



FACULTY OF HEALTH SCIENCES &  
VETERINARY MEDICINE

**School of Medicine**



Prospectus 2024  
UNIVERSITY OF NAMIBIA

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**NOTE**

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This Prospectus is only valid for 2024 as regulations and syllabi may be amended for 2024. 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 2024.

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 2024. This Prospectus must be read in conjunction with the *General Information and Regulations Prospectus 2024*.

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**SCHOOL OF MEDICINE PREAMBLE**

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The mission of the School of Medicine is to produce health professionals whose knowledge, professional skills, and practice in medicine are in tune with the needs of society (practice patterns, and scientific advancements). The School shall provide a learning environment conducive to the pursuit of professional competence by health workers, while providing quality services to the community and undertaking relevant translational research for enhancement of health. The School will continually strive for the establishment of training programs in a wide spectrum of health disciplines and lending support to the human resource development initiatives of the country, including post-graduate education of physicians and scientists. The School is mandated to prepare graduates for the medical degree of the University of Namibia.

The key objectives of the School of Medicine are:

- To promote equity of access to health care services for all;
- To promote affordable health care service delivery by strengthening health care systems which are sustainable, cost-effective, efficient and culturally relevant and acceptable;
- To institute measures to counter major health risks including the prevailing communicable diseases;
- To develop academically and professionally qualified medical doctors in sufficient numbers for manning various health care delivery systems;
- To contribute to the development of a national health care system that is capable of providing a fully comprehensive range of preventive, curative and rehabilitative health care that is cost-effective, sustainable and acceptable to the recipients of such health care services;
- 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 laboratory, 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 honor The University of Namibia, the Medical Board 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.

**UNAM 2024 CORE DATES**

<b>SEMESTER 1</b>	
11 January 2024	University Open
23 January	Academic Staff Resumes Office Duties
25 March	Vacation School Commerce for Distance Student (Until 28 March)
28 March	First Semester BREAK Commences For Students (Until 2 April)
3 April	Lectures Commence After FIRST SEMESTER BREAK
12 July	End Of First Semester
15-19 July	Mid Year Break
<b>SEMESTER 2</b>	
26 August	Second semester BREAK for student commences (Until 31 August)
27 August	Institutional Holiday
28 August	Vacation School Commerce for distance student (Until 30 August)
02 September	Lectures commence after SECOND SEMESTER BREAK
06 December	End of Second Semester
13 December	End of Academic Year
<b>2025 ACADEMIC YEAR</b>	
9 January	University opens for 2025 academic year
21 January	Academic staff resumes office duty for 2025 academic year

**CANCELLATION DATES**

<b>DATE</b>	<b>DESCRIPTION</b>
05 February	Last day to cancel core semester modules with 100% credit – New curriculum students
16 February	Last day to cancel core semester modules with 50% credit – New curriculum students
23 February	Last day to cancel core semester modules – New curriculum students
23 February	Last day to cancel Semester 1 and year modules with 100% credit – Old curriculum students
15 March	Last day to cancel first semester and year modules with 100% credit – New curriculum students
15 March	Last day to cancel first semester modules with 50% credit – Old curriculum students
12 April	Last day to cancel first semester and year modules with 50% credit – New curriculum students
30 April	Last day to cancel FIRST SEMESTER MODULES – All students.
08 July	Last day to cancel year modules with 50% credit – All students
09 August	Last day to cancel second semester with 100% credit – All students
02 September	Last day to cancel second semester with 50% credit – All students
30 September	Last day to cancel second semester and year modules – All Students

**Due Dates for the 2023 Academic Year**

<b>DATE</b>	<b>DESCRIPTION</b>
17 January	Last day to apply for remark for the second semester and year modules of First and Second opportunity examinations of November 2023)
18 January	Last day to apply to write promotional examination
18 January	Last day to apply for the retention of continuous assessment (CA) marks
24 January	Last day to approve promotional examinations applications by Schools
09 February	Last day for application of module(s) exemptions – New Curriculum Students
09 February	Last day for approval of module(s) and qualification changes – New Curriculum Students
16 February	Last day for application of module(s) exemptions – Senior Students
16 February	Last day for approval of module(s) and qualification changes – Senior Students
23 February	Last day for approval of module(s) exemptions – New Curriculum Students
08 March	Last day for approval of module(s) exemptions – Senior Students
30 April	Last day to change offering types

**Final 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup> School of Medicine Academic Calender**

<b>SEMETER 1</b>	
<b>JANUARY</b>	
11Jan- Thursday	University Opens
15 Jan- Monday	SOM Academic staff resumes office duty
15 Jan- Monday	SOM lectures commence 3 <sup>rd</sup> until 14 May and Block lectures commence 4th year MBChB
22 Jan- Monday	Core semester lectures commence 2nd year MBChB students (New curriculum) (6 weeks)
22 Jan- Monday	1st semester clinical rotation commences 5th year MBChB (Onandjokwe/Oshakati)
22 Jan- Monday	Clinical rotation commences 6th year MBChB
29 Jan -Monday	Lectures commence core semester new curriculum first years (Until 1 <sup>st</sup> March)
<b>FEBRUARY</b>	
16 Feb - Friday	Clinical rotation ends 5 <sup>th</sup> year MBChB
19 Feb - Monday	Clinical rotation commences 5 <sup>th</sup> year MBChB
23 Feb - Friday	Block lectures end 4 <sup>th</sup> year MBChB
<b>MARCH</b>	
01 March -Friday	Lectures end core semester 1 <sup>st</sup> and 2 <sup>nd</sup> years.
04 March- Monday	Lectures commence 1 <sup>st</sup> and 2 <sup>nd</sup> years (Until 11 June)
04 March- Monday	Examinations commence 4th year MBChB
15-March - Friday	Examinations end 4 <sup>th</sup> year MBChB
15-March - Friday	Clinical rotation ends 5 <sup>th</sup> year MBChB
18-March - Monday	Clinical rotation commences 5 <sup>th</sup> year MBChB
25-March - Monday	Clinical rotation commences 4 <sup>th</sup> year MBChB
28 March - Thursday	STUDENT BREAK COMMENCE
<b>APRIL</b>	
02 April- Tuesday	STUDENT BREAK ENDS
3 April - Wednesday	Lectures resume after the first semester break
12 April - Friday	Clinical rotation ends 5 <sup>th</sup> year MBChB
15 April - Monday	Clinical rotation commence 5 <sup>th</sup> year MBChB
<b>MAY</b>	
03 May - Friday	Clinical rotation ends 4th year MBChB
06 May - Monday	Clinical rotation commence 4th year MBChB
10 May - Friday	Clinical rotation ends 5th year MBChB
13 May - Monday	Clinical rotation commence 5 <sup>th</sup> year MBChB
<b>JUNE</b>	
03- June- Friday	COBES starts 3rd year MBChB (until 28 June)
07- June- Friday	First Semester Clinical Rotation Ends 5th Year MBChB (Onandjokwe/Oshakati)
11- June- Tuesday	Lectures End 1 <sup>st</sup> and 2 <sup>nd</sup> years.
10- 14 June	BREAK: 5th MBChB year (until 14th June)
14 June - Friday	Clinical rotation ends 4 <sup>th</sup> year MBChB
17 June - Monday	Second Semester Clinical Rotation Commences 5th Year MBChB(Onandjokwe/Oshakati)
28 June - Friday	COBES ends 3rd year MBChB
<b>SEMESTER TWO</b>	
<b>JULY</b>	
8 July - Monday	BREAK: 6 <sup>th</sup> MBChB year (until 19 <sup>th</sup> July)
15-19 July	MID-YEAR BREAK: UNAM
22 July - MondY	Clinical rotation commences 3 <sup>rd</sup> year MBChB until 8 <sup>th</sup> Nov
29 July -Monday	Lectures commence second semester 1 <sup>st</sup> , 2 <sup>nd</sup> years.
<b>AUGUST</b>	
02 Aug – Friday	Clinical rotation ends 4 <sup>th</sup> year MBChB
05 Aug - Monday	Clinical rotation commence 4 <sup>th</sup> year MBChB
26 Aug - Monday	Semester Break Starts (until 31 August)
27 Aug - Tuesday	Institutional Holiday
31 August	SEMESTER BREAK ENDS

<b>SEPTEMBER</b>	
2 Sept - Monday	Lectures resume after semester break (1 <sup>st</sup> and 2 <sup>nd</sup> years MBChB)
13 Sept - Friday	Clinical rotation ends 4 <sup>th</sup> year MBChB
16 Sept - Monday	Clinical rotation commence 4 <sup>th</sup> year MBChB
<b>OCTOBER</b>	
25 Oct - Friday	CLINICAL ROTATION ENDS 4TH YEAR MBCHB
<b>NOVEMBER</b>	
01 Nov- Friday	Lectures end for Second semester Old curriculum Professional programmes (3rd year MBChB ) and New curriculum MBChB students - 1st, 2nd years)
01 Nov- Friday	Second Semester Clinical Rotation Ends 5th Year MBCHB (Onandjokwe/Oshakati)
04 Nov - Monday	Examinations commence 4th year MBChB
8 Nov – Friday	CLINICAL ROTATION ENDS 3 <sup>rd</sup> & 6 <sup>TH</sup> YEAR MBCHB
11 Nov - Monday	Examinations commence 5 <sup>th</sup> year MBChB
15 Nov - Friday	Examinations end 4 <sup>th</sup> year MBChB
18 Nov - Monday	COBES starts 4 <sup>th</sup> year MBChB
25 Nov - Friday	Electives commence 5 <sup>th</sup> year MBChB
<b>DECEMBER</b>	
13 Dec - Friday	COBES ends 4 <sup>th</sup> year MBChB
13 Dec- Friday	END OF ACADEMIC YEAR
20 Dec - Wednesday	Electives end 5 <sup>th</sup> year MBChB

## **SUPPORTING STRUCTURE AND PERSONNEL**

Executive Dean	Prof J Hall
Associate Dean School of Medicine	Dr F Christians
Faculty Manager	Mr A Flederbascher
Campus Administrator	Ms D Titus
Faculty Officer	Ms I Peter
Secretary/Administrator	Ms S Amia
Examination Officer	Vacant
Student Records Officer	Mr M Nowaseb
Student Support Officer	Mr A Ngwangwama
Security Officer	Mr H Nakadiva
ICT Officer	Mr A Shikongo
ICT Officer	Mr S Shilongo

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

Ms I. Peter  
The Faculty Officer  
School of Medicine  
University of Namibia  
Private Bag 13301  
WINDHOEK  
Telephone: +264-61-2065015  
E-mail: [ipeter@unam.na](mailto:ipeter@unam.na)

## ACADEMIC DEPARTMENTS

### ASSOCIATE DEAN

☎ (+264 61) 2065010

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

✉ Private bag 13301, Windhoek, Namibia

Associate Dean: Dr. F. Christians, MBChB (University of Cape Town), M.Med Family Medicine (UCT), MPH (Umea University, Sweden), MCFP/ FCFP (CMSA) , Dip HIV Management (CMSA)

### DEPARTMENT OF HUMAN, BIOLOGICAL & TRANSLATIONAL MEDICAL SCIENCES

☎ (+264 61) 2065039

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

✉ Private bag 13301, Windhoek, Namibia

Head of Department: Associate Professor: Prof Jane Misihairabgwi PhD (Biochemistry) University of Zimbabwe; BSc (Hons) (Biochemistry); University of Zimbabwe; Postgraduate Diploma in Higher Education (Health Sciences) University of Namibia

Full Professor: Prof Frank Mojiminiyi, BSc Physiology, College of Medicine, University of Lagos, Nigeria; MSc Physiology, University of Lagos, Nigeria; PhD Physiology, University of Lagos, Nigeria; Fellow of the Physiological Society of Nigeria; Fellow of the Physiological Society of London

Associate Professor: Prof Quenton B Wessels, NDip (Biomedical Technology) Tshwane University of Technology; BSc (Medical Sciences); BSc (Hons) Cell Biology; MSc (Anatomy) University of Pretoria; PhD (Anatomy) University of Pretoria; MSc (Clinical Education) University of Edinburgh; PhD (Health Sciences Education) University of Cape Town; PGCert (Mentoring and Coaching) University of Sunderland; FHEA.

Associate Professor: Prof Mareli M Claassens, MBChB, Stellenbosch University; BSc (Hons) Pharmacology, North West University, South Africa; MPhil (Applied Ethics), Stellenbosch University, South Africa, PGDip (Epidemiology), London School of Hygiene and Tropical Medicine; MSc (Epidemiology), London School of Hygiene and Tropical Medicine (London); PhD, University of Amsterdam, the Netherlands; Postdoctoral fellowship; Stellenbosch University, South Africa; PG. Dip. Monitoring and Evaluation, Stellenbosch University, South Africa; Executive certificate in public leadership, Harvard Kennedy School, Boston, USA; PG. Cert. Social Justice, Harvard Extension School, Boston, USA.

Senior Lecturer: Dr Jacob A Sheehama, PhD Biology (Medical Microbiology and Medical Biochemistry) Kazan State University; Masters in Biology (Microbiology and Molecular Biology) Kazan State University

Senior Lecturer: Dr Emmanuel Nepolo, PhD (Biochemistry) University of Namibia, MSc (Applied Molecular Biology); University of Namibia; BSc (Molecular & Physiological Biology); University of Namibia

Senior Lecturer: Dr Eve Kaambo, PhD (Biomedical Sciences); University of the Western Cape, South Africa; MSc (Biotechnology), University of the Western Cape, South Africa; BSc (Hons) Biomedical Sciences, University of the Western Cape, South Africa; Fellow of Medical Virology and Pathology, University of Cape Town

Senior Lecturer: Dr Albertina M N Shatri, PhD Applied Human Biological Sciences (Nanomedicine), Master of Science (Applied Human Biology), BSc (Hons) Microbiology & Biochemistry, University of Namibia, Cert. Principle of Effective Teaching, University of Namibia, Certificate in Good Clinical Practice, University of Hong Kong, Certificate in Clinical Trial Research, University of Stellenbosch, Cert. in Grant Writing, ProGrant-Germany & Cardiff University.

Senior Lecturer: Mr Erastus HH Haidongo, BSc Microbiology & Biochemistry; Master of Science (Biology), University of Namibia

Lecturer: Dr Rihupisa J Kandando, HND (Manchester Polytechnic, UK), DipHE (Wolverhampton Polytechnic, UK), Postgraduate Diploma (Clinical Laboratory Sciences) (University of Leeds, UK), M.Sc (Clinical Biochemistry) (University of Leeds, UK), Ph.D (University of Surrey, UK); Registered Specialist Clinical Biochemist (Medical and Dental Council of Namibia)

Lecturer: Mr Christo D Izaaks, ND (Medical Technology) Cape Technikon, South Africa; B Tech (Biomedical Technology), Cape Peninsula University of Technology, South Africa; MTech [cum laude] (Cape Peninsula University of Technology, South Africa; PGDHE (UNAM); Registered Medical Technologist (Allied Health Professions Council of Namibia)

Lecturer: Ms Helga Zaire, MSc Epidemiology (Wageningen University, The Netherlands); MPH (Master of Public Health) (TUFTS University, USA); BSc. Animal Science UNAM

Lecturer: Dr Adele du Plessis, MBChB University of Stellenbosch; DCH College of Medicine, South Africa, PgDip (Health Professionals Education) UCT

Lecturer: Dr Kathleen L van Niekerk MBChB University of Namibia; PGDip (Clinical Education) University Of Edinburgh

Lecturer: Mr Nghoshi, MSc in Applied Field Epidemiology (UNAM), BSc Molecular, Physiological and Environmental Biology

Lecturer: Ms Toini Hatuikulipi, MSc (Molecular and Cellular Immunology:Oncology), University of Constantine 1, Algeria; BSc Immunology, University of Constantine 1, Algeria

Lecturer: Ms Josefina Nelongo, MSc (Biology) & BSc (Molecular & Physiological Biology and Chemistry) University of Namibia; BTech & ND (Biomedical Technology) Cape Peninsula University of Technology; PGDHE(Health Sciences) University of Namibia.

Lecturer: Ms Loide NN Shipingana, BSc (Hons) Molecular Biology & Biochemistry, University of Namibia; MSc Molecular Biology, JSS University, India

Lecturer: Ms Johanna Namene. BSc (Hons) Microbiology & Biochemistry, University of Namibia; MSc (Forensics), JSS University, India; MSc Physiology, University of Namibia

Lecturer: Ms Tuwilika PT Keendjele, BSc (Physiology) University of Pretoria, BHSc with Honours (Physiology) University of the Witwatersrand; MSc Physiology, University of Namibia

Lecturer: Ms Hilja H Eelu, BSc (Human Genetics) University of Pretoria, BSc Hons (Molecular and Cell Biology) University of Cape Town, PgDip (Health Professionals Education) UCT, MSc (Control of Infectious Diseases) London School of Hygiene and Tropical Medicine.

Lecturer: Mr Daniel H Haiyambo, BSc (Hons) Microbiology & Biochemistry; MSc Biology, University of Namibia

Lecturer: Ms Katrina Niieta, BSc (Hons) Biochemistry & Chemistry, University of Namibia; MSc Pathology, University of Namibia.

Senior Technologist: Dr Anneli Poolman BSc Human Life Science; BScHons (Cum Laude) Human Anatomy; MSc Human Anatomy; PhD Anatomy (University of Pretoria)

Technologist: Ms Lusia Mhuulu, BSc (Biochemistry and Chemistry) University of Namibia, MSc (Biochemistry and Molecular Genetics) University of Namibia

Technologist: Mr Peter Usiku, B Tech Biomedical Technology, Cape Peninsula University of Technology, South Africa; Bachelor of Laws, University of Namibia, Certificate in Pharmacy Assistant, National Health Training Centre

Technologist: Mr FI Tshavuka, MSc Clinical Laboratory Diagnostics (Chongqing Medical University); BSc (Hons) Biomedical Science, Namibia University of Science and Technology

Technologist: Ms Tuna E Nashihanga, BSc (Hons) Microbiology & Biochemistry, University of Namibia

Technician: Ms Denise Bouman, BSc Zoology & Physiology, University of South Africa

Technician: Mr Jan J van der Merwe, BMedSci University of the Free State, BMedSci (Hons), University of the Free State, HED University of South Africa

Assistant Technician: Mr Joseph S Lakanemo, National Certificate (N3) Electronics Engineering (TransNamib Radio Training Centre), (Higher Diploma) Business Administration, BA (Hons) Business Administration (The International University of Management), Bachelor of science (Hons) in Electronics and Medical, instrumentation Engineering (in progress) The International University of Management

**DEPARTMENT OF MEDICAL SCIENCES**

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Head of Department:	Dr F Yimer, MD (Gondar University), Ethiopia; MMed Internal Medicine (Addis Ababa University College of Health Sciences), Sub-speciality Certificate in Clinical Neurology (Addis Ababa University College of Health Sciences in collaboration with Mayo Clinic, Rochester).
Senior Lecturer:	Dr Felicia Christians, MBChB (University of Cape Town), M.Med Family Medicine (UCT), MPH (Umea University, Sweden), MCFP/ FCFP (CMSA) , Dip HIV Management (CMSA)
Senior Lecturer:	Dr Zelra Malan MBChB (University of Pretoria), MMed Family Medicine ( University of Pretoria), PhD Family Medicine (Stellenbosch University)
Senior Lecturer:	Dr Linda N Lukolo, PhD Nursing Science (Community Health) UNAM; Masters in Nursing Science (MCUR)(Community Health) University of Stellenbosch SA; Honors Degree in Nursing Education: University of Namibia (UNAM Bachelor's Degree in Nursing Sciences (BCUR): Nursing Education and Management: University of Namibia, Diploma in comprehensive Nursing Science: General nursing science, Psychiatric, Community Health and midwifery) University of Namibia, Diploma in Health System Management (Galilee International Management Institute, (Israel);
Lecturer:	Dr Jan C Kuehne MBChB (University of Cape Town), M. Phil Applied Ethics (Stellenbosch University), Dip HIV Management (Colleges of Medicine South Africa), MMed Family Medicine (University of Cape Town), Cert. In Health Science Education (SAFRI)
Lecturer:	Dr Chido Rwafa-Madzvamutse: Consultant Psychiatrist, MBChB (University of Zimbabwe), MMed Psychiatry - University of Zimbabwe, Postgraduate Certificate in Health Professional Education (University of Zimbabwe), MPhil Public Mental Health (University of Cape Town)
Lecturer:	Ms Sigrid Shaanika: Master of Arts Degree in Counselling/Clinical Psychology- University of Pretoria Master of Social Sciences Degree in Psychology- University of Cape Town (South Africa), Bachelor of Arts Honors Degree in Psychology- University of Stellenbosch (South Africa)
Lecturer:	Dr Hilen M Ndjaba. MMED Psych (University of Nairobi Kenya); MD of Medicine (Hubert Kairuki Memorial University), Dar Es Salaam, Tanzania; Diploma in Clinical Medicine (Tanga Medical Training School), Tanga Tanzania.
Lecturer & skills lab coordinator:	Mrs Edith Hamukwaya-Nawa MNSc (UNAM), PM (UCT), PG Dip (critical care) (UNAM), 14DCNM (UNAM)
Lecturer & COBES coordinator:	Ms. Ndiitodino Kakehongo , MSc, (Applied Field Epidemiology) (UNAM), BNSc, (Clinical)(Hons) (Community Health, General Nursing Science & Midwifery Science) (UNAM).

**DEPARTMENT OF MATERNAL & CHILD HEALTH**

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Head of Department:	Dr Benjamin J Nggada, MBBS (Unimaid), Fellow West African College of Surgeons (FWACS (Nigeria)), Master in International Relations and Diplomacy (MIRD (UniAbuja)
Senior Lecturer:	Dr Fredrick Sinyinza. BSc (Human Biology), University of Zambia, School of Medicine; MBChB, University of Zambia, School of Medicine; Master of Medicine (Paediatrics & Child Health, University of Zambia, School of Medicine
Lecturer:	Dr Ausbert T Msusa. Specialist Obstetrician/Gynaecologist: MBBS University of Malawi; Fellow of the College of Obstetricians and Gynaecologists of South Africa (FCOG(SA))
Lecturer:	Dr Annie F Muyotcha. Specialist Obstetrician/Gynaecologist: MBChB (UZ) MMed (Obstetrics and Gynaecology) (UZ)
Lecturer:	Dr Runyararo Mano. Specialist Paediatrician, MBChB (UZ), MMED Paeds UZ), Dip HIV Man (SA), AHMP (FPD/Yale)
Lecturer:	Dr Hailu Nida Sarero. MD (Gondar University), Paediatrics and Child Health (Addis Ababa University College of Health Sciences)



**DEPARTMENT OF SURGICAL SCIENCES**

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Head of Department:	Dr Youssef Saad. MB. B Ch. (Assuit University, Egypt); Masters in General Surgery (M Sc., Assuit University, Egypt); MRCS (Membership of Royal College of Surgeons of Edinburgh, U.K.), Diploma of Laparoscopic Surgery (IRCARD, France).
Associate Professor	Prof Ambrose Rukewe. MBBS (University of Ilorin, Nigeria); DA (University of Ibadan, Ibadan, Nigeria); MSc (University of Ibadan, Ibadan, Nigeria); FMCA (National Postgraduate Medical College of Nigeria, Lagos, Nigeria)
Associate Professor	Prof Kingsley U Tobi. MBBS (University of Benin, Benin-City, Nigeria); DA (University of Benin, Benin-City, Nigeria); FMCA (National Postgraduate Medical College of Nigeria, Lagos, Nigeria); FWACS (West African College of Surgeons (Anaesthesia), Ibadan, Nigeria)
Senior Lecturer	Dr Celestine B Mbangtang. MBBS (University of Ibadan, Nigeria); DA (Postgraduate Diploma in Anaesthesia, University of Ibadan, Nigeria); MMed (Surg), University of Zimbabwe; FRCS (Edin) Royal College of Surgeons of Edinburgh, Scotland; FCS (ECSA) College of Surgeons of East, Central and Southern Africa; FICS, International College of Surgeons.
Senior Lecturer	Dr Edward Fynn. MBChB (Ghana) DCH(SA), M. Med (Radiodiagnostics) FCRad(SA). Postgraduate Diploma in Management (Wales)
Senior Lecturer	Dr Onochie Nweze, , MBBS (University of Port Harcourt, Nigeria); PgDA (West Africa College of surgeons); FWACS (West Africa College of Surgeons(Anaesthesia); WFSA Fellowship in Neuroanaesthesia (Cairo University);FCA (ECSA) College of Anesthesiologists of East, Central and Southern Africa MBBCh., FWACS (Specialist Anaesthesiologist).
Lecturer	Dr Adesiyun Aderonke. MMBS, University of Ibadan, Oyo State, Nigeria, 2001; Postgraduate Dipoloma in Anaesthesia, West African College of Surgeons (PGDA, WACS), 2009; Consultant Anaesthetist, Fellow West African College of Surgeons (FWACS), 2014; Certificate in Leadership and Management, University of Washington, USA, 2020; Certificate in Medical Education, University of Warwick, UK, 2023.
Lecturer	Dr Ndhlovu Munyaradzi, MBChB., M Med General surgery, University of Zimbabwe.
Lecturer	Mr Nikanor Boas Johannes, S Sc. (UNAM), P Phill. Medical Physics (University of Ghana).

## **DEGREE: BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (MBChB) 26BMCH**

The purpose of this qualification is to produce health professionals whose knowledge, professional skills, and professional attitudes and behaviour in medicine are in tune with the needs of society. The drivers that were identified are: constructive alignment, vertical and horizontal integration and fitness to practice. The transformation of the Bachelor of Medicine and Bachelor of Surgery curriculum has been driven by various stakeholder engagements, as well as the HPCNA. The SDGs and NDP led to the integration of 4IR skills within the various modules. The curriculum focuses more on assessing competencies rather than content through work-based assessments, integrated research, and assessment of professional values and practice. A blended learning approach is emphasised throughout the curriculum, with student-centred learning and internationalisation of the curriculum that fosters independent life-long learning.

### **GRADUATE EMPLOYABILITY ATTRIBUTES**

The following graduate attributes shall define the philosophy of the Bachelor of Medicine and Bachelor of Surgery programme:

1. Clinical reasoning and judgement
2. Clinical problem solving
3. Ethical and moral decision making and leadership
4. Compassion
5. Independent life-long learning
6. Inter- and transprofessional teamwork
7. Technological and academic literacy
8. Global citizenry and international perspective
9. Environmental awareness and social responsibility
10. Resilience
11. Impactful

### **CAREER OPPORTUNITIES**

Upon qualification and registration, Bachelor of Medicine and Bachelor of Surgery graduates from the School of Medicine can either enter the public or private health sectors. The majority of our graduates, based on the data of the Needs Assessment, work in the public sector. They currently serve in departments such as psychiatry, surgery, orthopaedics, anaesthesiology, family medicine and community medicine. The employment possibilities are therefore vast. The scope of practice ranges from resident medical officers to specialist physicians. The career opportunities extend beyond clinical practice and include:

- Health Journalist
- Medical Teacher
- Clinical Forensic Medical Examiner
- Medical Photographer
- Medical/ Pharmaceutical Researcher
- Sports and Exercise Medicine
- Medical Legal Advisor
- Transplant Coordinator

### **DURATION OF STUDY**

The minimum duration for the Bachelor of Medicine and Bachelor on Surgery (MBChB) is six (6) years. Candidates must complete the MBChB programme within eight (8) years of full-time study.

### **ARTICULATION OPTIONS**

Graduates from Bachelor of Medicine and Bachelor of Surgery programme are eligible for further clinical specialty, scientific, and management training at post-graduate Master's, Doctoral, and Fellowship programmes.

## CRITERIA FOR ADMISSION

To be considered for admission to the School of Medicine, a candidate must have obtained the following grades at Namibian Senior Secondary Certificate Ordinary Level / Namibian Senior Secondary Certificate Higher Level (not older than 2 years) / Namibian Senior Secondary Certificate Advanced Subsidiary Level or equivalents from a recognized qualification:

- a) A minimum of 35 points in five subjects on the UNAM Evaluation Scale. In addition, the following subjects and grades will be required:
  - English with a minimum B symbol or better at NSSC Ordinary Level (or C symbol with a minimum of 37 points), or a minimum “c” or better at NSSCAS Level
  - Biology with a minimum “b” or better at NSSCAS Level
  - Mathematics with a “b” or better at NSSCAS Level
  - Chemistry and Physics with a “c” or better at NSSCAS Level
  
- b) A minimum of 35 points in five subjects on the UNAM Evaluation Scale. In addition, the following subjects and grades will be required:
  - English with a minimum B symbol or better at NSSC Ordinary Level (or C symbol with a minimum of 37 points) or a score of grade 3 or better at NSSC Higher Level
  - Biology (or Life Science) with a minimum B symbol at NSSC Ordinary Level, or a grade 2 or better at NSSC Higher Level
  - Mathematics with a minimum B symbol or better at NSSC Ordinary Level, or a grade 2 or better at NSSC Higher Level
  - Physical Science or Chemistry with a minimum B symbol or better at NSSC Ordinary Level, or a grade 2 or better at NSSC Higher Level
  
- c) A completed undergraduate degree programme in Pharmacy, Nursing, Dentistry or other health-related degree programme at a minimum of Bachelor's or Bachelor of Technology degree level such as a Science degree in Biological or Medical Sciences, with an average of at least 60% over the final two completed years of study. **National Diplomas, Technical Diplomas, Certificates and similar qualifications CANNOT be considered for entry.**
  - Sciences Requirements for applicants who have obtained and completed an undergraduate degree (**ALL of the following are compulsory**): 60% for first year university degree level Biology (Full course). Equivalent courses such as Anatomy, Physiology, Zoology, Life Sciences and similar courses will also be considered; 60% for first year university degree level Physics (Half Course); 60% for first year university degree level Chemistry (Half Course).
  - The above three subjects (Biology, Physics and Chemistry) **MUST** be completed at first-year of a university Bachelor's degree or higher. Applicants will only be considered if they have obtained the minimum UNAM points as outlined above;
  
- d) Transfer of students from other programmes in other Schools in the Faculty of Health Sciences and Veterinary Medicine, including Pharmacy, Dentistry, Nursing and public health, Allied health and veterinary medicine, will be subjected to the approval by Associate Deans of the concerned schools, as well as approval by the School of Medicine AAGC and if they have obtained the minimum UNAM points as outlined above or as determined by the School AAGC.
  
- e) Transfer of students from other Medicine degree programmes from other institutions or universities, may be considered by the School AAGC based on availability of space and if they have obtained the minimum UNAM points as outlined above or as determined by the School AAGC.
  
- f) Mature Age candidates will not be considered.

Meeting the above student admission criteria **DOES NOT** necessarily ensure admission. Admission is based on the number of places available and is awarded on the basis of merit and other criteria and any other conditions that may be determined from time to time. The Faculty/School reserves the right to administer special written entry tests and interviews for shortlisted candidates before final admission.

***Only candidates who have applied for Bachelor of Medicine and Bachelor of Surgery as first choice will be considered for selection into the programme.***

## ASSESSMENT CRITERIA

- A student will be eligible to write the examination if they have obtained a Continuous Assessment Mark of at least 50%.
- Unless otherwise indicated in the module descriptor, the Continuous Assessment Mark (CA mark) will count 40% towards the final mark while the examination mark will contribute 60%.
- A student may qualify for a supplementary examination in a pre- and para-clinical module if he/she obtained a final mark of 45%-49%, subject to a subminimum of 50% in each of the two examination assessment components (written, and clinical/practical).
- A student will pass a module when he/she has obtained a final mark of at least 50%.
- All Clinical modules, a subminimum of 50% will apply for all written and practical/clinical examinations. No supplementary examinations will be allowed for the fourth-, fifth- and sixth-year clinical modules. Should a student fail, he/she will therefore have to repeat the module(s) and sit for the June/July and November/December examination. A student who fails more than two (2) clinical modules, WILL NOT be allowed to sit for the normal June/July examination for the clinical modules failed, but will have to follow the normal progression and advancement rules laid out herein.

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

## MINIMUM REQUIREMENTS FOR RE-ADMISSION INTO THE PROGRAMME

To be readmitted to the School of Medicine, a student must have successfully completed the following minimum number of credits as indicated below: A student will not be re-admitted into the programme if she/he has not earned:

1. At least 56 credits by the end of the first year of registration
2. At least 152 credits by the end of the second year of registration
3. At least 290 credits by the end of the third year of registration
4. At least 440 credits by the end of the fourth year of registration
5. At least 620 credits by the end of the fifth year of registration
6. At least 800 credits by the end of the sixth year of registration
7. At least 960 credits by the end of the seventh year of registration

***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

<p><b>First Year to Second Year of Medicine</b></p>	<p>A student must have passed at least 124 credits of the prescribed First Year credits to be promoted to Second Year. If any of the failed modules is a prerequisite for a Second-Year module, the student cannot register for the affected Second Year module until the pre-requisite is passed.</p> <ul style="list-style-type: none"> <li>• A student who has passed at least 98 credits (but less than 124 credits) will not be promoted to Second Year, but will be allowed to take no more than 32 credits from Year 2 modules: 16 credits (equivalent to one full module) in Semester 1, and 16 credits (equivalent to one full module) in Semester 2, in addition to the failed Year 1 modules, provided that the required prerequisites are passed.</li> <li>• Students are responsible for selecting their modules within the framework of the UNAM timetable.</li> <li>• Students will not be allowed to register for more than one module in the same timetabled slot.</li> </ul>
<p><b>Second Year to Third Year of Medicine:</b></p>	<p>A student must have passed ALL the prescribed First Year modules (159 credits). In addition, the student must have passed at least 128 credits from the prescribed Second Year modules. If any of the failed modules is a prerequisite for a Third-Year module, the student cannot register for the affected Third Year module until the pre-requisite is passed.</p> <ul style="list-style-type: none"> <li>• A student who does not qualify for promotion to Year 3, but has passed at least 248 credits from both first- and second-year modules, will be allowed to take no more than 34 credits from Year 3 modules: 16 credits (equivalent to one full module) in Semester 1, and 18 credits (equivalent to one full module) in Semester 2, in addition to the failed modules. Such students will NOT be allowed to register for any clinical module of Year 3</li> <li>• A student who fails more than four (4) modules CANNOT take any modules from Year 3.</li> </ul>

	<ul style="list-style-type: none"> <li>• Students are responsible for selecting their modules within the framework of the UNAM timetable.</li> <li>• Students will not be allowed to register for more than one module in the same timetabled slot.</li> </ul>
<b>Third Year to Fourth Year of Medicine:</b>	<p>A student must have passed ALL the prescribed first year and second year modules (325 credits in total). In addition, the student must have passed at least 152 credits of the prescribed Third Year credits. If any of the failed modules is a pre-requisite for a Fourth-Year module, the student cannot register for the affected Fourth Year module until the pre-requisite is passed.</p> <ul style="list-style-type: none"> <li>• A student who passed all first- and second-year modules, and at least 143 (but less than 152) credits from Third Year, will not progress to Year 4, but will be allowed to take any four (4) of the 8 credit modules of Year Four, provided that the required pre-requisites are passed. Alternatively, such students will be allowed to register for any two (2) of the 8 credit modules of Year four, as well as any one (1) 18 credit clinical module, excluding any Surgery II modules, provided that the required pre-requisites are passed.</li> <li>• Students are responsible for selecting their modules within the framework of the UNAM timetable.</li> <li>• Students will not be allowed to register for more than one module in the same timetabled slot.</li> </ul>
<b>Fourth Year to Fifth Year of Medicine:</b>	To be promoted to fifth year, a student must have passed ALL the prescribed modules from first year up to the fourth year (656 credits) in order to advance to fifth year.
<b>Fifth Year to Sixth Year of Medicine:</b>	In order to be promoted to sixth year, a student must have passed ALL the prescribed modules from first year up to fifth year (892 credits) in order to advance to final year

***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.***

**REQUIREMENTS FOR QUALIFICATION AWARD:** A student can graduate with the Bachelor of Medicine and Bachelor of Surgery degree upon successful completion of the prescribed 1092 credits in the curriculum and has met all other UNAM requirements. Following graduation, graduates will be required to successfully proceed into a two-year medical internship in Namibia or as per requirement of the relevant country.

<b>Number of Modules/Credits to be Passed/Obtained at the Various Year Levels in order to be awarded the degree by the School</b>		
<b>Year Level</b>	<b>Number of Passed Modules Required</b>	<b>Credit Equivalent</b>
First year level	18 Modules	159 credits
Second year level	14 Modules	166 credits
Third year level	13 Modules	179 credits
Fourth year level	14 Modules	152 credits
Fifth year level	8 Modules	236 credits
Sixth year level	6 Modules	200 credits
<b>TOTAL</b>		<b>1092 CREDITS</b>

### First Year Level

At first year level, students take the University Core Curriculum modules and the required eleven (11) MBChB *modules* indicated below. The normal first year curriculum of a student registered in the Bachelor of Medicine and Bachelor of Surgery degree programme will therefore consist of eighteen (18) *Modules* (159 credits), compiled as follows:

Subject	Modules	Credits
University Core Curriculum	7*	24
MBChB at first year level	11	135
<b>Total</b>	<b>18</b>	<b>159</b>

### Curriculum

Students take all modules below:				
Semester	Code	Course Title	Prerequisite(Co-requisites) /	Compulsory (C)/Elective (E)
SC	U3583DD	Digital Literacy		C
SC	U3583AL	Academic Literacy I A		C
SC	U3403FS	Skills Portfolio		C
SC	U3520LP	Leadership Skills		C
SC	U3420EM	Ethics and Morality		C
SC	U3420CN	National and Global Citizenship		C
SC	U3420SE	Sustainability and Environmental Awareness		C
S1	M3511BA	Embryology and Introduction to Anatomy		C
S1	M3501BF	Medical Physics		C
S1	P3511SO	Organic Chemistry		C
S1	M3511BP	Integrated Physiology and Pathophysiology I		C
S1	M3511HS	Sociology of Health and Disease		C
S2	M3512BB	Medical Biochemistry I	(P3511SO)	C
S2	M3512MP	Developmental Psychology		C
S2	M3512BS	Statistics for Health Sciences		C
S2	M3512BA	Systemic Anatomy I	(M3511BA)	C
S2	M3512BP	Integrated Physiology and Pathophysiology II	(M3511BP)	C
S2	M3502FE	Professional Ethics		C

### Second Year Level

At second year level, students proceed with the University Core Curriculum modules and general MBChB modules. The normal second year level curriculum of a student registered in the Bachelor of Medicine and Bachelor of Surgery degree programme will therefore consist of fourteen (14) *Modules* (166 credits), compiled as follows:

Subject	Modules	Credits
University Core Curriculum	4*	24
MBChB at second year level	10	142
<b>Total</b>	<b>14</b>	<b>166</b>

Students take all modules below:				
Semester	Code	Course Title	Prerequisite(Co-requisites) /	Compulsory (C)/Elective (E)
SC	U3683AL	Academic Literacy I B		C
SC	H3513NM	Medical Anthropology		C
SC	U3520TH	Introduction to Critical Thinking		C
SC	U3420PJ	Project Management Skills		C
S1	M3611BB	Medical Biochemistry II	M3512BB	C
S1	M3611BP	Integrated Physiology and Pathophysiology III	M3511BP + M3512BP	C
S1	M3611BA	Systemic Anatomy II	M3511BA +M3512BA	C
S1	M3631TM	Medical Microbiology I		C
S1	M3601FM	Family Medicine I		C
S2	M3612TA	Anatomical Pathology	(M3611BA)	C
S2	M3612TM	Medical Microbiology II	(M3631TM)	C
S2	P3632CO	Pharmacology I	M3512BP	
S2	M3602TC	Chemical Pathology	M3611BB + M3611BP	C
S1/S2	M3619FC	COBES 1		C

### Third Year Level

At third year level, students proceed with the general MBChB modules. The normal third year level curriculum of a student registered in the Bachelor Medicine and Bachelor of Surgery degree programme will therefore consist of thirteen (13) *Modules* (180 credits), compiled as follows:

Subject	Modules	Credits
MBChB at third year level	13	179
<b>Total</b>	<b>13</b>	<b>179</b>

Students take all modules below:				
Semester	Code	Course Title	Prerequisite(Co-requisites) /	Compulsory (C)/Elective (E)
1	RID3711	Epidemiology		C
1	FMM3701	Family Medicine II	FMM3601	C
1	PTG3711	Haematology	PLG3611	C
1	MCB3711	Medical Microbiology II	MCB3612	C
1	PMG3711	Pharmacology II	PMG3612	
0	SUR3710	Surgery I	BCM3611, ATM3611 + PLG3611	C
2	PTG3702	Chemical Pathology	BCM3611 and PLG3611	
2	MCB3702	Clinical Microbiology	MCB3612 + (MCB3711)	C
2	OBG3712	Obstetrics & Gynaecology I	ATM3611 and PLG3611	C
2	PDC3712	Paediatrics I		C
2	PMG3712	Pharmacology III	PMG3612	
0	RID3780	Research Methods and Proposal Writing	RID3512/M3512BS	C
1/2	CMM3719	COBES II	CMM3512	C

### Fourth Year Level

At fourth year level, students proceed with the general dental surgery modules. The normal fourth year level curriculum of a student registered in the Bachelor Medicine and Bachelor of Surgery degree programme will therefore consist of fourteen (14) *Modules* (152 credits), compiled as follows:

Subject	Modules	Credits
MBChB at fourth year level	14	152
<b>Total</b>	<b>14</b>	<b>152</b>

Students take all modules below:				
Semester	Code	Course Title	Prerequisite(Co-requisites) /	Compulsory (C)/Elective (E)
S1	M3701AN	Anaesthesiology I	M3611BA+M3751CO+ M3752CO	C
S1	M3701FH	Health Systems Management		C
S1	M3701SI	Medical Imaging and Diagnostics	M3501BF	C
S1	M3741FM	Family Medicine III	M3601FM+M3701FM	C
S1	M3701FN	Nutrition and Dietetics		C
S1	M3701MS	Psychiatry I	M3512MP	C
S1	M3701SO	Surgery II – Orthopaedics and Trauma	M3712SU	C
S1	M3701SR	Surgery II - Urology	M3712SU	
S1	M3701SE	Surgery II – E.N.T	M3712SU	
S1	M3701SP	Surgery II - Ophthalmology	M3712SU	
S0	M3713IM	Internal Medicine II	M3712IM	C
S0	M3713OG	Obstetrics & Gynaecology II	M3712OG	C
S0	M3713PA	Paediatrics II	M3712PA	C
S1/2	M3759FC	COBES III	M3601FM +M3701FN+ M3719FC	

### Fifth Year Level

At fourth year level, students proceed with the general dental surgery modules. The normal fifth year level curriculum of a student registered in the Bachelor Medicine and Bachelor of Surgery degree programme will therefore consist of eight (8) *Modules* (177 credits), compiled as follows:

Subject	Modules	Credits
MBChB at fourth year level	8	236
<b>Total</b>	<b>8</b>	<b>236</b>

Students take all modules below:				
Semester	Code	Course Title	Prerequisite(Co-requisites) /	Compulsory (C)/Elective (E)
S0	M3813AN	Anaesthesiology II	M3701AN	C
S0	M3813IM	Internal Medicine III	M3713IM	C
S0	M3813OG	Obstetrics and Gynaecology III	M3713OG	C
S0	M3813PA	Paediatrics III	M3713PA	C
S0	M3813MS	Psychiatry II	M3701MS	C
S0	M3813SU	Surgery III	<b>ANY three of the following:</b> M3701SO;M3701SR;M3701SEM3701SP	C
S0	M3813TR	Research Project	M3713TR	C
S2	M3812FL	Electives		C

### Six Year Level

At fourth year level, students proceed with the general dental surgery modules. The normal sixth year level curriculum of a student registered in the Bachelor of Bachelor Medicine and Bachelor of Surgery degree programme will therefore consist of six (6) *Modules* (200 credits), compiled as follows:

Subject	Modules	Credits
MBChB at fourth year level	6	200
<b>Total</b>	<b>6</b>	<b>200</b>

Students take all modules below:				
Semester	Code	Course Title	Prerequisite(Co-requisites) /	Compulsory (C)/Elective (E)
S0	M3873IM	Internal Medicine IV	M3813IM	C
S0	M3873OG	Obstetrics and Gynaecology IV	M3813OG	C
SC	M3873PA	Paediatrics IV	M3813PA	C
S0	M3873MS	Psychiatry III	M3813MS	C
S0	M3873FM	Fam Meds IV	M3702FM	C
S0	M3873SU	Surgery IV	M3813SU	C

## COURSE DESCRIPTORS

### FIRST YEAR LEVEL

#### U3583DD Digital Literacy

**Proposed NQF Level:** 5      **Credits:**8      **Contact Hours:** Semester 0: 4 hours /2 week for semester 1 & 2 hours

**Content:** *Digital Proficiency:* ICT-based devices (laptops, tablets, smartphones, desktop computers, digital instruments and equipment); a mouse, keyboard, touch screen, voice control and other forms of input; screens, audio headsets and other forms of output; digital capture devices;

*Digital Productivity:* Basic productivity software (text editing, presentation, spreadsheets, image editing); email and other digital communication services; Internet or cloud or institutional shared spaces for Organising, managing and backing up digital files; software/apps and services suitable for learning-related tasks; digital tools fit learning and managing learning time

*Information Literacy:* search engines, indexes or tag clouds; wikis, blog posts, scholarly journals, e-books and the open web; file spaces and folders, bookmarks, reference management software and tagging; copyright, and digital citizenship issues

*Data and Media Literacy:* Digital data using spreadsheets and other media; data security and privacy; digital media messages – text, graphics, video, animation, audio and multimedia

*Digital Creation and Innovation:* digital materials (video, audio, stories, presentations, infographics); new digital tools for learning in digital settings



*Digital Communication, Collaboration and Participation:* digital communication; differences between media, norms of communicating in different spaces; false or damaging digital communications; collaborative tools and online environments; online networks.

*Digital Learning and Development:* digital learning opportunities; digital learning resources; digital tools/materials for organising, planning and reflecting on learning (mind-mapping, note-taking, e-portfolio/ learning journal/ blog)

*Digital Identity and Wellbeing:* online profiles for different networks (personal, professional, academic); digital reputation; managing personal data and privacy; digital CV or portfolio of work; digital technologies for personal development; online etiquette; wellbeing and safety online; internet addiction; cyberbullying and other damaging online behaviour

**Assessment:** Continuous assessment: 100%

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### U3583AL Academic Literacy I

**Proposed NQF Level:** 5

**Credits:**8

**Contact Hours:** Semester 0: 4 hours /2 week for semester 1 & 2 hours

**Content:** The module will cover study skills, reading, listening, speaking and writing, referencing, language usage and text organization.

**Assessment:** Continuous assessment: 100%

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### U3403FS Skills Portfolio

**Proposed NQF Level:** 0

**Credits:**0

**Contact Hours:**

**Content:** UNIT 1: Academic Planning and Goal Setting: Individual Needs and Values; Steps in Reaching a Personal Vision; Proactive Approach Towards Learning; Self-Regulated Learning; Personal and Academic Goal Setting; Receptiveness to Learning; Exploring Self- Development and Self- Awareness.

UNIT 2: Attitude and Motivation: Understanding Motivation; Personal Attitudes, Behaviours and Interests; Self-Reflective Process; Approaches to Dealing with Negative Factors; Class Attendance and Participation; Procrastination; Self-Reliance; Discipline; Accountability; Healthy Habits.

UNIT 3: Learning styles: Understanding Personal Approaches to Learning; Dynamics of The Learning Process; Learning Styles and Strategies.

UNIT 4: Study Methods and Skills: Study Habits and Strategies; Learning Styles and Techniques; Effective Study Methods and Skills; Note Taking; Memory and Reading Skills; Critical Thinking.

UNIT 5: Time Management: Effective Time Management; Planning; Decision-making; Prioritization; Setting Boundaries; Time for Self – care; Procrastination.

UNIT 6: Assessment Preparation: In class exercise; Test and Examination preparation; Organizing academic workload; Setting daily study goals; Staying physically active; Study groups.

UNIT 7: Mental well-being: Understanding mental health; Signs and indicators of poor mental health; commonly experienced mental health challenges; psychosocial stressors; Seeking professional help; Coping strategies.

UNIT 8: Interpersonal Communication: Effective Communication Skills; Verbal and Non-Verbal Communication; Listening Skills; Problem Solving; Assertiveness; Negotiation Skills; Practicing Empathy in Communication; Self-Confidence; Receptiveness to Feedback; Building Trust; Teamwork; Leadership; Public Speaking Skills.

**Assessment:** Continuous assessment: 100%

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### U3520LP Leadership Skills

**Proposed NQF Level:** 5

**Credits:**2

**Contact Hours:** 1 x 2h per week for 6 weeks

**Content:** Definition and scope of leadership; History and origins of leadership; Types of leadership; Leadership versus management skills; Leader (master of self, effective manager of people, active visionary); manager; Not all leaders are managers; Not all managers are leaders; Authority versus leadership; Power versus leadership; Principles of leadership (ability, adaptive, action, empowerment, creativity, problem solving, shared); Are leaders born or made? Characteristics of a good leader; Functions of leaders in organisations; Leading for the future; Mentoring skills; The 21st century leader; Ethical leadership skills; Responsible leadership skills.

**Assessment:** Continuous assessment: 100%

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### U3520LP Ethics and Morality

**Proposed NQF Level:** 4

**Credits:**2

**Contact Hours:** 2 hours per week – supplemented by online learning

**Content:** Ethical principles in perspective: Why is the principle of ethics necessary and significant? Ethics and the notion of ethical behaviour related to value systems in the organisational setting in the 21st century. Fundamental ethical principles: Meta-ethics implies the nature of ethics and moral reasoning. Discussions and reasoning around the role of for example self-interest are examples of meta-ethical discussions. Normative ethics guides the individual on how to determine the content of moral behaviour. Applied Ethics are related to specific realms of human action and how to address challenges within those realms. Psychological Egoism is a metaethical theory of motivation and related to self-interest and forms part of the first stage of moral development. Ethical egoism is a normative theory that states that our actions ought to be done from the perspective of self-interest. The moral concept of virtue and constructive evaluation of "virtue" ethics related to virtues found in a particular society or culture. Moral

responsibility comprises causality (cause and effect), knowledge (the facts, information and the skills acquired by the person through education or experience) and freedom (freedom of speech and acts). Applied ethics focusing on domain-specific areas for example science, health, business, education and engineering. Common ethical risks in personal life, studies and in the workplace that can lead to unethical behaviour.

**Assessment:** Continuous assessment: 100%

#### **U3520LP National and Global Citizenship**

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**Proposed NQF Level:** 4      **Credits:**2      **Contact Hours:** Up to 1 contact lecture periods per week for 6 Weeks

**Content:** UNIT 1: Constitution and its Importance: What is a constitution; Functions of a constitution; What it contains; Constitution and democracy

UNIT 2: Global Citizenship: The meaning of global citizenship; Importance of global awareness; World issues of concern to global citizens.

UNIT 3: Civic Engagement: What do we mean by civic engagement; Dimensions of civic engagement; Indicators of civic engagement; Promoting civic engagement.

UNIT 4: Globalisation: Understanding globalisation; Cultural construction of neoliberal globalisation; Major players; Major domains; Major Issues; Futures of Globalisation

UNIT 5: Intercultural Communication: Dealing with difference; Levels of culture; Stereotypes and generalisations; Intercultural communication Processes

UNIT 6: Sustainable Development Goals and individual action: Introduction to SDGs; Contributing to achievement of SDGs through action

**Assessment:** Continuous assessment: 100%

#### **U3420SE Sustainability and Environmental Awareness**

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**Proposed NQF Level:** 4      **Credits:**2      **Contact Hours:** 1 x 2h/6 weeks for the first 3 weeks followed by mini-project for the remainder of semester (total of 10 hours on this aspect)

**Content:** Sustainability: finite nature of elements constituting the Earthly environment, resilience and fragility of the natural environment; three distinct perspectives on sustainability: sustained yield of resources, sustained abundance and diversity of species and ecosystems, sustained economic and social development key themes in defining sustainability: (i) the human perspective, (ii) considerations of fairness and (ii) issues of scale concepts of inter- and intra-generational equity (fair and just distribution of resources), sustainable community. Natural resources: role of soil, water and minerals in supporting life on Earth; health and interdependence of ecosystems within the biosphere; dependence of human beings on natural resources for sustenance and livelihoods. Solutions to environmental sustainability challenges: simple inexpensive interventions aimed at reducing wastage of resources and generation of wastes through exhaustive use, reuse, recycling and refurbishing of products.

**Assessment:** Continuous assessment: 100%

#### **M3511BA Embryology and Introduction to Anatomy**

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**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**Content:** The module provides building blocks to master the following topics i) man's place in the organismic kingdom. ii) basic embryological concepts. iii) an integrated approach to histological structure and function of the primary tissues in relation to the primary organ systems. iv) terminology and definitions in anatomy. The module includes an introduction to microscopy and methods in microscopy. The module furthermore introduces bioethics linked to the history of Anatomy and the Anatomy and Human Tissue Acts.

The module consists of four entities:

Introduction to anatomy including topics: The evolution, humans and their environment, history of anatomy, anatomical concepts, and terms. Introduction to all the major body systems

Cell biology, consisting of structure and function of cells and cell organelles and biological communication. Embryology, consisting of basic anatomy and physiology of reproduction, fertilisation, implantation, the placenta, and development of the embryo up to the trilaminar stage.

Introduction to human histology in reference to the organs systems; including histology of the basic tissues, namely epithelial tissue, connective tissues, muscle tissue and nervous tissue, and introduction to haematology and immunology.

**Assessment:** Continuous assessment 60% Examination 40%

#### **M3501BF Medical Physics**

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**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**Content:** 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 1st, 2nd and 3rd 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); Gas laws & 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 bonds); 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:** Continuous assessment 60% Examination 40%

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### **P3511SO Organic Chemistry**

**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 4+2P hours

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

**Assessment:** Continuous assessment 60% Examination 40

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### **M3511BP Integrated Physiology and Pathophysiology I**

**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**Content:** The module provides building blocks to master the following topics i) man's place in the organismic kingdom. ii) basic embryological concepts. iii) an integrated approach to histological structure and function of the primary tissues in relation to the primary organ systems. iv) terminology and definitions in anatomy. The module includes an introduction to microscopy and methods in microscopy. The module furthermore introduces the bioethics linked to the history of Anatomy and the Anatomy and Human Tissue Acts.

**Assessment:** Continuous assessment 60% Examination 40%

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### **M3511HS Sociology of Health and Disease**

**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**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 emphasises the role that beliefs and behaviours play in health and illness.

Furthermore, the module will address the sociological definition of disease, explore major theoretical perspectives in health, behavioural 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 behaviours; 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 behaviours and apply many of the theories to specific behaviours, e.g. addictive behaviours and the factors that predict smoking and alcohol consumption as well as Gender Based Violence and HIV. Throughout the course students will focus on the interrelationships between beliefs, behaviour and health using the example of placebo effects; illustration of this interrelationship in the context of illness, focusing on HIV, cancer, obesity and coronary heart disease; aspects of women's health; the problems with measuring health status and the issues surrounding the measurement of quality of life.

**Assessment:** Continuous assessment 40% Examination 60%

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### **M3512BB Medical Biochemistry I**

**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**Content:** The module will cover the following topics: Cell biology; Introduction to Medical Biochemistry and its relationship to cell biology; Cellular diversity, function and compartmentalisation; The cell cycle. Protein structure and function; Structure and properties of amino acids, peptides and proteins; Peptides and Protein function (glutathione, globular proteins and fibrous proteins); Protein purification and separation methods/techniques. Enzymes; Enzyme properties and mechanism of action; Enzyme kinetics, inhibition and regulation; Diagnostic and therapeutic uses of enzymes. Lipid chemistry and lipoproteins; Definition, Structure and biomedical importance of various lipids and complex lipids; Steroids and Prostaglandins; Structure and function of lipoproteins. Chemistry of vitamins and minerals; Chemistry of vitamins, minerals and dietary sources; Role of vitamins in metabolism, growth and development (implication of vitamin deficiency); Role of minerals in metabolism, growth and development (implication of minerals deficiency). Carbohydrate chemistry; Structure and function of carbohydrates;

Carbohydrates in living systems; Glycoconjugates. Signalling Pathways; Signalling molecules and modes of cell signalling; G-protein coupled receptors and G-protein signalling; Second messengers, signal transduction and disease. Nucleic acid chemistry and genetic information transfer; Nucleic acid structure and properties; DNA organisation, synthesis and repair; RNA synthesis – Transcription. Protein synthesis; Protein synthesis – Translation; Post-translational processes; Regulation of gene expression. Introductory medical genetics; Mechanisms of genetic variation; Mendelian inheritance; Introductory cytogenetics, genetics and disease. Recombinant DNA technology; Principles of DNA isolation and cloning; Principles of DNA amplification and sequencing; Principles of hybridization and microarrays. Introduction to bioinformatics; Principles of bioinformatics and biologic databases; Assessing pairwise sequence similarity; Introduction to phylogenetics.

**Assessment:** Continuous assessment 40% Examination 60%

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### M3512MP Developmental Psychology

**Proposed NQF Level:** 5      **Credits:**12      **Contact Hours:** 4 hours

**Content:** This module focuses on applicable developmental theories such as the psychodynamic theory, particularly Freud's psychosexual theory and Erickson's psychosocial theory and developmental theories of cognitive development. To be considered here are Piaget's theory of cognitive development as well as Vygotsky's theory of cognitive development (sociocultural-historical theory, particularly the notions of the zone of proximal development and scaffolding in cognitive development). The course will examine perinatal/prenatal development, including the period from conception to birth. Environmental influences on prenatal development, hereditary/genetic influences on human development and hereditary/genetic transmission, genetic and chromosomal abnormalities, birth complications, and maternal stress will be explored. How infants' sense and perceive the world will be examined. Furthermore, the course will examine the five domains of human development from infancy, adolescence, through adulthood (cognitive development, physical development, emotional development, social development and language development (attainment of normal developmental milestones)). Finally, chronic illness in childhood and hospitalization, as well as child physical, emotional, and sexual abuse will be covered. The development of the concept of death among children will also be discussed.

**Assessment:** Continuous assessment 40% Examination 60%

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### M3512BS Statistics for Health Sciences

**Proposed NQF Level:** 5      **Credits:**12      **Contact Hours:** 4 hours

**Content:** *Describing Univariate Data:* Central Tendency, Spread, shape and graphs. *Describing Bivariate Data:* Scatterplots and Correlation. *Introduction to Probability (elementary):* Simple probability, Conditional probability, Probability of A and B, Probability of A or B. *Normal Distribution:* Standard normal distribution, Converting to percentiles and back, and area under portions of the curve. *Sampling Distributions:* Sampling distribution of the mean, Standard error, Central limit theorem, 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 and conclusion, The precise meaning of the p value, 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. *Chi square:* Test for independence and goodness-of-fit and equality of proportion. *Power:* Factors affecting power, Size of difference between means, Significance level, Sample size, Variance.

**Assessment:** Continuous assessment 40% Examination 60%

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### M3512BA Systemic Anatomy I

**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**Content:** This module addresses the regional anatomy, topographical anatomy, organ development and histology of the neurological and musculo-skeletal systems; with dissections, microscopy, and practical sessions of each system that is clinically orientated. It also exposes students to examples of the applications of the anatomical knowledge in clinical cases and clinical examination techniques mastered in skills laboratory.

**Assessment:** Continuous assessment 60% Examination 40%

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### M3512BP Integrated Physiology and Pathophysiology II

**Proposed NQF Level:** 5      **Credits:**14      **Contact Hours:** 3+4P hours

**Content:** The study of physiology encompasses a number of fields of study, from molecules to ecosystems. Here we continue with an investigation of the divisions of the nervous system along with their pathophysiological conditions. Students will be expected to understand and apply the knowledge around the general principles of neurophysiology into the different divisions of neurophysiology. Building upon this we will stress the importance of cellular and tissue compartmentation, and how information

flows within a cellular and mass context. We will investigate the physiological basis of problems associated with most of the major organ systems. In each case we will discuss the effect upon whole body homeostasis.

Topics include:

1. Describing cell injury and its importance in pathophysiological manifestations of disease,
2. Outlining the basic pathophysiological mechanisms leading to the diseased state,
3. Explaining how changes in physiology lead to signs and symptoms of disease
4. Synthesising important systemic complications during organ or organ system failure and
5. Describing the body's compensatory mechanisms to restore homeostasis. The integration of these systems and how they may impact homeostasis is also of critical importance.

Laboratory activities include demonstrations of blood typing among others.

**Assessment:** Continuous assessment 50% Examination 50%

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### **M3502FE Professional Ethics**

**Proposed NQF Level:** 5      **Credits:**7      **Contact Hours:** 2 hours

**Content:** This module addresses the regional anatomy, topographical anatomy, organ development and histology of the neurological and musculo-skeletal systems; with dissections, microscopy, and practical sessions of each system that is clinically orientated. It also exposes students to examples of the applications of the anatomical knowledge in clinical cases and clinical examination techniques mastered in skills laboratory.

**Assessment:** Continuous assessment 60% Examination 40%

## **SECOND YEAR LEVEL**

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### **U3683LA Academic Literacy II**

**Proposed NQF Level:** 5      **Credits:**8      **Contact Hours:** Semester 0: 4 hours/week; Semester 2: 2 hours/week

**Content:** The module is designed for students enrolled in a bachelor's degree, which requires them to do basic research, read and listen to specific academic material, produce specific written texts and give academic presentations. The module thus, focuses on enhancing academic reading, academic vocabulary, writing, listening and speaking

**Assessment:** Continuous assessment: 100%

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### **H3513NM Medical Anthropology**

**Proposed NQF Level:** 5      **Credits:** 12      **Contact Hours:** 4hrs/week

**Content:** This module represents a first exposure to Medical Anthropology, local understanding of medical systems and beliefs in understanding the different cultures; acquiring the most basic knowledge and skills of various cultural interpretations of health and illness which will enable them to become more tolerant and better understanding different health systems and beliefs.

**Assessment:** Continuous assessment 100%

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### **U3520TH Introduction to Critical Thinking**

**Proposed NQF Level:** 5      **Credits:**2      **Contact Hours:** 1-hour practical session per week

**Content:** The module will cover: Definition of critical thinking: striving for understanding; to have an inquisitive yet open-minded and flexible approach to exploring ideas, the ability to evaluate information and draw clear conclusions based on the evidence at hand. Core critical thinking skills: explain, infer, analyse, evaluate, problem solving, self-reflect. Deductive and inductive reasoning: inductive reasoning- move from the specific to the general, deductive reasoning-moving from the general to specific. Construction of argument: construct statements that combine reasoning with evidence to support an assertion or argument. Problem analysis: define problem, determine the root causes of problem, develop alternative solutions to problem, implement solution, evaluate outcome. Reflective learning: asking open questions, reflecting on answers, writing reflective learning essays, thinking about other answers, asking 'why' questions. Understanding fallacies: what is a fallacy? Description of various fallacies, identifying a fallacy in an argument, explaining a fallacy to an opponent in an argument.

**Assessment:** Continuous assessment 100%

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### **U3420PJ Project Management Skills**

**Proposed NQF Level:** 5      **Credits:** 2      **Contact Hours:** 2 hour lecture per week for the first two week and field-based practical for the remaining four weeks

**Content:** This module consists of two components: The first component is a two week theory covering the concepts (project vs programme) and the phases of project life cycle ( project initiation and planning: work breakdown, development of SMART indicators, estimation of activity duration, efforts, and costs, scheduling of activities, identification of critical path, setting of milestones, stakeholder identification and categorization, stakeholder engagement, initial risk identification, and development of the initial project plan; project implementation & management: forming the project team, managing people, resources allocation, responsibilities allocation, quality assurance, leadership style and project liaison; project monitoring and control:

progress reporting and communication, quality control, time management, budget and cost management, risk management and mitigation; project closure and evaluation: project evaluation, project auditing process and the closure process, and final project report). The second component is a four-week field-based practical where students participate in a real-life project in their immediate environment. Students are strictly required to apply the project management approach during the field-based practical.

**Assessment:** Continuous assessment 100%

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### **M3611BB Medical Biochemistry II**

**Proposed NQF Level:** 5      **Credits:**16      **Contact Hours:** 3+4P hours

**Content:** This module covers the following topics: Principles of bioenergetics; Principles of bioenergetics. Oxidative metabolism; Cellular redox systems; Mitochondrial electron transport system; Inhibitors and regulation of oxidative metabolism; Mitochondrial dysfunction and disease. Carbohydrate metabolism and the TCA cycle; Glycolysis; Gluconeogenesis; Tricarboxylic Acid cycle; Metabolism of non-glucose sugars; Pentose phosphate pathway; Metabolism of glycogen. Lipid metabolism; Oxidation of fatty acids in the liver and extrahepatic tissues; Ketogenesis and impaired oxidation of fatty acids; Biosynthesis and storage of fatty acids; Eicosanoids and health; Disorders of lipoprotein metabolism. Metabolism of proteins and amino acid nitrogen; Amino acid degradation and the urea cycle; Amino acid degradation and the urea cycle; Inborn errors of metabolism. Principles of metabolic regulation and biochemical basis of cancer; Principles of metabolic regulation; Integration of metabolism; Biochemical basis of cancer. Control of food intake and regulation of energy balance; Food intake control mechanisms; Energy balance regulation; Kwashiorkor and marasmus. Steroid and bile metabolism; Cholesterol synthesis and transport; Bile acid biosynthesis; Steroid hormones and CYP enzymes. Nutrition in health and disease; Overview of nutrition in health and disease; Nutrigenetics and nutrigenomics; Nutrition in metabolic and cardiovascular disease and their prevention. Xenobiotic metabolism; Xenobiotics, sites of metabolism and the process of biotransformation; Cytochrome P450 (CYP) enzymes in biotransformation; Clinical correlations in xenobiotic metabolism.

**Assessment:** Continuous assessment 60%; Examination 40%

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### **M3611BP Physiology and Pathophysiology III**

**Proposed NQF Level:** 6      **Credits:**16      **Contact Hours:** 3+4P

**Content:** Physiology and Integrated Pathophysiology III is the integration of the normal functions of the body and the study of disordered physiological processes associated with disease or injury. This course is an introduction to physiology and pathophysiology designed specifically to meet the needs of students preparing for careers in the health professions. This course will build on prior knowledge of anatomy and physiology as we explore body functions in altered health conditions. The course lays the basis for understanding major human body systems with an emphasis on the organ functions. The body systems to be covered in this module will include cardiovascular, respiratory, digestive, renal and respiratory systems along with their associated pathophysiology

**Assessment:** Continuous assessment 50%; Examination 50%

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### **M3611BA Systemic Anatomy II**

**Proposed NQF Level:** 6      **Credits:**16      **Contact Hours:** 3+4P

**Content:** This module addresses the regional anatomy, topographical anatomy, organ development and histology of the respiratory, gastro-intestinal, and urogenital systems through dissections, microscopy, and practical sessions of each system that is clinically orientated. It also exposes students to examples of the applications of the anatomical knowledge in clinical cases and clinical examination techniques mastered in skills laboratory.

**Assessment:** Continuous assessment 60%; Examination 40%

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### **M3631TM Medical Microbiology I**

**Proposed NQF Level:** 6      **Credits:**16      **Contact Hours:** 3 + 4P

**Content:** This module will cover: Bacterial cell nomenclature; morphology; body plan and components; structure and gram nature; Bacterial Processes cell growth; nutrition and metabolism; biofilms; Bacterial virulence regulation of virulence; pathogenicity and pathophysiological changes resulting from bacterial infections Bacterial Genetics: variation and inheritance; mutations and repair; Genetic exchange and Recombination. Normal Microbial flora Origins; Factors; Flora at different sites; Beneficial effects of flora Immunology: 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 defence Mechanisms; (tolerance; allergy and hypersensitivity; autoimmunity; immunodeficiency; immunosuppression); tissue transplant; immune-surveillance; tumour immunity; transplant immunology; immunotherapy and immunisation. Spread and Control of Infection Sterilisation and Disinfection; Mechanisms of action of major classes of antimicrobial agents; drug resistance; multidrug resistant organisms and the physical and chemical prevention and control methods.

**Assessment:** Continuous assessment 40%; Examination 60%

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**M3601FM Family Medicine I**

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**Proposed NQF Level:** 6      **Credits:**8      **Contact Hours:** 2 + 2P hours

**Content:** The module covers the following topics: Definitions of Family Medicine, Primary Health Care and Public Health and how they overlap; Primary Health Care – origins, different approaches and challenges; Disease Prevention and Health promotion – definitions, approaches and behaviour change theories, principles of disease prevention and social determinants of ill health; Communicable and Non-communicable diseases and screening for preventable conditions; Brief behaviour change counselling and how to communicate health information; Community oriented primary care (COPC) and how to apply the principles of COPC; Family- oriented primary care and how to utilise different tools to assess family function e.g. genograms, ecomaps and family APGAR as well as conducting a home visit and family conference.

**Assessment:** Continuous assessment 60%; Examination 40%

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**M3612TA Anatomical Pathology**

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**Proposed NQF Level:** 6      **Credits:**16      **Contact Hours:** 3 + 4P

**Content:** Pathology (also commonly referred to as laboratory medicine) comprises those services which provide knowledge and diagnostic information for the care of individual patients through the scientific analysis of specimens of blood, fluids, tissues and other samples. Pathology services constitute an essential element of clinical services through the contribution they make to the effective prevention, detection, diagnosis, treatment and management of disease, especially chronic disease. This curriculum in pathology is organised in three modules: histopathology, chemical pathology and haematology.

**Assessment:** Continuous assessment 40%; Examination 60%

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**M3612TM Medical Microbiology II**

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**Proposed NQF Level:** 6      **Credits:**16      **Contact Hours:** 3+4P hours

**Content:** **Parasitology** Overview of parasite; host; parasitism; parasitic diseases prevalent in Namibia and world; Classification; geographical distribution; habitat; morphology; life cycle; pathogenicity (mode of infection, pathogenesis and pathology); immune response to parasitic invasion and escape mechanism and laboratory diagnosis and prevention and control of medically important protozoa and helminths: *Entamoeba histolytica*; *Giardia lamblia*; *Trichomonas*; *Ascaris*; *Ancylostoma* and *Necator*; *Enterobius vermicularis*; *Trichuris trichiura*; Strongloides; *Taenia*; *Echinococcus*; *Hymenolepis nana*; *Brugia*; *Loaloa*; *Onchocerca*; *Dracunculus*; *Plasmodium*; *Leishmania*; African and South American trypanosomiasis; *Toxoplasma*; *Wucheria* and; **Medical entomology** (insects and arachnids) ; **Mycology**; Classification, general structure; physiology; pathogenesis; diagnosis treatment; prevention and control of medical important fungi; superficial mycosis; deep or systemic mycoses; opportunistic mycoses; fungal toxin and Allergies fungal drugs. **Virology**; History and principles of virology; Taxonomy and replication strategies of various viruses and Bacteriophages; Classification; structure; medical importance; pathogenesis and laboratory diagnosis of Poxviruses; Herpes viruses; Adenoviruses; Picornavirus; Orthomyxovirus; Paramyxovirus; Arbovirus; Rhabdo viruses; Hepatitis viruses; Retrovirus (HIV; HTLV etc); emerging viruses (SARS;MERS); Oncogenic virus; prions; Antiviral drugs; Technique of Diagnostic virology: Cultivation and purification of viruses.Principle and application of serodiagnostic methods-hemagglutination and haemagglutination inhibition tests; Complement fixation; neutralisation.

**Assessment:** Continuous assessment 40%; Examination 60%

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**P3632CO Pharmacology I**

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**Proposed NQF Level:** 6      **Credits:**16      **Contact Hours:** 4 hours

**Content:** The module introduces students to principles of pharmacodynamics and pharmacokinetics as integrated concepts that explain the effects and mechanisms of drug actions. It lays the foundation for students' understanding of drug therapy as will be taught in subsequent modules in the pharmacotherapy of systemic diseases. It will focus on: mechanisms and equations of drug receptor interactions; nature and types of drug dose response curves; pharmacodynamic terms describing drug dose effectiveness and safety; agonist and antagonist drug dose response curves and spare receptor theory; drug receptor families, cellular signal transduction pathways and second messengers; drug formulations and routes of drug administration; drug transport process, drug absorption, distribution and elimination; drug extraction ratio and clearance; effects of organ perfusion, protein binding and enzymatic activity on rates of drug elimination; pharmacokinetic compartment models; Pharmacokinetic parameters – their definitions and implications in drug therapy; drug plasma concentration time curves; pharmacokinetic models and equations and the use of semi-logarithmic graphs for determining pharmacokinetic parameters; drug metabolism and drug metabolising enzymes; enzyme induction and inhibition; Fundamental principles of drug interactions

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3602TC Chemical Pathology**

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**Proposed NQF Level:** 6      **Credits:**8      **Contact Hours:** 2 + 2P

**Content:** Through this module students will learn about the biochemical and metabolic basis of disease, and the mechanisms involved in restoration and maintenance of normal state. Students will also learn about the approaches to clinical reasoning guiding the choice of laboratory tests, interpretation of results of tests, decision making therefrom, the analytical methods themselves and their limitations.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3619FC Community Based Education and Service I (COBES I)**

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**Proposed NQF Level:** 6      **Credits:**14      **Contact Hours:** 5 hours of integrated learning and Household attachment

**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:** Continuous assessment 100%

### **THIRD YEAR LEVEL**

#### **RID3711 Epidemiology**

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**Proposed NQF Level:** 7      **Credits:** 14      **Contact Hours:** 3+1P hours

**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, occupational epidemiology, psychiatric 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 41 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,

**Assessment:** Continuous assessment 50%; Examination 50%

#### **FMM3701 Family Medicine II**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2+2P hours

**Content:** The module covers the following topics; the principles of Family Medicine; the Bio-psychosocial approach and the use of the three-stage assessment; patient-centeredness and the dynamics of the consultation; comprehensive primary care assessment model); communication and basic counselling skills; bioethics and an approach to solving ethical dilemmas in clinical practice

**Assessment:** Continuous assessment 40%; Examination 60%

#### **PTG3711 Haematology I**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2+2P hours

**Content:** The module provides comprehensive knowledge on the developmental process of all three haemopoietic cell lines of erythropoiesis, thrombopoiesis, lymphocyte and leucocyte maturation and differentiation; understanding the role growth factors in haemopoiesis and cytokines in haemopoietic proliferation differentiation and maturation; morphology (indication and interpretation of stains used in the peripheral blood smear; normal cellular morphology and composition of peripheral blood; qualitative and quantitative abnormalities of erythrocytes, platelets and white cells); haematologic malignancies (leukaemia, polycythaemia vera, myelofibrosis, thrombocythaemia); haemostasis and thrombosis (comprehensive knowledge of function of the various components of haemostasis; diagnosis of various congenital bleeding disorders); blood transfusion (genetics and biochemistry of major blood cell antigens such as ABO, Rhesus, HLA; principles of pretransfusion testing such as basic blood grouping, procedures for compatibility testing, principles of cross match strategies, and principles of antibodies identification); specialized haematology diagnostic modalities (to acquire comprehensive knowledge of the commonly used diagnostic panels such as acute leukaemic screen, chronic screen, plasma screen, CD34 analysis, Platelet marker analysis).

**Assessment:** Continuous assessment 40%; Examination 60%



### MCB3711 Medical Microbiology II

**Proposed NQF Level:** 7      **Credits:**16      **Contact Hours:** 3+4P hours

**Content:** Topics include: **Parasitology;** Overview of parasite, host, parasitism, parasitic diseases prevalent in Namibia and world, Classification, geographical distribution, habitat, morphology, life cycle, pathogenicity (mode of infection, pathogenesis and pathology), immune response to parasitic invasion and escape mechanism and laboratory diagnosis and prevention and control of medically important protozoa and helminthes: Entamoeba histolytica, Giardia lamblia, Trichomonas, Ascaris, Ancylostoma and Necator, Enterobius vermicularis, Trichuris trichiura, Strongyloides, Taenia, Echinococcus, Hymenolepis nana, Brugia, Loa loa, Onchocerca, Dracunculosis, Plasmodium, Leishmania, African and South American trypanosomiasis, Toxoplasma, Wuchereria and; **Medical entomology** (insects and arachnids) ; **Mycology;** Classification, general structure, physiology, pathogenesis, diagnosis treatment, prevention and control of medical important fungi; superficial mycosis, deep or systemic mycoses, opportunistic mycoses, fungal toxin and Allergies fungal drugs. **Virology;** History and principles of virology, Taxonomy and replication strategies of various viruses and Bacteriophages; Classification, structure, medical importance, pathogenesis and laboratory diagnosis of Poxviruses, Herpes viruses, Adenoviruses, Picornavirus, Orthomyxovirus, Paramyxovirus, Arbovirus, Rhabdo viruses, Hepatitis viruses, Retrovirus (HIV, HTLV etc), emerging viruses (SARS,MERS), Oncogenic virus, prions, Antiviral drugs; Technique of Diagnostic virology: Cultivation and purification of viruses.Principle and application of serodiagnostic methods-hemagglutination and haemagglutination inhibition tests, Complement fixation, neutralization.

**Assessment:** Continuous assessment 50%; Examination 50%

### PMG3711 Pharmacology II

**Proposed NQF Level:** 7      **Credits:**16      **Contact Hours:** 4 hours

**Content:** Neurohormonal transmission and initiation of post junctional activity; autonomic and somatic nervous system: structure and organ innervations; peripheral neurotransmitters (acetylcholine, noradrenaline, dopamine) and cotransmitters(ATP, adenosine, nitric oxide, endothelin, neuropeptide Y, vasoactive intestinal polypeptides); cholinergic and adrenergic receptors: their tissue distributions and effects of their stimulations; cholinergic and anticholinergic drugs (choline esters, natural alkaloids, anticholinesterases, atropinic drugs, neuromuscular blocking agents): their mechanisms of action and clinical uses; sympathomimetics ( $\alpha$  and  $\beta$  adrenoceptor agonists) and adrenergic receptor blockers ( $\alpha$  and  $\beta$  adrenoceptor antagonists): mechanisms of action and clinical uses; angiotensin converting enzyme inhibitors, angiotensin II receptor antagonists and diuretics: mechanisms of action and clinical uses; Bacterial pathogens: staining properties and morphological classifications, virulent characteristics; associations with infections of given anatomical sites and mechanisms of resistance development; antibacterial agents (Beta-lactam antibiotics (penicillins, cephalosporins, penems and monobactams), Glycopeptides (vancomycin and teicomycin); Protein synthesis inhibitors: [50S ribosomal protein inhibitors (chloramphenicol, macrolides and ketolides, lincosamides, spectogramins); 30S ribosomal protein inhibitors (Tetracyclines, glycylicyclines and aminoglycosides); bacterial nucleic acid synthesis inhibitors (quinolones, sulphonamides and trimethoprim, metronidazole)

**Assessment:** Continuous assessment 40%; Examination 60%

### SUR3710 Surgery I

**Proposed NQF Level:** 7      **Credits:**16      **Contact Hours:** 3+4P hours

**Content:** The course will cover the core areas for the non-specialist medical practitioner including: Orthopaedics: the assessment of the musculoskeletal system; an approach to x-rays & other diagnostic imaging; fracture healing & B complications; principals of operative treatment; bone & joint infections; skeletal Tuberculosis; osteoarthritis, gout and other joint pain; rheumatic disorders; bone tumours; Metabolic bone disease, osteonecrosis & osteochondritis; genetic disorders, dysplasia & malformations; neuromuscular disorders; an introduction to ATLS and assessment of the injured patient; general principals of fractures & dislocations; management of wounds & soft tissue including GSW's; brachial 59Plexus & peripheral nerve injuries; amputation & rehabilitation; acute pyogenic bone & joint infections in children; fractures & joint injuries in children; the child's hip; deformities of legs & feet in children; limb length inequalities **Urology:** Benign Prostatic Hypertrophy (BPH); cancer prostate; urinary tract imaging; renal trauma; ureteric trauma; bladder trauma; urethral trauma; external genital trauma; urinary tract infection (uti); urolithiasis; cancer kidney; cancer bladder; cancer testis; dd of scrotal swelling; male infertility **otorhinolaryngology:** introduction to otorhinolaryngology; applied anatomy & physiology of the external ear; external ear conditions; clinical examination of the ear; applied anatomy & physiology of the middle ear cleft; applied anatomy & physiology of the inner ear; hearing loss; balance disturbances; facial nerve and audiometry; applied anatomy & physiology nose, paranasal sinuses and nasopharynx; applied immunology/allergology for ent (part i); specific conditions of the nose, paranasal sinuses, nasopharynx; applied anatomy & physiology of the mouth and pharynx (oro and laryngo pharynx); obstructive sleep apnoea, applied anatomy and physiology of the larynx and trachea; specific conditions of the larynx and trachea; HIV and otorhinolaryngology; speech disorders. **Ophthalmology** Disorders of the lid; disorders of the lacrimal apparatus; conjunctivitis & ophthalmia; neonatorum; trachoma & other chronic conjunctivitis; keratitis and corneal ulcers; corneal ulcer; scleritis & episcleritis; refractive errors & method of correction; presbyopia; accommodation convergence; congenital cataract; senile cataract; metabolic & complicated cataract; primary angle closure glaucoma; congenital glaucoma; primary open angle glaucoma;

secondary glaucomas; anterior uveitis; posterior uveitis; blindness prevalence, prevention & rehabilitation; retinopathies, hypertensive, toxemia and pregnancy, diabetic retinopathy; retinal detachment, types, symptoms and pre-disposing Retinoblastoma and other ocular neoplasms; binocular vision amblyopia & concomitant Optic nerve lesions; ocular emergencies (traumatic) and non-traumatic); minor ophthalmic surgery; and general principles of intra ocular

**Assessment:** Continuous assessment 40%; Examination 60%

### **MCB3702 Clinical Microbiology**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2+2P hours

**Content:** Organ-system approach will be used; Musculoskeletal system infections (osteomyelitis, septic arthritis, pyomyositis etc.); Respiratory system infections (pharyngitis, tonsillitis, Tuberculosis, pneumonia, empyema etc); cardiovascular systems (Septicemia, Rheumatic fever, infective endocarditis etc.) ; gastrointestinal system and the biliary system infections (Peptic ulcer disease, secretive & Inflammatory diarrhoeas, dysentery etc.) ;Urogenital system (UTI, STDs & STI); Central nervous system infections (Meningitis, encephalitis etc.); Skin conditions (Carbuncles, folliculitis, Tinea, etc), HIV and opportunistic infections, Hospital acquired infections and infection control and prevention. The entire topics will be taught under sub-titles of epidemiology, transmission, natural history of the common infections; pathogenesis and clinical manifestations; diagnosis; treatment; prevention and control.

**Assessment:** Continuous assessment 50%; Examination 50%

### **OBG3712 Obstetrics & Gynaecology I**

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**Proposed NQF Level:** 7      **Credits:**20      **Contact Hours:** 40 hours for 5 weeks

**Content:** Students will be able to evaluate normal and suspect high risk or abnormal pregnancy, carry out selected diagnostic investigations, develop an intervention plan, observe practical and surgical interventions as an assistant to clinical faculty members, prepare patient records, present findings to clinical faculty members, and make proper referrals of patients.

Topics to be covered include : Conception, pregnancy & the management of normal pregnancy; high-risk pregnancy; abnormal pregnancy; medical conditions and HIV in pregnancy; normal and abnormal labour; use of partograph for monitoring labour; operative vaginal delivery; patho-physiology of high risk and abnormal pregnancy; obstetric operations, e.g. caesarean section; ethical issues in obstetrics, all with specific reference to practicing in Namibia; Miscellaneous medical disorders: Haematological problems in pregnancy; Renal disease, Diabetes and endocrine disease; Heart disease; hypertensive disorders; malpresentation; malposition; cephalopelvic disproportion; obstetric procedures: induction and augmentation of labour; prolonged pregnancy; preterm labour; multiple pregnancy; disorders of foetal growth and assessment of foetal well-being; obstetric emergencies: APH, PPH, cord prolapse, etc.; neonatal care for obstetricians; puerperium and lactation; analgesia and anaesthesia for obstetrics; foetal monitoring during labour; antenatal care; pre-conception counselling; Normal foetal growth; the placenta and foetal membranes; prenatal diagnosis and genetics.

**Assessment:** Continuous assessment 40%; Examination 60%

### **PDC3712 Paediatrics I**

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**Proposed NQF Level:** 7      **Credits:**20      **Contact Hours:** 40 hours for 5 weeks

**Content:** Students will attend the paediatric wards and clerk patients, to develop an understanding of the normal and sick child, identify abnormalities in growth and development, and to learn how the child relates to their family and the community. The emphasis will be laid on clinical history and examination, making a correct diagnosis and formulating a management plan for the common childhood illnesses. They will learn the principles of administering first aid during medical emergency, make effective referral and follow-up of a baby or child who requires life-saving care.

**Assessment:** Continuous assessment 40%; Examination 60%

### **PMG3712 Pharmacology III**

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**Proposed NQF Level:** 7      **Credits:**16      **Contact Hours:** 4 hours

**Content:** Receptors, neurohumours and neurotransmission in the central nervous system; general anaesthetics; local anaesthetics; analgesics: Opioid and non-steroidal anti-inflammatory analgesic agents; drug addiction and abuse; ethanol; hypnotics and sedatives, antiepileptic drugs; anti-psychiatric, antipsychotic and anti-maniac drugs; antidepressants and anxiolytics; principles of antibiotic prescribing; HIV replication; Antiretroviral drugs: Classifications and mechanisms of action and resistance development; principles antiretroviral therapy and HAART; non-antiretroviral and antifungal agents: mechanisms of their action and clinical uses particularly in opportunistic infections in immune compromised patients; chemotherapy of parasitic infections (anti-helminthics); chemotherapy of neoplastic diseases; tumour cell growth and cell kill hypothesis; sites of action of cytotoxic drugs in the cell cycle; antineoplastic drugs: Classes (Cytotoxics, hormones and biologic response modifiers) therapeutic uses; adverse effects of cytotoxic drug and their management, principles of cancer chemotherapy

**Assessment:** Continuous assessment 40%; Examination 60%

### **RID3780 Research Methods and Proposal Writing**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 1+2 P hours

**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 the different of studies design. Sampling Methods: Non-probability sampling, Probabilistic or random sampling; sample size determination. Study population, Specification study variables, and types of variables. The 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. Research proposal development.

**Assessment:** Continuous assessment 50%; Examination 50%

### **CMM3719 COBES II**

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**Proposed NQF Level:** 7      **Credits:**16      **Contact Hours:** 4 weeks of integrated learning

**Content:** This module provides immersion of the student into district/ rural hospitals in Namibia. The student will participate in all aspects of service delivery at the hospital and outreach in the clinic. The learning will be re-enforced by assessment through observation of skills and assignments related to the patient illness in the context of the family and community, which include: Family Visit, Chronic Illness Audits, Patient Adherence Questionnaires and a Health Promotion project.

**Assessment:** Continuous assessment 100%;

## **FOURTH YEAR LEVEL**

### **M3701AN Anaesthesiology I**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2 hours

**Content:** This course reviews the physiology, pathophysiology and anatomy of the respiratory, cardiovascular and autonomic nervous systems as well as the pharmacology of medicines used in the context of anaesthesia. The course will acquaint the students with pre-operative preparation of the patient and family; this includes consent to anaesthesia and choice of appropriate preoperative additional medications and investigations.

Students will be taught the principles of General Anaesthesia including the choice of medicines for induction and maintenance, the application of intravenous and inhalational anaesthesia, the use of neuromuscular blocking and analgesic agents, as well as the function of appropriate monitoring during anaesthesia. Complications of General Anaesthesia, in particular in respect the airway management will be discussed in detail.

Students will be lectured on the principles of Regional Anaesthesia including the pharmacology of medicines used for local and regional anaesthesia, and pain management; emphasis will put on spinal anaesthesia and the management of its side effects and possible complications.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3701FH Health Systems Management**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2 hours

**Content:** As a manager within a health facility, certain leadership qualities and managerial practices contribute to achieving health care objectives. Students will be introduced to leadership skills which are needed for success in health service administration. Understanding different leadership and management theories that characterise organisation management which shape clinical delivery. Health economics applies the tools of economics to issues of the organisation, delivery, and financing of health care. Financial management will include the ability to develop and assess a budget, to determine where monies are best spent, to set up systems to monitor and evaluate the outcomes, to complete a cost benefit analysis of the service provided, and the ability to write up the needed reports. Human resources training will deal with the personnel component of any organisation. For a health services administrator, the responsibilities would include developing policy for hiring, discipline, and termination of personnel through direct management or as a supervisor of the individual assigned to these services. Concepts related to Clinical Governance help shape the day-to-day engagement of clinical delivery within the healthcare system

**Assessment:** Continuous assessment 60%; Examination 40%

### **M3701SI Medical Imaging and Diagnostics**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2 hours

**Content:** Introduction to medical physics, radiation and use of radioisotopes in medicine as a diagnostic tool and for treatment. The module discusses risks to radiation, radiation protection, and legislation on radiation, various imaging techniques, the normal appearance of various tissues and organs in plain films, angiography, contrast studies, tomography and resonance. At the end of the module, a student will be able to differentiate normal from abnormal findings in radiographs and diagnose common pathologies in the chest, abdomen, bone and the skeletal system. The student will also be able to institute due care practices in requesting imaging investigations, be mindful of the comfort of the patient and obtain consent as necessary. Topics covered include principles of radiation physics and radiological technology; radiation protection; radiobiology; X-rays: normal systemic anatomy using plain X-rays (plain films, contrast studies); imaging modalities and their application; radio-isotope imaging, computerised tomography, magnetic resonance imaging, ultrasound, radiological, angiography, images of osteomyoarticular, respiratory, circulatory, digestive, urogenital, haemolymphopoietic, and endocrine systems; radio-therapeutics and bio-effects of radiation.

Applied radiology and diagnostics: cost-effective use of medical imaging, the use of plain films as an imaging primary technique for the general physician, actual working with the ultrasound in bedside care of patients, the benefits of tomography, angiography and radio-magnetic resonance. Topics in neuroscience include MRI, CT and plain films: haemorrhage, subarachnoid and subdural haemorrhage, infarct, oedema, mass and hydrocephaly; in the spine: metastatic mass, disc disease, compression; abdomen: bowel obstruction, aortic aneurysm, renal mass pancreatic mass, hepatic mass, abdominal mass; Chest: pneumonia, effusion, atelectasis, nodule, congestive heart failure, pulmonary oedema, pneumothorax; pelvis: prostate nodule, testicular mass; neck: thyroid nodule; indications of ECHO cardiograph, Doppler; bile duct ultra sound; use of ultra sound and radioisotopes in treatment

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3702FM Family Medicine III**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 3 hours

**Content:** This module consists of two parts: The first part aims to introduce students to environmental and occupational health and safety, and the second part aims to introduce students to gerontology, disability and rehabilitation.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3701FN Nutrition and Dietetics**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2 hours

**Content: Basic Nutrition:** Including digestion, absorption, metabolism, storage, and excretion of nutrients and other markers of nutritional adequacy or excess with emphasis on micronutrients; functions, dietary sources and deficiencies of essential nutrients and water in humans; a balanced diet.

**Nutritional needs through the life course:** The significance of nutrition throughout the lifecycle with an emphasis on infancy, 1-5 years, adolescents, pregnant and breast-feeding mothers, and old age; the role of nutrients in heart disease, cancer, hypertension, osteoporosis; weight control and eating disorders; vegetarianism; food safety; food fortification; dietary supplements

**Public Health Nutrition:** Nutrition and public health; practical nutritional assessment; different types of malnutrition (both under and over nutrition including micronutrient deficiency) in the community; disease and disordered eating; the prevalence and distribution of different nutritional problems in a Namibia context; food and nutrition safety and security; the latest policies and interventions in Namibia (including the Food Based Dietary Guidelines; Food and Nutrition Security policy etc).

**Therapeutic and Clinical nutrition:** Nutrition of patients in health care settings; age of patients, including not only outpatients at clinics, but also (and mainly) inpatients in hospitals to keep a healthy energy balance in patients, as well as providing sufficient amounts of other nutrients such as protein, vitamins and minerals a case-based approach.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3701MS Psychiatry I**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 2 hours

**Content:** Topics: Diagnoses of patients with mental/psychiatric disorders, neuropsychiatry, behavioural neurology and psychopharmacology; application of medical and psychopathological knowledge and procedural skills to collect and interpret data, make appropriate clinical decisions; carry out diagnostic procedures using an appropriate combination of biological, psychological and sociological methods, including up-to-date, ethical and cost-effective clinical practice and effective communication with patients.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3713IM Internal Medicine II**

**Proposed NQF Level:** 7      **Credits:**18      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** All common medical conditions in the following systems will be covered: Cardio-vascular, Respiratory, Gastrointestinal, Nephrology, Neurology, emergency medicine and Endocrinology, and Dermatology  
Refer to syllabus document for full details

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3713OG Obstetrics and Gynaecology II**

**Proposed NQF Level:** 7      **Credits:**18      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** This module aims at making the student gain knowledge, skills and professional attributes necessary for evidence-based practice in Gynaecology. Topics to be covered include The menstrual cycle; Normal and abnormal development of the genital tract; gynaecological exploration; major gynaecological syndromes: leucorrhoea, pelvic pain; menstruation, menstrual abnormalities & menstrual problems: premenstrual syndrome (PMS) & dysmenorrhoea; benign and malignant conditions of vulva and vagina; benign and malignant conditions of uterus; ovarian tumours; pelvic inflammatory disease; uterine prolapse; climacteric, menopause and post-menopause; contraception; infertility & assisted reproduction; sexual education and family planning; Hysteroscopy and laparoscopy; Urinary incontinence; Pelvic floor dysfunction – utero-vaginal prolapse; endometriosis; chronic pelvic pain; polycystic ovary syndrome; amenorrhoea – primary & secondary; Gynaecological disorders of childhood and adolescence; Gestational Trophoblastic disease; spontaneous miscarriage; recurrent miscarriage; termination of pregnancy and the medico-legal aspect of termination of pregnancy; Ectopic pregnancy; Acute abdomen in gynaecology; the role of Ultrasound in Gynaecology; sexually transmitted infections (STIs); sexual assault and domestic violence

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3713PA Paediatrics II**

**Proposed NQF Level:** 7      **Credits:**18      **Contact Hours:** 40 hours per week for 6 weeks

**Content:** The purpose of this module is to continue to develop an understanding of the normal and sick child, identify abnormalities in growth and development, and to learn how the child relates to their family and the community. Students will attend out-patients, and in-patient wards, including neonatal and oncology wards, attend XR meetings and seminars. They will learn to take a full history and examination of children and come to a provisional diagnosis with differentials. They will learn about the investigations needed to help make a diagnosis. They will formulate a management plan for childhood illnesses. They will learn the principles of administering first aid during medical emergencies, make effective referral and follow-up of a baby or child who requires life-saving care. The student will gain mastery in the following areas: (1) Knowledge of, and skills necessary for safe and efficient paediatric practice, (2) Communicating and interacting effectively with patients, parents and carers, (3) Recognizing a sick child, knowledge of diseases as they occur in children, and how to identify problems in development and health of the child, by problem solving and clinical reasoning, (4) Neonatal care, both normal and abnormal, (5) Recognizing the impact of childhood illness within the family, including ethical issues, (6) Self-reflection on his/her own practice, (7) The principles of dealing with medical emergencies, make effective referral and follow-up of a baby or child who requires life-saving care.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3701SO Surgery II (Orthopaedics and Trauma)**

**Proposed NQF Level:** 7      **Credits:**9      **Contact Hours:** 40 hours per week for 6 weeks

**Content:** The course will cover the core areas for the non-specialist medical practitioner including:  
**Orthopaedics:** the assessment of the musculoskeletal system; an approach to x-rays & other diagnostic imaging; fracture healing & complications; principles of operative treatment; bone & joint infections; skeletal Tuberculosis; osteoarthritis, gout and other joint pain; rheumatic disorders; bone tumours; Metabolic bone disease, osteonecrosis & osteochondritis; genetic disorders, dysplasia & malformations; neuromuscular disorders; an introduction to ATLS and assessment of the injured patient; general principles of fractures & dislocations; management of wounds & soft tissue including GSW's; brachial Plexus & peripheral nerve injuries; amputation & rehabilitation; acute pyogenic bone & joint infections in children; fractures & joint injuries in children; the child's hip; deformities of legs & feet in children; limb length inequalities

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3713SR Surgery II (Urology)**

**Proposed NQF Level:** 7      **Credits:**9      **Contact Hours:** 40 hours per week for 6 weeks

**Content:** The course will cover the core areas for the non-specialist medical practitioner including but not limited to:  
Benign Prostatic Hypertrophy (BPH); urinary tract imaging; renal trauma; ureteric trauma; bladder trauma; urethral trauma; external genital trauma; urinary tract infection (UTI); urolithiasis; cancers; kidney; bladder; testis; penis, prostate, differential diagnosis of scrotal swelling; male infertility, erectile dysfunction, congenital abnormalities, and emergencies as contained in the textbook and lecture materials.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3701SE Surgery II (E.N.T)**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 40 hours per week for 6 weeks

**Content:** The course will cover the core areas for the non-specialist medical practitioner including: Introduction to otorhinolaryngology; **Ear:** applied anatomy & physiology of the external ear; external ear conditions; clinical examination of the ear; applied anatomy & physiology of the middle ear cleft; applied anatomy & physiology of the inner ear; **hearing loss; balance disturbances;** facial nerve and audiometry; applied anatomy & physiology – **Nose:** paranasal sinuses and nasopharynx; **applied immunology/allergology for E.N.T.;** specific conditions of the nose, paranasal sinuses-**Nasopharynx:** applied anatomy & physiology of the mouth and pharynx (oro-pharynx and laryngo-pharynx); obstructive sleep apnea, applied anatomy and physiology of the larynx and trachea; specific conditions of the larynx and trachea; HIV and otorhinolaryngology. **Speech disorders.**

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3701SP Surgery II - Ophthalmology**

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**Proposed NQF Level:** 7      **Credits:**8      **Contact Hours:** 40 hours per week for 6 weeks

**Content:** Students learn in a structured environment that integrates didactic lectures and clinical apprenticeship. Students also learn by performing selected examination and management techniques. Under the supervision of a qualified medical practitioner or health professional.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3759FC Module Title: Community Based Education and Service III (COBES III)**

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**Proposed NQF Level:** 7      **Credits:**16      **Contact Hours:** 4 weeks

**Content:** The immersion of the student into the number of rural hospitals in Namibia. The student will participate in all aspects of service delivery at the hospital and outreach in the clinic. The learning will be re-enforced by assessment through observation of skills and assignments related to the patient's illness in the context of the family and community, which include a Quality Improvement Project.

**Assessment:** Continuous assessment 100%

## **FIFTH YEAR LEVEL**

### **M3813AN Anaesthesiology II**

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**Proposed NQF Level:** 8      **Credits:** 20      **Contact Hours:** 20 hours per week for 4 weeks

**Content:** This course applies the practice of anaesthesia in different clinical settings: childhood and adulthood, the aged, in different surgical domains, including obstetric care, and under different medical conditions. Students observe, experience and practice pre-operative assessment and pre-medication, as well as providing peri-operative care in the form of general and regional anaesthesia, in the set-up of clinical training by an anaesthesiologist. Students will learn the application and interpretation of peri-operative clinical and technical monitoring of patients. They will gain observational and practical experience in ICU management of patients.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3813IM Internal Medicine III**

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**Proposed NQF Level:** 8      **Credits:**40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** Diagnosis, management and follow up of all common medical conditions in the following systems will be covered.

1. Cardio-vascular, Respiratory, Gastrointestinal, Nephrology, Neurology, Endocrinology, Rheumatology, Infectious diseases (COVID-19, TB, HIV, Malaria) and Oncology
2. Emergency conditions of all the above systems will also be included

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3813OG Obstetrics and Gynaecology III**

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**Proposed NQF Level:** 8      **Credits:**40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** This module enables students to practice gynaecological and obstetrical care of patients and, under the supervision of a Gynaecologist-Obstetrician, shadow as an intern and gain practical hands-on-experience in the care of individual patients with conditions affecting the reproductive organ-systems and their functions in women during the entire reproductive cycle as well as during states of pregnancy and lactation and deliver reproductive health care in a health facility, household, or community.

Course includes performing the listed obstetrical procedures and assisting in frequently performed obstetric/gynaecologic surgical operations. Students will acquire practical skills in the assessment of sexuality, hereditary conditions, normal pregnancy and high risk pregnancy, home delivery and institutional management of labour; complications during labour, caesarean section and assisted/operative vaginal delivery; indications and contra-indications of frequently used procedures, drugs and interventions; puerperium; contraception; infertility; the epidemiology, pathogenesis and clinical manifestations of communicable and non-communicable diseases that affect the reproductive system and functions including sexually transmitted infections (STI), that are

prevalent in Namibia and neighbouring countries; emergencies affecting pregnancy and the reproductive systems; evidence-based care for women and adolescents; invasive and non-invasive diagnostic and therapeutic procedures; cost-effective and rational use of drugs; surgical interventions and laboratory investigations; screening for disease markers for prevention of diseases; health care for populations and health groups; ethical issues and the gate-keeping role of physicians; health resource allocation and management, and health systems research in gynaecological-obstetrical care.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3813PA Paediatrics III**

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**Proposed NQF Level:** 8      **Credits:** 40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** The aim of this module is to continue to improve the knowledge base and to enable the student to gain mastery in clinical skills necessary for managing a healthy child and sick child, identify abnormalities in growth and development, and to learn how the child relates to their family and the community. The emphasis will be laid on history and examination of a child, making a correct diagnosis and formulating a management plan for the common childhood illnesses including neonatology and paediatric oncology; identifying and arranging appropriate investigations and interpreting these to help formulate an appropriate management plan. Students will also learn the principles of providing emergency support in the paediatric setting; interaction with aspects of obstetric care especially as it relates to how maternal health and delivery impacts on the health of the neonate.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3813MS Psychiatry II**

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**Proposed NQF Level:** 8      **Credits:** 20      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** Topics:

1. Personality (Principles of Personality development) and objective testing of Personality
2. Definition of personality, trait, factors influencing personality development, theories of personality and personality assessment.
3. Introduction and classification of Psychiatric disorders
4. Aetiology of Psychiatric disorders
5. Approach to patient management
6. Overview of contribution of different scientific disciplines to psychiatric aetiology
7. Psychiatry history taking, mental status and physical examination
8. Neurodevelopmental and childhood disorders
9. Schizophrenia Spectrum and other psychotic disorders
10. Bipolar and related disorders
11. Classification of psychotropic drugs and common side effects
12. Common psychiatric emergencies (suicide and violent behaviour, dystonia, NMS and Catatonia)
13. Depressive disorders
14. Anxiety disorders
15. Obsessive –compulsive and related disorders
16. Trauma-and stress-related disorders
17. Personality disorders
18. Somatic symptoms and related disorders
19. Psychiatric disorders associated with medical illnesses (Epilepsy and HIV)
20. Neurocognitive disorders
21. Alcohol and other common substances related disorder in Namibia
22. Other psychiatric disorders (sleep-wake disorders, Sexual Dysfunction, eating disorders, prevention and public awareness services, counselling and psychological therapies, legal and ethical issues in Psychiatry)

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3813SU Surgery III**

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**Proposed NQF Level:** 8      **Credits:** 40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** The course will cover the specific topics of pain & pain management; surgical nutrition; wound healing; metabolic response to trauma; Infections of surgical importance; disorders of the appendix; burns & scalds; disorders of the biliary tree; liver disorders of surgical importance; non-malignant thyroid disorders; oesophageal disorders; fluid & electrolyte disorders in surgery; pancreatitis; head injury; thoracic trauma; malignant thyroid disorders; stomach & duodenum; the small bowel; non-malignant large bowel disorders; peritonitis & principles of management; malignant large bowel disorders; breast disorders; breast cancers; arterial disease; aneurysmal disease; venous disease & VTE; the paediatric surgical patient; paediatric trauma; common paediatric surgical emergencies; common paediatric solid tumours; thoracic malignancies; abdominal trauma; investigation & management of postoperative jaundice; principles of palliative care in surgical practice; palliative care: spiritual support; investigation & management of postoperative pyrexia; haemorrhoids & anal mass; peri-anal sepsis; principles of safe; surgery: who checklist; the spleen & lymphatic disorders.

**Assessment:** Continuous assessment 40%; Examination 60%

### **M3813TR Research Project**

**Proposed NQF Level:** 8      **Credits:**18      **Contact Hours:** 4 hours

**Content:** DATA COLLECTION AND ANALYSIS: The student focuses on data collection during the first semester of the fourth year as a longitudinal module from primary or secondary sources in Windhoek /Khomas region. 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 in a specified income cluster. The student will apply the skills of research methodology and epidemiology to clean and process the data using a suitable software package. At the end of the semester, the student will make a presentation detailing the results of the field work, summary tables and preliminary findings. Feedback from the student conference assists the student to review the analytical framework and finalise 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 a refereed journal.

WRITING AND PRESENTATION OF THESIS: This final stage is for the student to write the Thesis with regular advice from the Faculty mentor. The student will be able to make revisions using advice from the mentor aiming at producing the final revised copy one month before the end of the tenth semester (end of year 5 academic year). 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 refereed scientific journal.

**Assessment:** Continuous assessment 100%

### **M3812FL Electives**

**Proposed NQF Level:** 8      **Credits:**18      **Contact Hours:** 40 hours fieldwork per week for 4 weeks

**Content:** The student will complete four weeks in the Electives period. Upon completing an elective, the student is responsible for ensuring that his or her evaluation form is completed and submitted to the School of Medicine for credit. In all cases students must seek approval of a specific elective and the School reserves the right to approve and or cancel chosen electives. We will also actively discourage students from scheduling electives during periods the School has designated for vacation.

**Assessment:** Continuous assessment 100%

## **SIXTH YEAR LEVEL**

### **M3873IM Internal Medicine IV**

**Proposed NQF Level:** 8      **Credits:** 40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** They will practice like student interns and in the process, they will master diagnosis, management and follow up of most common medical conditions in the following systems:

1. Cardio-vascular, Respiratory, Gastrointestinal, Nephrology, Neurology, Endocrinology, Rheumatology, Infectious diseases (COVID-19, TB, HIV, Malaria), Oncology
2. Emergency conditions of all the above systems will also be practised and any other conditions that present to hospital

**Assessment:** Continuous assessment 60%; Examination 40%

### **M3873OG Obstetrics and Gynaecology IV**

**Proposed NQF Level:** 8      **Credits:** 40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** As a way of reducing maternal and neonatal mortality emphasis will be put on the following areas for student interns to gain more practical knowledge: Antenatal care – traditional and focussed ANC; Premature rupture of membrane (PROM) Preterm labour and Preterm birth; Induction and augmentation of labour; Hypertensive conditions in pregnancy particularly preeclampsia, eclampsia & HELLP syndrome; Cardiac disease in pregnancy; Operative vaginal delivery i.e. vacuum extraction and low forceps delivery; Caesarean section/delivery; Obstructed labour & ruptured uterus; Retained placenta; Post-partum haemorrhage; Puerperal sepsis; Acute abdomen in obstetrics – ectopic pregnancy, appendicitis in pregnancy, red degeneration, etc.

The following gynaecology topics will also be taught to the student interns: Post-abortion care – incomplete abortion, septic abortion, etc. (the 4 pillars of post-abortion care) Postpartum sterilization; Short term and long term contraceptive methods; Infertility; Medico-legal aspects of sexual assault and/or rape; Termination of pregnancy and Medico-legal aspects of termination of pregnancy; Sexually transmitted infections; Pelvic infections – pelvic inflammatory disease; Uterine fibroids; Pre- and post-operative assessment and care and Discharge plans.

**Assessment:** Continuous assessment 40%; Examination 60%



### M3873IM Paediatrics IV

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**Proposed NQF Level:** 8      **Credits:** 40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** The student interns will spend ten (5) weeks in the various units of the Paediatric of the Teaching Hospitals. They will be required to attend daily ward rounds and all academic meetings including periodic mortality statistics meetings. Clinical supervision will be provided by both hospital staff and UNAM SOM academic staff. The student interns will have encountered many medical conditions in the preceding years. They should be, at this point, able to recognize the normal child and his/her development and to manage many of the common paediatric conditions in Namibia, including the following: Anaphylaxis, asthma, eczema; Malnutrition, marasmus and kwashiorkor; acute and chronic infections; Gastro-enteritis, dehydration; Upper respiratory infections, otitis media, rhinitis, sore throat; Lower respiratory infections, bronchiolitis, croup, bronchitis, pneumonia; Meningitis and meningococcal septicaemia; Renal diseases including nephrotic syndrome and acute nephritis; Febrile convulsions, epilepsy; anaemia and bleeding disorders; nappy rash; Diabetes mellitus; Down's syndrome and other chromosome disorders; Understand the investigation and management of the above conditions, fluid and electrolyte therapy and paediatric prescribing; and common neonatal disorders such as prematurity, neonatal sepsis and neonatal jaundice; Viral exanthema; congenital infections; Immunodeficiency; Coeliac disease; congenital heart disease; neural tube defects; Dysmorphic syndrome; inborn errors of metabolism; congenital hip dysplasia; Septic arthritis; transient synovitis; juvenile rheumatoid arthritis; Kawasaki's disease; gastrointestinal reflux; inflammatory bowel disease; Hirschsprungs disease; intussusception; pyloric stenosis; Henoch Schönlein purpura; idiopathic thrombocytopenia purpura; Sickle cell disease and other blood disorders, Thalassaemia and acute leukaemia; solid paediatric tumours; vesico-ureteric reflux; accidental poisoning; Munchausen by proxy; autism; attempted suicide; attention deficit hyperactivity disorder; and eating disorders.

**Assessment:** Continuous assessment 60%; Examination 40%

### M3873MS Psychiatry III

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**Proposed NQF Level:** 8      **Credits:** 20      **Contact Hours:** 20 hours per week for 4 weeks

**Content:** Cumulatively, students master the following competencies: Assessment of patients with different psychiatric disorders; Management of psychiatric disorders; Handling of aggressive patient; Assessment of patients with suicidal/homicidal behaviour; Management of substance and Addiction disorders; Ethics and the law; Counselling and crisis intervention; Family interventions; Pharmacological and other treatments in psychiatry; Management of other psychiatric emergencies.

**Assessment:** Continuous assessment 40%; Examination 60%

### M3873FM Family Medicine IV

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**Proposed NQF Level:** 8      **Credits:** 20      **Contact Hours:** 20 hours per week for 4 weeks

**Content:** The module will be covered in the following contexts: Outpatient Department of Hospitals and Primary Care Clinics in Windhoek. There will be an emphasis on chronic diseases (e.g. Diabetes and HIV), basic surgical outpatient skills, community paediatrics, and basic antenatal care.

**Assessment:** Continuous assessment 100%

### M3873SU Surgery IV

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**Proposed NQF Level:** 8      **Credits:** 40      **Contact Hours:** 40 hours per week for 8 weeks

**Content:** Areas to be covered include: review of eliciting symptoms and signs in surgery as well as evidence-based clinical decision making; **surgical biology**, with specific emphasis on wound healing, blood and blood products, anaemia, haemostasis, surgical pathology, shock, hypovolemia and blood transfusion, gastrointestinal haemorrhage, surgical infection and basic surgical skills; **perioperative care**: focusing on preoperative preparation, nutrition and fluid therapy, WHO surgical safety checklist, postoperative care and analgesia in the perioperative period, surgical nutrition; **trauma and the injured patient**: specifically the assessment of the injured patient, ABCDE of trauma, pathophysiology and management of head injury & spine injury, soft-tissue injuries of the neck, chest trauma, abdominal and pelvic injuries, vascular trauma and compartment syndrome, burns and principles of skin grafting, bites and stings; **priority surgical disorders**: of the skin and soft tissues including perianal & perineal sepsis, abdominal wall hernias, esophageal disorders, stomach and duodenum, acute abdomen, small bowel, colon and rectum, breast and endocrine surgery, liver, gallbladder and pancreas, infections and infestations of surgical importance; **common paediatric surgical disorders**; **principles of palliative care in surgery**: being a member of a health team; and **ethics and medico legal issues**; **patient consultation**; **patient discharge and follow-up**.

**Assessment:** Continuous assessment 60%; Examination 40%

## POSTGRADUATE PROGRAMMES

- 26PDFM - Postgraduate Higher Diploma in Family Medicine
- 15MANA - Master of Medicine (Anaesthesiology, Critical Care & Pain Management)
- 15MSPH - Master of Science in Physiology
- 15MANY - Master of Anatomy (By Thesis)
- 15MSPT - Master of Science in Pathology (By Thesis)
- 15MSMB - Master of Science in Medical Microbiology (By Thesis)
- 15DPSM - Doctor of Philosophy in medicine and surgery
- 15DSPH - Doctor of Philosophy in Physiology
- 15DPMM - Doctor of Philosophy in Medical Microbiology
- 15DPMB - Doctor of Philosophy in Medical Biochemistry

### Postgraduate Higher Diploma in Family Medicine

(26PDFM)

#### Aims and Objectives

The purpose of the Postgraduate Diploma in Family Medicine (Level 8) is to train and equip doctors with the appropriate knowledge and clinical skills to provide quality care in areas relevant to general practice/primary care. There has been a great national interest and need for a course that can provide doctors with additional skills and training in primary care, especially from Namibian graduates who trained outside the country. The Postgraduate Diploma will address this.

The rationale of this qualification is to improve and strengthen the primary health care platform to address health care needs in Namibia. Bridging the gap between the health care system and communities is of utmost importance in achieving health goals. The World Health Organization (WHO) has noted that “doctors with postgraduate training in Family Medicine or general practice” are an essential part of effective approaches to primary care. At a national level, the Ministry of Health and Social Services (MoHSS) has recognized the role that doctors with postgraduate training in Family Medicine can play in clinical governance and in improving the quality of care at district health and primary services. The MoHSS strategic plan notes that generalist doctors who are trained across multiple disciplines, can offer useful clinical leadership in health districts and posts for doctors with postgraduate training in Family Medicine are offered at a district level.

Programme coordinator: Dr Zelra Malan, - Email: [jrademeyer@unam.na](mailto:jrademeyer@unam.na)

#### Graduates who will complete the Postgraduate Diploma in Family Medicine will be able to fill the following careers:

- Competent clinicians
- Community advocates
- Critical thinkers
- Change agents
- Capacity builders
- Collaborators

This qualification may articulate into the Master of Medicine in Family Medicine or related cognate area of learning, provided other requirements are met. This qualification is fully aligned to both institutional policies and NQF requirements. Relevant stakeholders were involved in the development/transformation process and, endorsed this qualification to register on the NQF.

#### Holders of this qualification should be able to:

- Perform as competent clinicians,
- Perform as change agents who help lead improvement in the quality of care,
- Develop the capability of self and team members,
- Apply critical thinking to help the team make sense of evidence and health information,
- Apply the principles of community orientated primary care
- Develop and demonstrate a collaborative approach to working in a primary care team

Semester	Module Code	Module Name	Credits	Compulsory (C) / Elective (E)
S1/2	M5819FA	Learning in Primary Care Teams	20	C
S0	M5813FF	Clinical Primary Care	8	C
S1/2	M5819FD	Principles of Primary Care	20	C
S1/2	M5819FB	Primary Care Consultation	20	C
S1/2	M5819FC	Community Oriented Primary Care	20	C
S1/2	M5819FE	Clinical Governance in Primary Care	20	C

## COURSE DESCRIPTORS

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### M5819FA Learning in Primary Care Teams

Proposed NQF Level: 8                      Credits:20

#### Module Content

1. Illustrate the role of the diploma graduate as both learner and facilitator of other's learning
2. Practise relevant principles of adult education and learning theory
3. Formulate learning needs, develop a learning plan, and plan educational activities
4. Practice using reflection to aid learning
5. Facilitate small group learning
6. Engage in one-on-one teaching activities confidently
7. Provide and elicit effective feedback

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### M5813FF Clinical Primary Care

Proposed NQF Level: 8                      Credits:8

#### Module Content

1. Manage patients with undifferentiated problems in primary care
2. Respond effectively to the quadruple burden of disease
3. Provide ethical, legal, professional, and scientifically sound healthcare
4. Perform appropriate clinical, communication, and procedural skills
5. Provide comprehensive (preventative, promotive, curative, rehabilitative, palliative), coordinated and continuing care
6. Manage resources within the context of the multi-disciplinary team and the referral system towards optimal clinical care
7. Interpret and use evidence and guidelines to reflect on practice
8. Assist with clinically related administration

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### M5819FB Primary Care Consultation

Proposed NQF Level: 8                      Credits:20

#### Module Content

- Perform the tasks that should be achieved in a consultation
- Demonstrate the communication skills that can help achieve these tasks
- Generate a holistic assessment of a patient and express it as a 3-stage assessment
- Construct a genogram and compose a family assessment as part of a consultation
- Employ the brief behavior change counselling (BBCC model) to support lifestyle changes
- Demonstrate an approach to managing an ethical dilemma
- Demonstrate the principles of breaking bad news
- Evaluate, reflect on, and critique the consultation
- Demonstrate effective consultation and communication skills when faced with cultural and language barriers

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### M5819FC Community Oriented Primary Care

Proposed NQF Level: 8                      Credits:20

#### Module Content

1. Demonstrate the principles of community-oriented primary care
2. Identify and characterize a community within which your practice is situated
3. Evaluate the major health issues of that community
4. Perform a home visit related to an important health issue from the community.
5. Support a relevant group already involved in the community.
6. Design a basic intervention that would address one of the high priority health issues

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### M5819FE Clinical Governance in Primary Care

Proposed NQF Level: 8                      Credits:20

#### Module Content

- Support quality of care & performance of the local health system (private practice, PHC facility, district hospital) in line with policy and guidelines
- Conduct a Quality Improvement Cycle and partake in other clinical governance activities.
- Demonstrate to be a role model for change – people need to see the change in action (for a specific facility or service)
- Provide vision, innovation, and critical thinking
- Support aspects of corporate governance relevant to clinical care – able to influence planning and budgeting for resources

## G. Faculty of Health Sciences

☎ (264 61) 206 5015 ☎ (+264 61) 206 5093 ✉ [lmuraranganda@unam.na](mailto:lmuraranganda@unam.na) ✉ Private Bag 13301, Windhoek, Namibia

### SCHOOL OF MEDICINE

#### OFFICE OF THE ASSOCIATE DEAN

☎ (264 61) 206 5015 ☎ (+264 61) 206 5093 ✉ [lmuraranganda@unam.na](mailto:lmuraranganda@unam.na) ✉ Private Bag 13301, Windhoek, Namibia

### G.1 POSTGRADUATE QUALIFICATIONS OFFERED BY THE SCHOOL OF MEDICINE

The Faculty of Health Sciences: School of Medicine may award the following postgraduate qualifications:

Qualification Code	Qualification Name Period	Study
15MSPH	Master of Science in Physiology (by Thesis)	2
15MANA	Master of Medicine	4
15DPSM	Doctor of Philosophy	3

### G.2 MASTER OF MEDICINE (ANAESTHESIOLOGY, CRITICAL CARE AND PAIN MANAGEMENT) 15MANA

Department	Anaesthesiology, Critical Care and Pain Medicine
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#### G.2.1 Purpose and Rationale of the Qualification

**The purpose** of the MMed in Anaesthesiology, Critical Care and Pain Management is to equip Medical Practitioners with appropriate knowledge and clinical skill for safe, effective administration of anaesthesia, adequate control of pain and optimal provision of critical care services as specialist Anaesthesiologists.

**The rationale** of this qualification emanates from the paucity of qualified Anaesthesiologists in most hospitals in Namibia resulting in unmet surgical and anaesthetic service.

The Ministry of Health and Social Services is unsuccessfully trying to recruit Anaesthesiologists beyond the borders of Namibia. Currently, there is no in-country training of Anaesthesiologists to improve the number of specialists in this field.

In Namibia, one of the pillars of the Harambee Prosperity Plan is the reduction of Maternal and Infant mortality rates. The University of Namibia would contribute enormously to this aspect of the plan by training this cadre of anaesthesiologists.

#### G.2.2 Exit Outcomes

Holders of this qualification will be able to:

- Demonstrate analytical, interpretational, scientific writing, problem solving, managerial, planning, integration, and evaluation and presentation skills.
- Exhibit and apply in clinical practice the *knowledge* required of a Specialist Anaesthesiologist.
- Exhibit and practice clinically the *skills* required of a Specialist Anaesthesiologist in an Intensive Therapy Unit.
- Exhibit and practice the application of the *attitudes* and competences required of a professional Anaesthesiologist (including organizational, management and leadership skills as

well as applying strategies for health promotion, prevention of ill-health and co-morbidities).

- Practice regional, local and general anaesthesia in complex situations
- Teach, train and supervise trainees in Anaesthesiology.
- Appraise clinical research critically and conduct clinical audits/high impact research.

### **G.2.3. Criteria for Admission**

- Prospective students must be in possession of a level 8 UNAM MBChB degree or equivalent from any other accredited institution with an average mark of at least 60% and must have completed **30 months** of clinical practice that must include at least **24 months** in a recognised supervised internship programme.
- A prospective student must be registered with the Health Professions Council of Namibia (HPCNA) as a Medical Practitioner.
- Prospective students whose medical education was not in English shall provide proof of proficiency in spoken and written English e.g. TOEFL ( $\geq 75$ ) or IELTS academic version only (overall score of at least 7.5), not more than 2 years old at the time of application.
- Successful completion of the UNAM Level 8 Postgraduate Diploma in Anesthesiology and registration with Health Professions Council of Namibia (HPCNA) and employment by the Ministry of Health & Social Services of Namibia (MoHSS) or supernumerary employment with the MoHSS, will be an advantage.

All prospective students will be interviewed by the Postgraduate Admissions Committee of the School of Medicine. (Proof of practice in Anaesthetic unit/department for at least six months will be desirable).

### **G.2.3 Articulation Options**

A student may opt to truncate the MMed (Anaesthesiology, Critical Care and Pain Management) after the first integrated (Part I) examination, but will exit with Postgraduate Diploma in Anaesthesiology.

The MMed (Anaesthesiology, Critical Care and Pain Management) may serve as an entry point to sub-specialisations (Pain Management, Paediatric Anaesthesiology, Cardiac Anaesthesiology, Neuro-anaesthesiology), post-doctoral research projects and programmes (Fellows, PhD, MD, DSc) in the relevant field.

### **G.2.4 Mode of Delivery**

The MMed (Anaesthesiology, Critical Care and Pain Management) is a full-time programme with a modern integrated spiral curriculum. This competency based programme will combine intensive teaching blocks with simulations, clinical training, webinars and research. Furthermore, intensive Anaesthesiology (coupled with Surgery) camps will provide opportunities for students to collect the required number of cases, while it will simultaneously assist the Ministry of Health and Social Services to alleviate the pressing needs in the field.

Teaching will take place at designated teaching hospitals and the Health Sciences Campus of the University of Namibia.

The delivery is mostly based on adult learning principles with training spread over a period of 48 months.

Modules are staggered with each module providing the basis for the next module. While students will be allowed to start with the subsequent module without having passed the previous one, the module must be passed before the student will be allowed to take the examination of the subsequent module.

Students must pass the first integrated Part I examination before embarking on the second 24 month training period.

By definition, a spiral curriculum is a flexible model where the exact length of each individual module will be determined by the availability of cases and training opportunities. A particular module may thus span more than one calendar year.

### **G.2.5 Duration of study**

The programme cannot be completed in less than 4 years. The maximum duration of the programme is 5 years.

### **G.2.6 Assessment Criteria**

Being a competency based programme, the final mark of each module will consist of continuous assessment (60%) and a module examination (40%). Continuous assessment will include amongst others, an externally moderated student portfolio, case logbooks and tests.

A minimum continuous assessment mark of 50% will be required to qualify for each module examination. In addition, all previous modules must be passed before the student is allowed to take the modular examination in any given module.

For all modules, a pass mark of 50%, as well as a subminimum mark of 50% for the module examination is required.

Students will qualify for a supplementary if they fail the module examination irrespective of their mark in this examination.

Two integrated Part I and Part II examinations will take place – the first after completion of the first seven modules, and the second after completion of all the modules.

A minimum mark of 50% is required to pass these final integrated Part I and Part II examinations consisting of theory papers, OSCE's and semi-structured oral assessments.

Students who fail to obtain this pass mark, will be allowed to take a supplementary examination after a remedial period of at least one month. The supplementary examination will consist of all components of the regular examination irrespective of the performance of the student in the individual components during the regular examination.

### **G.2.7 Minimum requirements for re-admission into the Program.**

A student will not be readmitted into the MMed if she/he has failed the respective integrated Part I examinations on third attempt (i.e. three attempts to clear both examinations, not three attempts per examination). Please note that the regular examination and supplementary examination is considered as one attempt.

### **G.2.8 Advancement and progression rules**

A student will advance to the second part (year 3) of the MMed only after passing the first integrated Part I examination. Other than this, there is no year to year advancement as modules in a spiral curriculum are flexible and could span a calendar year.

### **G.2.9 Maximum number of credits per year**

Not applicable – see above.

### G.2.10 Requirements for Qualification Award

The MMed (Anaesthesiology, Critical Care and Pain Management) will be awarded to the candidate who has successfully passed all the prescribed modules (694 credits), the two integrated examinations and has completed the one year extended clinical training in anaesthesiology (both core and electives).

### G.2.11 Career Opportunities

- The MMed (Anaesthesiology, Critical Care and Pain Management) is registrable as a specialist qualification by the Health Professions Council of Namibia (HPCNA).
- Graduates could work as specialists in various areas of anaesthesiology, critical care and pain medicine in public and private hospitals
- Graduates will further be equipped to become researchers in the field of anaesthesiology, critical care and pain medicine
- Graduates could be employed as academic staff in the School of Medicine

### G.2.12 Programme Director/Coordinator

This programme will be implemented in the School of Medicine and will be led by the Head of Department of Anaesthesiology, Critical Care and Pain Medicine. For the interim it will be coordinated by:

Dr. Ambrose Rukewe MBBS, DA, MSc, FMCA, Cert. Regional Anes

Associate Professor of Anaesthesiology.

Email: arukewe@unam.na

Office number: +264 61206 5038

The Doctor of Philosophy in Engineering will be offered in compliance with the general regulations and guidelines for postgraduate studies at the University of Namibia as contained in this Prospectus. Refer to **Regulations for Postgraduate Studies** in **Section B of this Prospectus**.

### G.2.13. Summary Table for all Modules in the Programme:

Module code	Module name	NQF level	Credits	Total hours	Pre-requisite
<b>PART 1</b>					
ASB5989	<i>Basic Concepts and Practice of Anaesthesiology</i>	9	45	450	
ASM5989	<i>Anaesthesiology and Trauma</i>	9	45	450	
ASA5989	Comorbidities and Peri-operative Care	9	45	450	
ASH5989	Pathophysiology and Higher Care of Sick Patients	9	45	450	
ASP5989	<i>Anaesthesiology in Pregnancy</i>	9	45	450	
ASC5989	<i>Anaesthesiology and the Child</i>	9	45	450	
ASH5999	Clinical Research Methodology	9	20	200	ASH5999
<b>TOTAL PART 1</b>			<b>290</b>		
<b>PART 2</b>					
UAE 5819	<i>Academic Writing for Postgraduate Students.</i>	8	(24)*	4h/week for 14 weeks	
ASA5999	Advanced Anaesthesiology I	9	60	600	
ASP5999	Pain in Clinical practice.	9	60	600	
ASM5999	Management in Anaesthesiology Practice	9	40	400	
ASC5999	Clinical Training Core	9	30	300	
	Advanced Anaesthesiology II		40	400	
ASB5999	Clinical Training Elective	9	30	300	
AST5999	MMed (Anaesthesiology) Thesis	9	120	1200	
<b>TOTAL PART 2</b>			<b>380</b>		
<b>TOTAL</b>			<b>694</b>		

# Prospectus 2024