact and communicate with people when examining and treating them and how to forward key messages to describe patients' health status and instructions for further treatment. Students gain knowledge and skills in the clinical evaluation of a patient through history taking, examination of the patient, selecting diagnostic procedures and interpreting test results. This module covers also ethical and legal issues related to provision of oral health services to facilitate the students with understanding and knowledge of the requirements set by the surrounding society.

They learn to record relevant medical and oral health information accurately. Theory and practise of infiltration and inferior dental block analgesia are taught and practised. Principles of drug prescriptions are covered.

### Module Content

This module integrates knowledge and techniques learnt during the first two years of basic sciences; introduction to core of skills in clinical practise which is to be developed throughout the program; early exposure to clinical practise; application of basic skills of patient interviewing, examination and diagnosis; the use of radiographs and other diagnostic techniques in dentistry; and basic life support. Extra-oral physical examination in the extent relevant to dentists; preparation of a treatment plan; actions to avoid infectious contaminations; maintaining high level of hygiene and aseptics; fundamentals of four-handed dental operation; recognizing general medical emergencies; communication of clinical findings with patients, relatives and other health care workers; legal and ethical questions of providing oral health care. The roles of the members of oral health care team; professionalism; ethics and values; codes of dental practise.

Pharmacokinetics of the agents in local anesthesia; Routes for drug administration; Absorption, distribution, and clearance of local analgesic solution; use and prescription of drugs in relation to the practise of dentistry; Detailed knowledge of nerve supply and blood supply to the oral cavity and oral anatomy; safe practise of administrating local infiltration. Analgesia and inferior dental block analgesia; Common problems and medical complications associated with local analgesia; control and licensing of drugs;

### Assessment Strategies

Continuous assessment      100%



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**Course Title: Epidemiology**

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<b>Code:</b>	<b>RID3711</b>
<b>NQF level:</b>	7
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3 lecture hours + 1 practical hour per week for 14 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 1

**Module Aims**

This module aims to introduce students to the principles and methods used in epidemiology as it applies to disease prevention and control in public health practise. Students will learn about the quantitative techniques of measuring health status and investigating underlying factors for the occurrence of diseases and health outcomes.

**Module Content**

This module covers the following topics: history of epidemiology, definition, functions, and characteristics of epidemiology, Definition, functions, and characteristics of epidemiology, routine data sources and descriptive epidemiology and analytic epidemiology; epidemiological triad, natural history of disease, exposure and outcome, incubation period and disease spread; determinants of health, epidemiology applied to specific areas (social epidemiology, infectious disease epidemiology, epidemiology of HIV/AIDS, Environmental epidemiology, Oral Health Care epidemiology etc.); population health, disease burden and its indicators: incidence, prevalence, measures of morbidity and mortality - morbidity rate, mortality rate, fertility rate, survival rate, life expectancy, proportion, ratio, rate, Measuring of Disease and Exposure; Comparison of health problem between different populations: Standardization of rates and ratio; Association and causality, Relating risk factors to health outcome; Analytic study designs; Causal inference: Sources of error; Multicausality — Confounding; Outbreak investigation; prevention strategies, diagnostics tests and screening: Sensitivity and specificity, Predictive value, Likelihood ratio (LR), Predictive value and prevalence, Stability of the sensitivity and specificity, Clinical case definition, measures of agreement.

**Assessment Strategies**

The continuous assessment (CA): 50 %  
Examination: 50 % (1 X 3 hours paper)

## Course Title: Research Methods and Proposal Writing

<b>Code:</b>	<b>CRS3740</b>
<b>NQF level:</b>	7
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	1+2P hours per week for 28 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RID3512
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semesters 1 and 2

### Module Aims

This module aims to equip the students with principles, skills and methods to conduct scientific research and analysis required on any matter within the domain of health, with special emphasis on oral health. Students will learn about the quantitative and qualitative methods.

### Module Content

This module covers the following topics: Introduction to Quantitative research and Qualitative research, Literature Review, Identification, selection, analysis and formulation of the research problem; Identification and formulation of the research question; Hypotheses formulation. Formulate a problem statement and justification of the study, formulation of the study objectives.

Classification of study types: Descriptive studies - Exploratory Studies, Cross-sectional studies, Case report, case series, correlational studies. Analytical studies - Cohort studies, Case control studies, Comparative Cross sectional studies. Intervention studies: Clinical trials, Experimental studies, Quasi-experimental studies, Fields interventional studies. The advantages and disadvantages of different study designs.

Sampling Methods: Non-probability sampling, Probabilistic or random sampling; sample size determination. Study population, Specification of study variables, and types of variables.

Data collection methods: Data collection techniques, development of data collection tools and/or questionnaires. Report writing, Citation of references and referencing styles - The Harvard system, Vancouver style, APA. Ethical Considerations in health research, Research project administration and Research proposal development.

### Assessment Strategies

The continuous assessment (CA): 50 %

Examination: 50 % (1 X 3 hours paper)

## Module Title: Oral Microbiology

<b>Code:</b>	<b>DSG3711</b>
<b>NQF level:</b>	7
<b>Notation</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	MCB3612
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 1

### Module Aims

The aim of this module is to introduce the basic principles and application of microorganisms to clinical disease with relevance to oral health. This module will give a student the means to develop both knowledge and diagnostic skills in medical microbiology so that they can apply this in clinical oral health care setting. The module will enable students understand the nature, metabolism, nutrition, growth, life cycles, pathogenicity, and prevention of microbial pathogens of oral health care significance and understand their interactions with the human body to cause disease, particularly those with oral manifestations. Special emphasis will be on microbes commonly encountered in oral cavity and surrounding tissues.

### Module Content

This module will give an overview of microorganisms in oral cavum which commonly cause diseases. Special focus will be in oral microorganisms that are common in Namibia and in the region. Microorganisms which cause manifestations in oral cavity, particularly those which have relevance to clinical dentistry. Classification, geographical distribution, habitat, morphology, life cycle, pathogenicity (mode of infection, pathogenesis and pathology), immune response to parasitic invasion and escape mechanism, as well as laboratory diagnosis and prevention and control of microorganisms relevant to oral health care.

#### **Assessment Strategies**

The continuous assessment of student performance in practicals and assignments: 50 %

Final examination: 50 % (1 x 3 hours)

Module Title: Oral Medicine and Oral Pathology

<b>Code:</b>	<b>DSG3731</b>
<b>NQF level:</b>	7
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	ATM3512
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 1

#### **Module Aims**

This module aims to enable the student to gain knowledge and skills in the diagnosis of medical or surgical conditions of clinical importance to dentistry. The student will learn about the pathological processes and the clinical signs, symptoms of medical and surgical diseases, their management and their impact on the oral health care of the affected patient. Diagnostics and treatment of bacterial, fungal and viral infections, as well as cysts and tumors in maxillo-facial area are covered together with their radiological and histological representations. This module will also give students the basic skills of managing patient with medical or surgical diseases, and teach them how to detect such patients' needs for oral health care. Furthermore, the students will learn the signs and symptoms that general medical and surgical diseases produce in oral cavity and to diagnose these for referral to relevant medical professionals for more detailed diagnoses and treatment. Etiology, diagnoses and classification of oral cancers and oral manifestations of HIV and AIDS are systematically covered.

#### **Module Content**

The module will cover: patho-physiological basis of oral medicine as it is related to general medicine and/or surgery. Etiology, histology, radiology, diagnosis, prevention and treatment of pathological processes in hard and soft tissues of maxilla-facial area. Prevention and early detection of oral cancers. Manifestations of HIV and AIDS in maxilla-facial area. Obtaining medical information in connection with recording oral health status. Oral manifestations of the whole variety of medical and surgical diseases and conditions. Identification of patients whose oral manifestations may be due to general medical or surgery conditions. Complications that may be associated with use of oral health care medication or oral health care therapy as result of complex medical condition. Principles and practise of patient referral from dental office to medical professionals. Oral health care services that are commonly required for patients entering general medical and/or surgical treatment.

#### **Assessment strategies**

Continuous Assessment of assignments and practicals 60%

Final Examination 40% (1 x 3 hours)

## Module Title: Restorative Dentistry I

<b>Code:</b>	<b>RDT3711</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 1

### Module Aims

The aim of this module is to give students thorough knowledge of the biology of a healthy dental tissue, pathology of dental caries, its origin, development process and factors affecting these. Also the students will gain thorough knowledge of contemporary methods for preventing and stopping the caries process. Together with these skills the students will learn the necessary skills in aseptics and ergonomics as well as the basics of four-handed working in dentistry. Students will learn about principles of dental material application.

### Module Content

Clinical structure of enamel, dentin and pulpo-dental structure. Histopathology of dental caries. Dental caries as a disease. The structure of saliva and its role in cariology. The content of different types of diet and their influence on caries processes. The microbiology of saliva and dental caries. Basics of caries diagnostics and clinical use of restorative materials.

### Assessment strategies

Continuous assessment 60%  
Final Examination 40% (1 x 3 hours)

## Module Title: Clinical Practise I

<b>Code:</b>	<b>RDT3791</b>
<b>NQF level:</b>	7
<b>Notional hours:</b>	120
<b>Contact Hours:</b>	120 total hours
<b>NQF Credits:</b>	12
<b>Pre-requisite:</b>	Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 1

### Module Aims

Through this module, students learn how to use the theoretical knowledge they have acquired in mutual understanding with the patients, to produce appropriate clinical outcomes in safe manner. After the students have proved in competence test that they are able to manage patients with selected oral health problems, they will receive their first patients. These patients are chosen so that they do not have such oral health problems or diseases which would require more knowledge or higher skills than what the students at this stage of their studies have acquired.

### Module Content

This module contains practical patient care which students provide in dental department clinic under supervision by qualified dentists. Based on their experiences from clinical work the students will prepare case reports which will be discussed in small groups.

### Assessment Strategies

Continuous assessment 100%

## Module Title: Oral Radiology II

<b>Code:</b>	<b>DSG3702</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	DSG3611
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

### Module Aims

The aim of this module is to equip the students with deeper knowledge and advanced technical skills of imaging in dentistry. Students will learn about both intra- and extra-oral manifestations of the effects of radiation, their diagnostics, care and cure. Strong emphasis will be on increasing students' ability to make diagnoses from radiographic images. The course will give in-depth knowledge of managing and diagnosing orthopantomogram and cephalometric images. Use of ultrasound and other advanced imaging techniques will be introduced. Students will learn the principles of interpretation of the findings of advanced imaging techniques and their use in clinical decision making. Furthermore, students will learn about safety precautions in use of advanced imaging techniques, as well as chemical and physical basics for radiological hazards. Principles of forensic dentistry and techniques used by dentists in forensic examinations are covered.

### Module content

Topics to be covered include: physical and technological characteristics of advanced imaging methods, like ultrasound, computerized tomography and magnetic resonance images. Pathological processes producing various radiological images. Theoretical knowledge, and practical skills to manage and diagnose occlusal, orthopantomogram and cephalometric imaging. Safety issues related to advanced imaging techniques. Necessary precautions to be considered and taken care of when using advanced imaging. Comparison of radiologic findings and dental records for person identification.

### Assessment strategies

Continuous assessment 60%  
Final Examination 40% (1 x 3 hours)

Module Title: Restorative Dentistry II and Endodontics

<b>Code:</b>	<b>RDT3772</b>
<b>NQF level:</b>	7
<b>Notional hours:</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Co-requisite:</b>	RDT3711
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

### Module Aims

This module will provide students with knowledge of pulpal biology and pathology, and practical skills to diagnose deep caries lesions and pulpal infections. The module gives them ability to provide restorative treatment which aims at stopping progression of deep caries lesions and to evaluate when this treatment option is not feasible and endodontic treatment is required. The students will learn how to control bacterial growth using both local and systemic medications together with mechanical preparation of root canals. Maxillo-facial manifestations of advanced and/or untreated pulpal infections will be covered. The use of different mechanical preparation instruments with relevant chemical components will be taught.

### Module Content

The module includes lectures on the biological and clinical aspects of endodontics and practical training in phantom laboratory. The biologic aspect lectures include: discussions of pulp and peri-apical diseases; diagnostic and treatment procedures; selection of patients; and medications in endodontics. Various instruments used for preparing and filling root canals; technical management of deep caries lesion and root canal treatment; materials used; restoration of endodontically treated teeth.

### Strategies of student assessment:

Continuous assessment 60%  
Final Examination 40% (1 x 3 hours)

## Module Title: Periodontology II

<b>Code:</b>	<b>RDT3702</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RDT3631
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

### Module Aims

This module prepares students to provide integrated care for patients who have diseased gingiva, and/or periodontal and supporting tissues around teeth. Through the module the students will get in depth understanding of the development of gingival and periodontal infection, how to characterize their variations and how to make a comprehensive treatment plan and to implement it for various types of patient cases. Local and systemic medications in periodontal treatment are studied.

### Module Content

Etiology, classification, epidemiology, prevention, diagnosis, and management of periodontal diseases.

### Assessment strategies

Continuous assessment 100%

## Module Title: Orthodontics

<b>Code:</b>	<b>PHP3702</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	PHP3612
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

### Module Aims

In this module students will learn to perform a comprehensive orthodontic examination, make diagnosis, formulate treatment plan, select treatment procedures for developing malocclusions, and to manage treatment of selected cases. Students are introduced to materials, components and properties of orthodontic appliances, and to biomechanical principles governing orthodontic tooth movement and growth modification.

### Module Content

This module will introduce the students to clinical management of orthodontic patients, including examination, collection of records and patient history, motivation of patients and caregivers, and management of treatment procedures under supervision. Assessment of patient records, making diagnoses, formulation of treatment plans and selection of appliances. Screening children for malocclusions, selecting between treatment modalities and performing preventive and interceptive procedures. Introduction to construction and activation of various orthodontic appliances, materials used in the appliances, mechanical properties of the appliances, and biomechanics of orthodontic tooth movement. Special attention is given to early orthodontic treatment and orthodontic growth modification. The module will also introduce the students to the role of orthodontists in a multidisciplinary team.

### Assessment strategies

Continuous assessment 60%  
Final Examination 40% (1 x 3 hours)

## Module Title: Dental Prosthetics I

<b>Code:</b>	<b>RDT3722</b>
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<b>NQF level:</b>	7
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RDT3611
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

#### Module Aims

The module will equip students with knowledge and technical skills necessary for managing oral health care patients receiving complete dentures. Students will learn the chemical, physical and technical characteristics of typical impression materials used for modelling edentulous dental arches. Also the clinical relationships of upper and lower jaw will be covered. The students will take impressions and construct models based on the impressions. Different types of impression trays are studied, and articulation techniques to produce occlusal relationship study models are included. Students will learn how to prepare and fit complete dentures, how to provide oral hygiene and dietary instructions to complete denture wearing patients and how to teach denture maintenance to them. Techniques for repairing broken complete removable dentures will be included in this module.

#### Module Content

The module covers chemical, physical and technical characteristics of impression materials, plasters, acrylics and other materials commonly used to produce models that are used for removable complete denture treatment planning and preparation. Handling and construction of models; construction of individual impression trays, producing plaster models and fitting the models into articulator for studying and repairing removable complete dentures.

#### Assessment strategies

Continuous Assessment 100%

Module Title: Dental Prosthetics II

<b>Code:</b>	<b>RDT3742</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RDT3611
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

#### Module Aims

The module will cover the theoretical and practical training for diagnosing removable denture needs for shortened dental arches and evaluation of alternative denture constructions to be considered for treatment. The course will provide students with knowledge and technical skills necessary for managing oral health care patients receiving partial removable dentures. Partial acrylic and partial alloy based removable dentures for shortened dental arches will be covered. Students will learn how to prepare and fit these types of dentures, how to provide oral hygiene and dietary instructions to denture wearing patients and how to teach denture maintenance to them. Dental, periodontal and oral mucous membrane problems commonly encountered with the use of different types of removable partial dentures are covered, as well as repairing and relining removable partial dentures.

#### Module Content

This module will cover the following topics: Indications for various types of removable partial dentures; indications for limiting or preventing preparation of different types of removable partial dentures; treatment planning for removable partial denture treatment; construction of acrylic and alloy based partial dentures; identification and treatment of health problems encountered with the use of removable partial dentures; oral hygiene, dietary and denture maintenance instructions; repairing and relining broken and/or unfitting removable partial dentures.

#### Assessment strategies

Continuous Assessment 100%

## Module Title: Clinical Practise II

<b>Code:</b>	<b>RDT3782</b>
<b>NQF level:</b>	7
<b>Notional hours:</b>	120
<b>Contact Hours:</b>	120 total hours
<b>NQF Credits:</b>	12
<b>Pre-requisite:</b>	Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	3 <sup>rd</sup> year semester 2

### Module Aims

Through this module, students learn how to use the theoretical knowledge they have acquired in mutual understanding with the patients, to produce appropriate clinical outcomes in safe manner. After passing relevant competence and integrated tests, students have been assigned patients whose oral health problems are suitable to treat with students' acquired knowledge and skills. After the second semester with exposure to clinical patient treatment, the students are more capable to make diagnoses and treatment decisions and they have reached higher level of clinical knowledge and practical skills.

### Module Content

This module contains practical patient care which students provide both in inpatient and outpatient circumstances, under supervision by qualified dentists. Based on their experiences from clinical work the students will prepare case reports which will be discussed in small groups.

### Assessment strategies

Continuous assessment 100%

## Module Title: District Hospital Dentistry I

<b>Code:</b>	<b>DSG3789</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	40
<b>Contact Hours:</b>	200 total hours clinical practise in District Hospital setting
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	RDT3612, Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	After 3 <sup>rd</sup> year semester 2

### Module Aims

This module allows students to learn and practise dentistry at district hospital facilities. At this stage of their studies, they will assist in-house dental officers in general patient management, diagnostics, provide simple curative treatment and whole variety of preventive services. In these circumstances oral health services are in many occasions provided with minimal specialist back up and with modest diagnostic facilities. Students will be assisted to gain experience of working in a variety of clinical settings, leading to gain skills to provide comprehensive care at the level of future practise.

### Module Content

Examination and diagnosis, leading to the investigations and preventive treatment options; clinical skills of local anesthesia; simple restorations for adult patients; occlusion malfunctions; working with members of the dental team. Communication with patients, and provision of preventive services, including health education.

### Assessment strategies

Continuous assessment 100%

## Module Title: Community Practise I



<b>Code:</b>	<b>RDT3789</b>
<b>NQF level:</b>	7
<b>Notional Hours</b>	40
<b>Contact Hours:</b>	200 total hours clinical practise in Community setting
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	RDT3612, Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	After 3 <sup>rd</sup> year semester 2

### Module Aims

Through this module, students learn to practise dentistry at a primary care level often with minimal diagnostic facilities. Primary health care principles are emphasized.

### Module Content

Areas to be covered include: History taking, clinical examination, investigation, diagnosis; treatment planning; Restorative and periodontal services; Simple tooth extraction; Consent and referral; Decision-making in relation to non-operative cases.

### Assessment strategies

Continuous assessment 100%

## Course Title: Research Project

<b>Code:</b>	<b>RPT3810</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	320
<b>Contact Hours:</b>	4 hours per week for 32 weeks
<b>NQF Credits:</b>	32
<b>Pre-requisite:</b>	CRS3740
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semesters 1 and 2, and 5 <sup>th</sup> year semesters 1 and 2

### Module Aims

The aim of the module is to enable student to: develop and apply the knowledge and skills required in identifying and prioritizing oral health problems essential to Namibian oral health care, and systematically investigating them with the view to finding practical answers. By carrying out a modest research project and producing a report in this module, students are provided the opportunity to consolidate the various research methods, basic science, clinical, statistical and epidemiological techniques and other public health theoretical lessons they studied in the previous years.

### Module Content

Data collection and analysis: The student focuses on writing the proposal and data collection during the first semester of the fourth year as a longitudinal module from primary or secondary sources. According to the proposal, the data can be from the clinics, hospital, City Council, Ministry of Health and Social Services or its institutions or from the community. The student will apply the skills of research methodology to clean and process the data. At the end, the student will make a presentation detailing the results of the work. Feedback from the student seminar assists the student to review the analytical framework and finalize the data analysis. The conference presentation rating will constitute the continuous assessment for the semester. The student can then proceed to write the thesis using the UNAM format. Optionally, students can write a scientific paper to be submitted in refereed journal.

Writing and presentation of thesis: This final stage is for the student to write the Thesis with regular advise from the Faculty mentor. The student will be able to make revisions using advise from the mentor aiming at producing the final revised copy. The Thesis will be graded by two faculty appointed evaluators. The student will also make a presentation of the research study at the final student conference to be held before graduation. The mentor will assist a student who requests to prepare a manuscript for publication in a referred scientific journal.

### Assessment

Continuous Assessment 100%

**strategies:**

## Module Title: Oral & Maxillo-facial surgery I

<b>Code:</b>	<b>DSG3811</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	DSG3731
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 1

### Module Aims

Students will learn about the principles of oral surgery with knowledge and skills for managing soft and hard tissues of oral cavity, interpretation of the findings of imaging, biopsy taking and the diagnosis and management of oral mucosal disease.

### Module Content

Development of skills in relevant history-taking and interpretation of the anamnestic findings; preparation of different surgical patients for operation; use and interpretation of radiographs; biopsy taking; operative extractions and apectomies; indications and contraindications for different types of pain management; more advanced knowledge and preparedness for CPR; introduction to mucosal disease and oral manifestations of systemic disease,

### Strategies of assessment:

Continuous assessment 60%  
Final Examination 40% (1 x 3 hours)

## Module Title: Dental Prosthetics III

<b>Code:</b>	<b>RDT3881</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	120
<b>Contact Hours:</b>	2+3P hours per week for 16 weeks
<b>NQF Credits:</b>	12
<b>Pre-requisite:</b>	RDT3611
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 1

### Module Aims

This module focuses on the provision of fixed prosthodontics as restorations prepared inside or outside mouth, single tooth crowns and short bridges. The student will learn how to design and construct a variety of short fixed tooth replacement solutions in a range of materials.

### Module Content

The module will contain determination of need and possibilities for preparation of restorations manufactured both inside or outside oral cavity, single tooth replacements and short bridges. Single fillings, crown and short bridges prepared for restorations, manufactured outside oral cavity, cooperation with technicians in charge of technical work; and fitting fixed solutions.

### Assessment strategies

Continuous Assessment 100%

## Module Title: Leadership and Management

<b>Code:</b>	<b>PHP3801</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	1+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 1

### Module Aims

Through this module, students learn the general principles and concepts of health systems management and leadership in general, and in dentistry. Students will learn how management and leadership philosophies have changed during the previous decades and how these are approached today. Students will apply the concepts of different management models to oral health care settings and critically discuss their applicability. They will get more thorough understanding of planning, monitoring and evaluation, medical audit, quality assurance, resources and assets management, cost-effective and rational use of resources including logistics management, with strong emphasis in Namibian health care setting.

### Module Content

This module will cover the health information and health care management systems which will include 1) clear measurement strategy including data collection, synthesis of data from different sources and estimation, 2) developing indicators and management systems, 3) integration of monitoring of health systems and their performance into health information systems, 4) concepts of healthcare financing and health economics, application of economics to decision making process, with concept of equity, public private mix. The emphasis will be on the ability to detect changes and to show improvement in health care system.

### Assessment strategies

Continuous assessment 100%

## Module Title: Gerodontology and Special needs

<b>Code:</b>	<b>RDT3801</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	1+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RDT3611
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 1

### Module Aims

The module is designed to help students prepare for the evaluation and management of the elderly patient and other population groups with special needs. It stresses the need for compassion and understanding as well as the medical and oral health aspects of providing emergency and comprehensive oral health care. This module concentrates on the aging process and how special population groups like people having strong dental fear or anxiety, mental and/or physical handicaps, should be approached and managed. The purpose of this module is to provide the students with an overview of the challenges facing oral health practitioners in society with emphasis on providing oral health care for all patients safely and effectively, and without discrimination. The module provides an understanding of the multi-disciplinary needs of adults with special needs and the role of oral health care professionals play in providing care to these populations. The module addresses physical and psychological changes associated with aging, as well as with handicapped patients, and identification and management of common oral conditions encountered in these population groups. Pharmacological special requirements in treatment of the aged patients are covered. Also this module will equip students with knowledge and skills of the safe use of local anesthetic agents, intravenous, inhalational anesthesia.

### Module Content

Anatomical, biological and physiological changes during aging process; Control and management of pain and anxiety; Requirements in the clinical arrangements to enable treatment of patients with special needs; Multi-disciplinary approach to oral health care management of patients with special needs; Safe use of different types of pain management and anesthetics.

**Assessment strategies**

Continuous Assessment 100%

Module Title: Clinical Practise III

<b>Code:</b>	<b>RDT3891</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	250
<b>Contact Hours:</b>	250 total hours clinical service
<b>NQF Credits:</b>	25
<b>Pre-requisite:</b>	Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4th year semester 1

**Module Aims**

Through this module, students learn how to use the theoretical knowledge they have acquired in mutual understanding with the patients, to produce appropriate clinical outcomes in safe manner. After passing further competence and integrated tests, students have been assigned patients whose oral health problems are suitable to treat with students' acquired knowledge and skills. After the third semester with exposure to clinical patient treatment, the students are more capable to make diagnoses and treatment decisions and they have reached higher level of clinical knowledge and practical skills.

**Module Content**

This module contains practical patient care which students provide both in inpatient and outpatient circumstances, under supervision by qualified dentists. Based on their experiences from clinical work the students will prepare case reports which will be discussed in small groups.

**Assessment strategies**

Continuous assessment 100%

## Module Title: Dental Prosthetics IV

<b>Code:</b>	<b>RDT3802</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	1+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Co-requisite:</b>	RDT3881
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 2

### Module Aims

Students will gain theoretical knowledge and clinical skills to effectively manage oral health care patients who need combined prosthetic structures and more complicated prosthetic appliances. In this module the focus will be in different types of combination prosthesis, fixed bridge work that will replace more than single missing teeth, and also indications and preparations of attachment retained prosthesis. The student will gain the skills required to consider on alternative solutions in the form of precision attachments. The student will learn to analyze the cost implications and quality assurance measures when choosing materials for these appliances.

### Module Content

The module covers theoretical basis for treating patients with complicated prosthetic solutions, like longer bridges with several attachment units and attachment retained prosthesis. Different types of bridge constructions; their indications and contraindications; attachment retained prosthesis; their indications and contraindications; requirements for remaining teeth and periodontium for combined prosthetic or complicated longer fixed prosthesis, treatment to return and retain the condition of remaining dentition; preparation and fitting of complex prosthetic constructions; managing patients receiving complicated prosthesis structures and instructing their self-care and maintenance of the appliance to retain good oral health.

### Methods of student assessment

Continuous Assessment 100%

## Module Title: Pediatric dentistry

<b>Code:</b>	<b>PHP3882</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	120
<b>Contact Hours:</b>	2+3P hours per week for 16 weeks
<b>NQF Credits:</b>	12
<b>Pre-requisite:</b>	PHP3702
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 2

### Module Aims

In this module will focus on special knowledge and skills that are required in the oral health care of children. Students will learn management of prevention and treatment of oral diseases of infants, children and adolescents, including those with special health care needs.

### Module Content

This module will cover etiology, prevention and clinical management of oral diseases in infants, children and adolescents; caries prevention and treatment of decayed primary teeth including strip crown restorations, stainless steel crowns and intra coronal restorations; clinical management of pediatric patients including children with high dental anxiety and fear, or special health care needs; use local anesthesia, performing extractions of primary teeth and management of dental traumas in children and adolescents; Identification and management of problems of tooth eruption, construction and insertion of appliances for space maintenance.

### Assessment strategies

Continuous assessment 60%  
Final Examination 40% (1 x 3 hours)

## Module Title: Dental Practise Management

<b>Code:</b>	<b>PHP3802</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	1+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semester 2

### Module Aims

The aim of this module is to equip students with knowledge and skills to manage and administer a dental practise.

### Module Content

Management and administrative skills to enable a dentist to run a successful practise; how to take into consideration all professional groups, their roles and human resources management; administration and finances; assets management; material logistics, time management in clinical practise; reporting and record keeping; evidence based practise, continuous professional development.

### Assessment strategies

Continuous Assessment 100%

## Module Title: Clinical Practise IV

<b>Code:</b>	<b>RDT3882</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	400
<b>Contact Hours:</b>	400 total hours clinical service
<b>NQF Credits:</b>	40
<b>Pre-requisite:</b>	Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4th year semester 2

### Module Aims

Through this module, students learn how to use the theoretical knowledge they have acquired in mutual understanding with the patients, to produce appropriate clinical outcomes in safe manner. After passing further competence and integrated tests, students have been assigned patients whose oral health problems are suitable to treat with students' acquired knowledge and skills. After the fourth semester with exposure to clinical patient treatment, the students are more capable to make diagnoses and treatment decisions and they have reached higher level of clinical knowledge and practical skills.

### Module Content

This module contains practical patient care which students provide both in inpatient and outpatient circumstances, under supervision by qualified dentists. Based on their experiences from clinical work the students will prepare case reports which will be discussed in small groups.

### Assessment strategies

Continuous assessment 100%

## Module Title: Elective Attachment

<b>Code:</b>	<b>ELA3889</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	40
<b>Contact Hours:</b>	400 total hours
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	4 <sup>th</sup> year semesters 1 and 2, and 5 <sup>th</sup> year semesters 1 and 2

### Module Aims

This module gives the student opportunity to obtain deeper knowledge, understanding and skills in dental specialty area(s) the student finds most interesting. During the fourth and fifth years of studies, the students will work in one, or in some cases in two dental specialty disciplines to gain more in-depth understanding and knowledge of the selected area. It is advisable, although not compulsory that students choose an elective specialty which supports their research project, so that these two study elements form a comprehensive whole.

### Module Content

Elective studies on the selected discipline(s) will be carried out during the fourth and fifth years of studies. This will allow students to gain deeper knowledge, understanding and skills in dental specialty which the student finds particularly interesting.

### Assessment Strategies

Continuous Assessment 100%

## Module Title: Oral & Maxillo-facial Surgery II

<b>Code:</b>	<b>DSG3831</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	160
<b>Contact Hours:</b>	3+4P hours per week for 16 weeks
<b>NQF Credits:</b>	16
<b>Pre-requisite:</b>	DSG3881
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5 <sup>th</sup> year semester 1

### Module Aims

The aims of this module are to prepare students to be able to diagnose dental and maxilla-facial trauma, evaluate treatment options and provide adequate care. The students will gain more skills to perform more demanding procedures and operations. Introduction, indications and contraindications of different sedation methods for dentistry are taught. They will also learn to estimate the difficulty of possible operations and to refer patients to special care when patient cases are that demanding.

### Module Content

Practise of oral surgery; evaluation and management of surgical oral/dental patients; management of the acute demanding cases; preparedness for life-supporting procedures; further knowledge of pain management; sedation techniques; dento-alveolar, pre-prosthetic and orthodontic surgery, dental and maxillo-facial trauma diagnostics and treatment.

### Assessment Strategies

Continuous Assessment 100%

## Module Title: Restorative Dentistry III

<b>Code:</b>	<b>RDT3821</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RDT3712
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5 <sup>th</sup> year semester 1

### Module Aims

The aim of this module is to give students more advanced knowledge and skills in restoring teeth. The module will include etiology, pathology, prevention and treatment of dental abrasions and erosions, give more detailed knowledge of the materials and techniques used in their treatment. Also this module will include etiology, diagnosis and treatment of dry mouth syndrome. The chemical composition of oral hygiene products and their indications and contraindications for use are covered, together with the materials patients and professionals may use for whitening teeth.

### Module Content

Etiology, prevention and treatment of dental erosions, abrasions and dry mouth syndrome. Chemical, physiological and pathological characteristics of different prophylactic oral health care products, and self-care products obtained over-the-counter by consumers/patients. Risk evaluation of caries, erosion and abrasion for individual patients and for various populations.

### Assessment strategies

Continuous Assessment 100%



## Module Title: Periodontology III

<b>Code:</b>	<b>RDN3801</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	80
<b>Contact Hours:</b>	2+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	RDT3702
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5th year semester 1

### Module Aims

This module gives the students theoretical knowledge and practical skills to diagnose, plan and provide advanced periodontal treatment and to systematically follow-up and maintain the positive results. The module will focus on advanced periodontal problems; their pathophysiology, medical, conservative and operative treatment and rehabilitation of occlusion when periodontal status has already been compromised.

### Module content

This module will cover diagnostics and treatment of advanced periodontal cases, and the role of genetics, systemic diseases and conditions in periodontal pathogenesis.

### Assessment strategies

Continuous Assessment 100%

## Module Title: Clinical Practise V

<b>Code:</b>	<b>RDN3881</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	450
<b>Contact Hours:</b>	450 total hours clinical service
<b>NQF Credits:</b>	45
<b>Pre-requisite:</b>	Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5th year semester 1

### Module Aims

Through this module, students learn how to use the theoretical knowledge they have acquired in mutual understanding with the patients, to produce appropriate clinical outcomes in safe manner. The students have been assigned patients whose oral health problems are suitable to treat with students' acquired knowledge and skills. At this stage of their studies the students are already prepared to provide whole variety of treatment and their clinical training concentrates on comprehensive rehabilitation of patients' oral health. After the fifth semester with exposure to clinical patient treatment, the students are capable to make diagnoses and treatment decisions where they consider all patients' health conditions simultaneously, and they have reached higher level of clinical knowledge and practical skills.

### Module Content

This module contains practical patient care which students provide both in inpatient and outpatient circumstances, under supervision by qualified dentists. Based on their experiences from clinical work the students will prepare case reports which will be discussed in small groups.

### Assessment strategies

Continuous assessment 100%

## Module Title: District Hospital Dentistry II

<b>Code:</b>	<b>DSG3819</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	40
<b>Contact Hours:</b>	200 total hours clinical practise in District Hospital setting
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	DSG3789
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5 <sup>th</sup> year semester 1

### Module Aims

This module allows students to learn and practise dentistry more independently at district hospital facilities. In this second district hospital practise the students are already equipped with knowledge and skills to provide oral health care services independently to variety of patient cases. They will work in general patient management, diagnostics, provide whole variety of curative treatment and preventive services. Their treatment plans are approved by qualified dentists, and these will be tutoring the work, be available for consultation and help. The students will learn the principles of practical management of district hospital clinics.

### Module Content

Examination and diagnosis, comprehensive treatment planning; provision of required treatment with continuous opportunity for consultation and help from qualified dentist. Work as a leading professional of a dental team.

### Assessment strategies

Continuous assessment 100%

## Module Title: Public Health Dentistry

<b>Code:</b>	<b>PHP3892</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	80
<b>Contact Hours:</b>	1+2P hours per week for 16 weeks
<b>NQF Credits:</b>	8
<b>Pre-requisite:</b>	None
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5 <sup>th</sup> year semester 2

### Module Aims

The objectives of this module are to facilitate students with ability to study, compare and assess alternative organizational systems for oral health care provision. The strengths, weaknesses, opportunities and threats of private practises, public clinics, third party charity clinics and other organizational alternatives are presented and evaluated. The students are directed to approach organizational settings both from national health policy perspective and from practicing clinician's perspective.

### Module Content

The module covers the history and present state of oral health care services in Namibia; the theory and practical examples of dental health economics; economic consequences of alternative systems to produce oral health services; evaluation of different organizational settings to produce oral health care services, and the issues of inequality and unmet treatment need in relation to them.

### Assessment strategies

Continuous Assessment 100%

## Module Title: Dental Prosthetics V

<b>Code:</b>	<b>RDT3892</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	40
<b>Contact Hours:</b>	1 lecture hour per week for 16 weeks
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	RDT3802
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5 <sup>th</sup> year semester 2

### Module Aims

Students will gain knowledge of dental implants, their indications, contra-indications and the requirements of oral structures for treatment with implants. Critical evaluation of contemporary issues of evolving prosthetic treatment are taught.

### Module Content

The module covers the requirements of oral health and oral cavity structures for implant treatment; principles of examining patients for implant treatment; process of implant therapy; preoperative assessment of intra- and extra-oral conditions; principles of surgical procedures for implant placement; maintenance of rehabilitative constructions with implants.

### Assessment strategies

Continuous Assessment 100%

## Module Title: Clinical Practise VI

<b>Code:</b>	<b>RDN3882</b>
<b>NQF level:</b>	8
<b>Notional hours:</b>	450
<b>Contact Hours:</b>	450 total hours clinical service
<b>NQF Credits:</b>	45
<b>Pre-requisite:</b>	Competence test
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5th year semester 2

### Module Aims

Through this module, students learn how to use the theoretical knowledge they have acquired in mutual understanding with the patients, to produce appropriate clinical outcomes in safe manner. The students need to have passed competence and integrated tests before been assigned patients whose oral health problems are suitable to treat with students' acquired knowledge and skills. At this stage of their studies the students are already prepared to provide whole variety of treatment and their clinical training concentrates on comprehensive rehabilitation of patients' oral health. During the fifth year of studies the students will finalize comprehensive oral health care rehabilitation treatments they have started earlier and they will provide various types of treatment so that their clinical training contains enough different types of oral health care treatments.

### Module Content

This module contains practical patient care which students provide both in inpatient and outpatient circumstances, under supervision by qualified dentists. Based on their experiences from clinical work the students will prepare case reports which will be discussed in small groups.

### Assessment strategies

Continuous Assessment 100%

## Module Title: Community Practise II

<b>Code:</b>	<b>RDT3889</b>
<b>NQF level:</b>	8
<b>Notional Hours</b>	40
<b>Contact Hours:</b>	200 total hours clinical practise in community setting
<b>NQF Credits:</b>	4
<b>Pre-requisite:</b>	RDT3789
<b>Compulsory/Electives:</b>	Compulsory
<b>Semester offered:</b>	5 <sup>th</sup> year semester 2

### Module Aims

Through this module, students learn to practise dentistry at a primary care level often with minimal diagnostic facilities. They will work in general patient management, diagnostics, provide whole variety of curative treatment and preventive services. Their treatment plans are approved by qualified dentists, and these will be tutoring the work, be available for consultation and help. The students will observe, study and evaluate the oral health needs in the community and learn the principles of daily management of a community clinic.

### Module Content

History taking, clinical examination, investigation, diagnosis; treatment planning; provision of treatment; studying and evaluating oral health needs in the community.

### Assessment strategies

Continuous assessment 100%

# Prospectus 2022