

UNIVERSITY OF NAMIBIA

FACULTY OF HEALTH SCIENCES

**SCHOOL
OF
MEDICINE**

PROSPECTUS 2010



NOTE

This Prospectus is only valid for 2010 as regulations and syllabi may be amended for 2011. 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 October 2009.

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 2010.

This Prospectus must be read in conjunction with the *General Information and Regulations Prospectus 2010*.

ACADEMIC CALENDAR

FIRST SEMESTER

11 January	University opens
21 January	Lecturers resume office duties
18 Jan – 19 Febr	Registration - Dist Teaching (CES) (Last day for Late Reg: 24 Febr)
02 - 19 February	Registration - Full & Part time (Last day for Late Reg: 24 Febr)
22 February	Lectures commence for FIRST SEMESTER
06 April	EASTER BREAK starts
12 April	Lectures resume after Easter Break
11 June	Lectures end for FIRST SEMESTER
15 June	First Opportunity Examinations commence (Semester I modules)
02 July	First Opportunity Examinations end (Semester I modules)
02 July	End of 1st Semester
12 – 16 July	Mid-year Recess

SECOND SEMESTER

26 July	Lectures commence for SECOND SEMESTER
13 September	SPRING BREAK starts
20 September	Lectures resume after Spring Break
05 November	Lectures end for SECOND SEMESTER
09 November	First Opportunity Examinations commence (Sem II & Double modules)
26 November	First Opportunity Examinations end (Sem II & Double modules)
26 November	End of 2nd Semester
15 December	Academic Year ends & University closes (until 10 January 2011)

DUE DATES FOR THE 2010 ACADEMIC YEAR

(i) **GENERAL**

Last day for application of retention of continuous assessment mark	19 February
Last day for application for exemption(s).....	19 February
Last day for Late Registration (<i>Late fee payable</i>).....	24 February
Last day for approval of exemption(s)	24 February
Last day for approval of retention of continuous assessment mark	24 February
Last day for approval of module(s) & qualification changes.....	24 February
Last day to change Examination Centres at Regional Centres (Semester I modules).....	30 April
Last day to submit outstanding documentation	30 July
Last day for appeals (First Opportunity Examinations) (Semester I)	30 July
Last day to change Examination Centres at Regional Centres (Semester II modules – 1 st & 2 nd Opportunity Examinations)	30 April
Last day to cancel enrolment	01 October
Last day for submission of Theses and Dissertations for examination.....	30 April

(ii) **CANCELLATIONS**

Semester I modules

Last day to cancel Semester I modules.....07 May

Semester II modules

Last day to cancel Semester II modules.....01 October

Double modules (A double module normally extends over one academic year)

Last day to cancel Double modules.....01 October

(iii) **FINANCE**

Semester I modules

Last day to cancel with 100 % credit
 12 March |

Last day to cancel with 50 % credit
 23 April |

Semester II modules

Last day to cancel with 100 % credit
 06 August |

Last day to cancel with 50 % credit
 03 Sept |

Double modules (a double module normally extends over one academic year)

Last day to cancel with 100 % credit
 12 March |

Last day to cancel with 50 % credit
 04 June |

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STRUCTURE AND PERSONNEL

OFFICE OF THE DEAN

Dean	Vacant
Deputy Dean	Vacant
Faculty Officer	Mrs M J Marthinussen
Faculty Secretary	Vacant
Typist	Vacant

General enquiries regarding the school of Medicine and the qualifications offered by the School should be directed to:
Mrs Sanet Marthinussen
The Faculty Officer
School of Medicine
University of Namibia
Private Bag 13301
WINDHOEK

Telephone: +264-61-2063705
E-mail: smarthinussen@unam.na

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

ACADEMIC DEPARTMENTS

DEPARTMENT OF ANATOMY

((+264 61) 2063626 7 (+264 61) 206 3922 : gwessels@unam.na * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer Dr. Q. Wessels: PhD (Anatomy) University of Pretoria; MSc (Anatomy) University of Pretoria; BSc Hons (Anatomy) University of Pretoria; BSc (Medical Sciences) University of Pretoria; N.Dipl. Medical Technology (Tshwane University of Technology)

DEPARTMENT OF PHYSIOLOGICAL CHEMISTRY AND PHARMACOLOGY

((+264 61) 2063626 7 (+264 61) 206 3922 : cjacobson@unam.na * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Associate Professor: Prof. C. Jacobson: PhD (Neuroscience) McGill University; MSc (Biology) University of Waterloo; BSc (Microbiology) McGill University

Lecturer Dr. J A Sheehama: PhD Medical Biochemistry and Medical Microbiology (Kazan State Univ & Kazan State Medical Academy; Russia); Masters in Molecular Biology (Kazan State Univ Russia)

DEPARTMENT OF PATHOLOGY

((+264 61) 2063626 7 (+264 61) 206 3922 : * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

DEPARTMENT OF MICROBIOLOGY

((+264 61) 2063626 7 (+264 61) 206 3922 : * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

DEPARTMENT OF INTERNAL MEDICINE

((+264 61) 2063626 7 (+264 61) 206 3922 : * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

DEPARTMENT OF SURGERY

((+264 61) 2063626 7 (+264 61) 206 3922 : * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

DEPARTMENT OF COMMUNITY MEDICINE

((+264 61) 2063626 7 (+264 61) 206 3922 : mgoraseb@unam.na * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Dr. M Goraseb: Masters in Public Health Univ of Oklahoma, USA; Med Degree
Selisian (Med School Poland); Dipl. in Nursing (College of Nursing, Windhoek)

DEPARTMENT OF OBSTETRICS AND GYNAECOLOGY

((+264 61) 2063626 7 (+264 61) 206 3922 : * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

DEPARTMENT OF PAEDIATRICS

((+264 61) 2063626 7 (+264 61) 206 3922 :

* Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

DEPARTMENT OF PSYCHIATRY AND BEHAVIOURAL SCIENCES

((+264 61) 2063626 7 (+264 61) 206 3922 : hnaude@unam.na * Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Professor: Prof. H. Thirion Naudé: D.Ed. Psych (UNISA); MED Psych (University Stellenbosch); BED Hons Psych (University Stellenbosch); BA (Psych) (University Pretoria); HDE Post graduate (University Pretoria); IAC (Institute of Administration and Commerce of Southern Africa); N.Dipl. Computer Science (Technicon Stellenbosch).

Lecturer Prof. H. Thirion Naudé: D.Ed. Psych (UNISA); MED Psych (University Stellenbosch); BED Hons Psych (University Stellenbosch); BA (Psych) (University Pretoria); HDE Post graduate (University Pretoria); IAC (Institute of Administration and Commerce of Southern Africa); N.Dipl. Computer Science (Technicon Stellenbosch)

DEPARTMENT OF RESEARCH AND INSTITUTIONAL DEVELOPMENT

((+264 61) 2063626 7 (+264 61) 206 3922 :

* Private Bag 13301, Windhoek, Namibia

Head of Department: Vacant

Lecturer: Vacant

SCHOOL OF MEDICINE PREAMBLE

The key mission of the School of Medicine is to prepare academically and professionally qualified medical doctors whose skills and abilities are nationally, regionally and internationally recognized. Through this training the School of Medicine aims at the attainment of a level of health and social wellbeing by all Namibians that will enable them to lead economically and socially productive lives. This goal is guided by the following principles – equity, accessibility, availability, community involvement, sustainability, inter-sectoral collaboration and quality of medical care.

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.

SCHOOL OF MEDICINE OATH

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 honor 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.

DEMEANOR AND DRESS CODE

The following is applicable to both students and lecturers within the School of Medicine:

The mode of dress of all medical students must be appropriate and professional. A professional image increases credibility and safety, while fostering patient trust, respect, and confidence. Non-adherence to the dress code might have negative effects on patient care and could diminish the reputation of the School of Medicine, as well as the aesthetic of the profession and affiliated hospitals and clinics. While studying medicine under The University of Namibia, all medical students and staff members are expected to conform to the dress requirements of both UNAM as well as the supervisory clinical department.

Grooming Standards:

- Practice daily oral hygiene;
- Bathe daily and use effective deodorant;
- Heavily scented toiletries should be avoided;
- Hair (including facial hair) should be clean and neat. Beards, sideburns, and mustaches are not allowed, even though it might be well-groomed and closely trimmed. Dreadlocks are prohibited, and any hair extensions shall be neatly fastened with an inconspicuous rubber band. Hair gel is allowed, however overuse should be avoided in order to maintain a neat and clean appearance. No afro styling or "teasing" of hair is allowed. Hair may not be dyed unnatural colors;
- Shoulder length or longer hair shall be fastened (e.g. in a pony tail);
- Shoulder length or longer hair for men is not permitted;
- Hair must be styled in such a way that it does not fall or hang across the face or eyes;
- Hair must be cut or pulled back so that the ears are not covered;
- Nails should be conservative in length and neatly manicured. Artificial nails (e.g. acrylics, etc.) are not allowed due to safety concerns. Only a clear natural coating of nail polish is allowed - no flashy colors (e.g. black, red, brown purple, etc.);
- Ladies' make-up should be conservative and in good taste. Lipstick must be natural with no prominent flashy color (e.g. bright red, purple, blue, etc.). No "glitter" make-up is allowed;
- No "body-paint" or "body-glitter" is allowed;
- Tattoos are prohibited and tattoos prior to admittance into the School of Medicine shall be covered up.

General attire:

- Jewelry and piercing are limited to a wrist-watch and single small ear-studs for women (no multiple ear-studs); Ear-studs may not exceed 3 mm in diameter; Circular earrings are prohibited due to safety concerns; No more than one ear-stud per ear is allowed; Earrings and body piercing of any kind are prohibited for men;
- All students must have one (1) white doctor's coat (knee length), and one (1) white lab-coat; The School of Medicine ordered a specific design from the manufacturers; hence, please do not purchase these items before being informed to do so;
- White doctor's coats should be worn at all times during lectures, on campus and while in appropriate patient care settings; Lab-coats must be worn during practical laboratory work; Coats must be clean and neatly ironed at all

times; Coats should be regularly laundered for infectious control; at least two (2) buttons must be fastened at all times to prevent the coattails from freely flowing, which could inhibit both appearance and safety;

- No sunglasses are permitted indoors, unless prescribed by a physician;
- No hats or any headgear is allowed;
- No earphones (e.g. Mp3 players, walkmans, disk-mans etc.) may be "worn" while dressed as a medical student; this includes off and on campus.

Male attire:

- Men are required to wear neat and clean trousers that cover the ankles; no shorts or ¾ pants are allowed; trousers shall not be tight fitting or baggy; the trousers should be of a single color, but not flashy (e.g. bright red, yellow, etc.); no visible branding (e.g. Billabong, Nike, Reebok, etc.) is allowed; denim trousers are permitted, but should be neat and clean - no bleach or stained areas or tattered material is allowed; spandex, leggings, athletic wear, and sweatpants are prohibited;
- Belts are permitted, but should be leather or synthetic leather and with an inconspicuous buckle; no canvas belts are allowed;
- A clean and neatly ironed button-shirt must be worn with a professional neck-tie (together with the appropriate coat – pending the setting); during the summer season, short-sleeved shirts are allowed, but should have a collar, and a neck-tie should always be worn; all shirts must have a single overall color; a striped or checkered shirt is allowed, but should be professional at all times; the shirt may not have any decals or branding on it; the neck-tie must fit the attire and may not have any branding or decals;
- Shoes should be closed toed and clean in appearance; flip-flops are not permitted; shoes must be neatly polished and untarnished; white tennis shoes are only appropriate with scrubs, unless hospital policy prohibits this; no point-toed shoes are allowed (latest long point-toed fashion);
- Proper undergarments shall be worn and not visible;
- Appropriate socks must be worn with shoes at all times.

Female attire:

- Revealing clothing is not permitted;
- Women may wear neat and clean trousers that cover the ankles; no shorts or ¾ pants are allowed; women should refrain from wearing flashy colors that inhibit professional appearance; no visible branding or decals are permitted; denim trousers are permitted, but should be neat and clean - no bleach or stained areas or tattered material is allowed; spandex, leggings, athletic wear, and sweatpants are prohibited;
- Skirts are permitted, but shall be of knee-length; the skirt must be of A-type design due to safety and professional concerns; no free-flowing cloth is allowed; ankle-length dresses and skirts are not allowed due to safety concerns;
- Shirts and blouses must cover the shoulders; no visible decals or branding is permitted; no revealing cleavage is allowed; shirts shall not be overly tight fitting; shirts must be of an opaque material to prevent undergarments to be seen;
- Proper undergarments shall be worn and not visible; no bra-straps may be visible at any time;
- Appropriate socks and hosiery or knee-high stockings must be worn;
- Shoes should be closed toed and clean in appearance (e.g. "kidluv"-style is preferred); flip-flops are not permitted; heels should not be higher than 3 cm; stilettos are prohibited; white tennis shoes are only appropriate with scrubs, unless hospital policy prohibits this; point-toed shoes are not allowed (latest long point-toed fashion).

Medical students need to be distinctive and dignified, yet not too imposing when attending to patients; patients must be able to identify with the student doctor, therefore medical students' appearance should always be neat, tidy and respectable. A white coat has come to be accepted as a doctor's attire and therefore it becomes easy for the patient to recognize a doctor at a hospital as opposed to a paramedic. The coat also conceals the medical student's personal style of dressing. A well buttoned up coat also prevents unnecessary revealing of the body, particularly in the case of women physicians, while examining a patient. Exotic or large pieces of jewelry, fancy tattoos or frilly sleeves need to be avoided by medical students so that patients could view them as serious professionals.

Courtesy:

- Always greet others in hallways, elevators, and at work stations with a kind word or smile;
- Assist people in finding their way;
- Refrain from loudness (talking loud, laughing, shouting etc.) at all times, even outdoors;
- All cellular phones must be switched off during lectures, lab-work, clinical and hospital attendance;
- Do not interrupt someone during conversation or while lecturing;
- Make special arrangements if you are going to be late, or have to leave early.

Respect:

- Always respect others' privacy and dignity;
- Knock and wait for a response before entering areas;
- Discuss confidential or sensitive information about patients only with those having a valid need to know and do so privately, never in public places. Do NOT discuss patients with your family and friends, or with fellow students not involved with the patient;
- Respect the hospital staff and patients (even if you are not involved with them);
- Be tolerant of cultural differences.

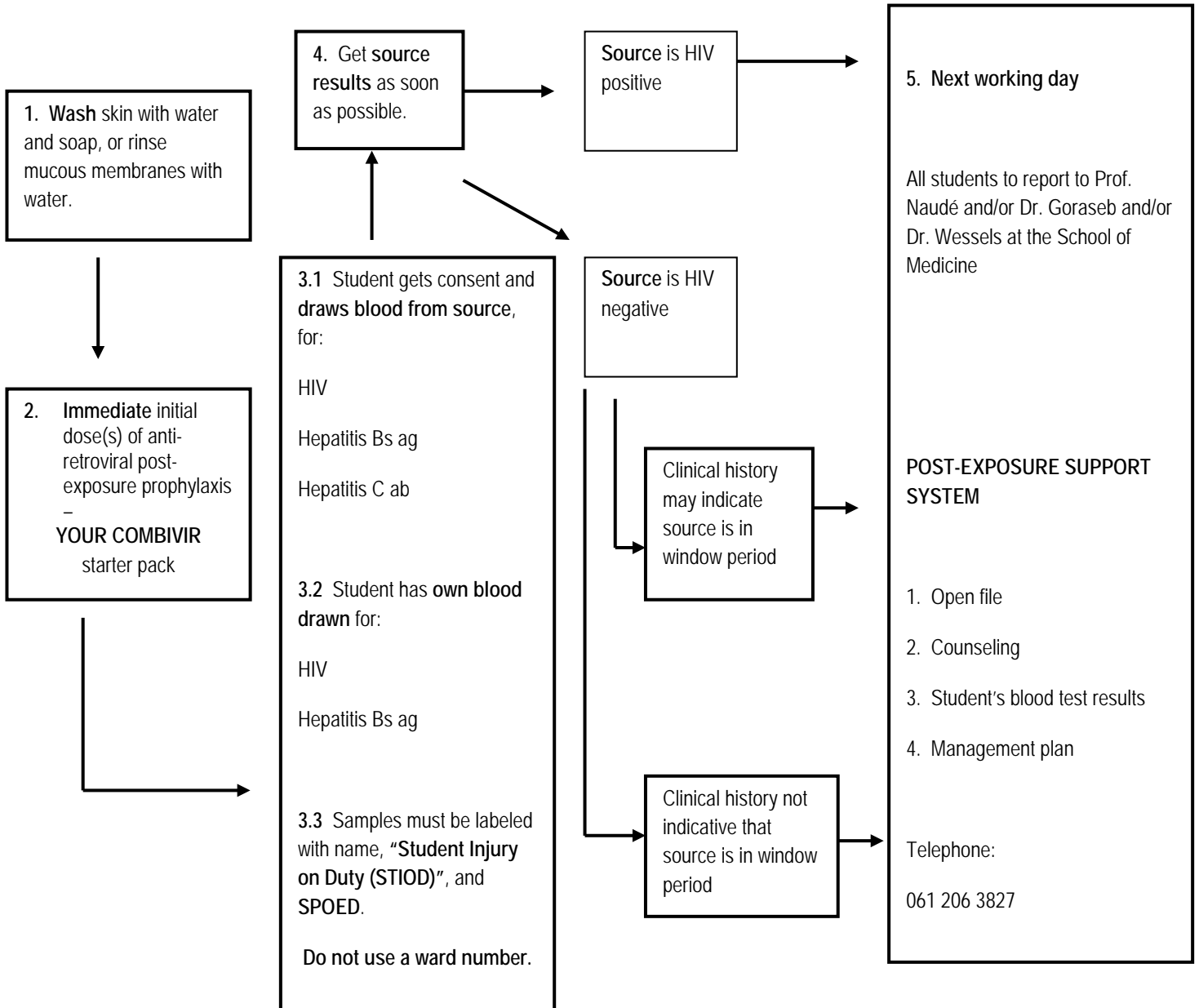
Professionalism:

- Always present a positive image;
- Wear name badge or name tag so that name is clearly visible at all times - name tags will be provided by the School of Medicine;
- Limit eating, drinking, and smoking to designate areas and at appropriate times; do not eat in lecture-halls or clinics/hospitals; no chewing of gum is allowed;
- Avoid personal conversations with co-workers when providing patient care;
- Make no inappropriate or negative comments about patients, co-workers, or physicians.

STUDENT INJURY ON DUTY (STOID) AND SPOED POLICY

1. The medical student should have his/her **COMIVIR** starter pack with him/her **at all times**;
2. A prescription for the COMBIVIR starter pack will be made available via the School of Medicine, and students' UNAM accounts will be credited with approximately N\$60.00;
3. In order to document an incident fully, we need to submit the medical student's blood and the patient's blood for testing simultaneously. If the patient is unable to give consent, please approach the superintendent of the hospital or clinical setting to give consent for the patient's HIV test;
4. Adequate post-exposure counseling might not be available after hours, but all incidents must be reported immediately and arrangements for interim counseling will be made;
5. Therefore, immediately take your prophylaxis, call your supervising lecturer, take your blood to the laboratory, and make an appointment with your supervising lecturer(s) at the School of Medicine to discuss your results. This will make no difference to the immediate decisions that you should take on the basis of the exposure;
6. This is provided that the medical student takes his/her COMBIVIR **immediately** and then use the **action tree** (see card provided) to do what is required;
7. In the case of an incident at the start of a long weekend, when 72 hours of COMBIVIR may not be sufficient supply, e.g. an incident on the Thursday night before the Easter weekend, would require 96 hours of COMBIVIR before the next working day, the student must phone the supervising lecturer and the doctor-in-charge at the Katutura or Central Hospital Emergency Unit to help organize an extra 36 hours of COMBIVIR;
8. **AS SOON AS POSSIBLE, PLEASE REPORT ALL INCIDENTS TO THE SCHOOL OF MEDICINE, REGARDLESS OF PATIENT STATUS, DEGREE OF RISK, OR CHOICE TO RATHER SEEK HELP IN THE PRIVATE SECTOR.**

STUDENT INJURY ON DUTY - NEEDLE STICK OR SPLASH



REGULATIONS

STUDENT ADMISSION

COMMITTEE ON ADMISSIONS

Admission to the School of Medicine shall be administered by a Committee on Admissions, which shall be composed of members of the School, a representative of the Medical and Dental Board of Namibia, the Administrative Officer in charge of admissions to the School, and the Registrar of the University. All committee members shall be appointed by the Dean for three (3) years and may be reappointed for additional terms. The Committee shall have the authority to select students entering the School on condition that they fulfill the *minimum* admission requirements as set out below. The School shall exercise the responsibility of reviewing the requirements for admissions and recommending any revisions to Senate for approval.

ADMISSION CRITERIA

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

ADMISSION REQUIREMENTS

- (i) To apply for the MBChB degree, a candidate must hold a valid NSSC (Namibian Senior Secondary Certificate) or any other equivalent qualification with at least **35 points** on the UNAM scale with a **grade 2** or better on higher level for **Mathematics and Physical Sciences**, and a **grade B** or better on ordinary level for **Biology and English** (*please refer to the scale used by the School of Medicine to calculate the UNAM score*);
OR
- (ii) To apply for the MBChB degree, a candidate must have successfully completed the entire first year BSc curriculum with **at least 60% in each of the Mathematics, Chemistry and Physics modules**;
OR
- (iii) To apply for the MBChB degree, a candidate must have successfully completed a **relevant¹ degree** program such as Pharmacy or Dentistry.

ESSAY WRITING

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

LETTERS OF RECOMMENDATION

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

INTERVIEWS

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

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

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

UNAM EVALUATION SCALE:

POINTS	NSSC		CAMBRIDGE		SENIOR CERTIFICATE		GCE	
	H	O	HIGCSE	IGCSE	HG	SG	A-level	O-level
10							A	
9	1		1		A		B	
8	2	A*	2	A*	B		C	
7	3	A	3	A	C	A	D	A
6	4	B	4	B	D	B	E	B
5		C		C	E	C	N/O/Subsidiary	C
4		D		D	F	D		D
3		E		E		E		E
2		F		F		F		F
1		G		G				G

DURATION OF STUDY

The minimum duration for the Bachelor of Medicine and Bachelor of Surgery (MBChB) degrees is five years. The MBChB degrees must be completed within six (6) years of full-time study.

EXEMPTIONS:

UNAM will give exemptions for equivalent modules taken at other tertiary institutions but the exemptions shall not exceed 50% of the modules in the MBChB degree program.

BACHELOR OF MEDICINE AND BACHELOR SURGERY

15BMCH

CURRICULUM REQUIREMENTS

BASIC STRUCTURE OF THE DEGREE

The curriculum for the degrees of Bachelor of Medicine and Bachelor of Surgery degrees (Medicinae Baccalaureus et Chirurgiae Baccalaureus) MBChB consists of five years of Medicine training spread over 10 semesters followed by a 2 year post-qualification internship period jointly supervised by the School of Medicine and the Medical and Dental Professions Council of Namibia, a statutory body responsible for pre-registration of medical students and registration and certification of medical doctors.

The 10 semesters of the MBChB degrees have been structured using the UNAM degree format, while satisfying accreditation requirements of the Medical and Dental Professions Council of Namibia. At the UNAM School of Medicine, a semester is made up 16 weeks of lectures and 2 weeks of examinations, resulting in a 18 week semester. In this curriculum, modules are offered over one to seven semesters before a final, comprehensive examination is conducted. For each semester that a module is offered at 4 lecture hours plus 2 hours of tutorial (or 3 hours of practical) per week for 16 weeks, 20 credits will be accumulated. The credit value of modules thus range from 20 credits to 140 credits depending on the module. The total number of credits for the degree is 888.

EXAMINATION REGULATIONS

For detailed examination and promotion rules see the General Information and Regulations Prospectus. The Continuous Assessment Mark (CA mark) will count 40% towards the final mark while the examination mark will contribute 60%. A candidate will be eligible to write the examination if he/she has obtained a Continuous Assessment Mark of 50%. However, the regular UNAM regulations will apply to the 4 UNAM core modules.

At the end of each semester there shall be a written, practical/clinical and/or oral examination which shall contribute to the 40% CA for the module. The oral and clinical examinations shall be administered by a team of examiners at the end of every semester.

At the end of each module, there shall be a final composite examination covering the content of all the modules that constitute that module written on one sitting. There shall be an oral examination to be administered by a team of examiners as part of the composite final examination in every module. The written, practical/clinical and oral examinations shall together constitute the 60% examination mark for the particular module.

In the clinical years (years 3-5) students are required to pass the clinical examination in addition to passing the written examinations. Students who pass the written component of the examination but do not pass the clinical examination/practical examinations are deemed to have failed the module.

ACADEMIC ADVANCEMENT RULES

First Year to Second Year of Medicine

A student must pass all the first year modules to be eligible for registering for the Second Year of Medicine.

Second Year to Third Year Medicine

A student must pass all the second year modules to be eligible for registering for the Third Year of Medicine.

Third Year to Fourth Year Medicine

A student must pass all the third year modules to be eligible for registering for the Fourth Year of Medicine.

Fourth Year to Fifth Year Medicine

A student must pass all the fourth year modules to be eligible for registering for the Fifth Year of Medicine.

Fifth Year to Internship

A student must pass all the fifth year modules before proceeding to the Internship.

RE-ADMISSION REGULATIONS

A student shall only be allowed to repeat a module once. Failure to clear the module after repeating it once shall result in the discontinuation of the studies. The student shall be allowed to reapply to register for the failed year after a mandatory two year break.

GRADUATION

A student must pass/complete the entire curriculum as prescribed before graduation.

CURRICULUM COMPILATION

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

Year 1			
Semester 1		Semester 2	
MBSA1533	Anatomy	MBSA1533	Anatomy
MBSP1533	Physiology	MBSP1533	Physiology
MBSB1522	Biochemistry	MBSB1522	Biochemistry
MBSC1533	Behavioral Sciences and Primary Health Care	MBSC1533	Behavioral Sciences and Primary Health Care
ULCE3419	English Communication and Study	ULEA3419	English for Academic Purposes
UCLC3409	Computer Literacy	UCSI3409	Contemporary Social Issues

Year 2			
Semester 3		Semester 4	
MBSC1533	Anatomy	MPCP4625	Pathology
MBSP1533	Physiology	MCMM4770	Internal Medicine
MPCM4625	Medical Microbiology	MPCM4625	Medical Microbiology
MBSC1533	Behavioral Sciences and Primary Health Care	MCMR4770	Independent Research Studies

Year 3			
Semester 5		Semester 6	
MPCP4625	Pathology	MCMC5637	Community Medicine
MPCM4625	Medical Microbiology	MCMP6627	Pharmacology
MCMM4770	Internal Medicine	MCMS6627	Psychiatry
MCMR4770	Independent Research Studies	MCMR4770	Independent Research Studies
MCMC5637	Community Medicine	MCMS6750	Surgery
		MCMM4770	Internal Medicine

Year 4			
Semester 7		Semester 8	
MCMM4770	Internal Medicine	MCMM4770	Internal Medicine
MCMR4770	Independent Research Studies	MCMR4770	Independent Research Studies
MCMS6750	Surgery	MCMS6750	Surgery
MCMS6627	Psychiatry	MCMP8630	Pediatrics
MCMP6627	Pharmacology	MCMO8630	Obstetrics and Gynecology
MCMC5637	Community Medicine		

Year 5			
Semester 9		Semester 10	
MCMO8630	Obstetrics and Gynaecology	MCMO8630	Obstetrics and Gynaecology
MCMP8630	Pediatrics	MCMP8630	Pediatrics
MCMM4770	Internal Medicine	MCMM4770	Internal Medicine
MCMR4770	Independent Research Studies	MCMR4770	Independent Research Studies
MCMS6750	Surgery	MCMS6750	Surgery

THE SYLLABI

ENGLISH COMMUNICATION AND STUDY SKILLS

ULCE3419

NQF Level	4
Contact hours	4 Contact hours per week for 14 weeks
Credits	16
Assessment	Continuous 60%; Examination 40%: (1 x 3 hour paper)

Pre-requisites None

Module Description: This module is aimed at assisting students in the development of their reading, writing and speaking and listening skills, in order to cope with studying in a new academic environment and in a language which may not be their first language. The module also focuses on study skills that students need throughout their academic careers and beyond. The module serves as an introduction to university level academics, where styles of teaching and learning differ from those at secondary schools in that more responsibility is placed on the student. The module therefore, focuses on the skills that students need throughout their academic careers and beyond.

Exit Learning Outcomes:

Upon completion of this module, students should be able to:

- Apply effective reading skills
- Employ effective writing skills
- Demonstrate general speaking skills
- Demonstrate general listening skills
- Demonstrate effective study skills

ENGLISH FOR ACADEMIC PURPOSES

ULEA3419

NQF level 4
Contact hours 4 Contact hours per week for 14 weeks
Credits 16
Assessment Continuous 60%; Examination 40% (1 x 3 hour paper)
Prerequisites None

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

Exit Learning Outcomes:

Upon completion of this module, the students will be able to:

- Apply academic and formal writing conventions within the context of their studies
- Integrate advanced reading strategies in reading an academic context
- Employ oral and presentation skills in an academic context
- Employ academic listening techniques in an academic context

CONTEMPORARY SOCIAL ISSUES

UCSI3429

NQF 4
Contact Hours 2 Contact hours per week for 14 weeks
Credits 8
Assessment Continuous 50%, Examination 50% (1 x 2 hour paper)

Prerequisite None

Module Description: The module raises awareness on the need for a personal, national and global ethics. The main objective of the course is to help students reflect on the social moral issues; to discover themselves in a learner-centered, contextual, religious and life related setting. It also stimulates students' critical thinking and help them to appreciate their values, standards and attitudes. Furthermore it orientates students with regards to the epidemiology of HIV/AIDS; the prevalence of the disease in Namibia, Africa and Internationally. It also informs students on the psycho social and environmental factors that contribute to the spread of the disease, the impact of HIV/AIDS on their individual lives, family and communities at large. The unit further seeks to enhance HIV/AIDS preventive skills among students by means of paradigm shift and behaviour change and also to impart general introductory knowledge on gender, to make students aware, as well as sensitize them towards gender issues and how they affect our society, Sub-Region and continent at large.

Exit Learning Outcomes:

Upon completion of this module the students should be able to:

- Identify social issues affecting the Namibian Society
- Describe the characteristics of these issues and to design a plan of action
- Assess the challenges facing the society in a multi-cultural, multi-faith and secular setting
- Develop respect for humanity, nature and cosmos
- Describe the physical-medical aspects of HIV/AIDS
- Demonstrate knowledge of the following social factors that can contribute towards the spread of HIV/AIDS; Relationships; Social conditions; Attitudes; Cultural influences; Myths about HIV/AIDS
- Explain behaviour change towards HIV/AIDS
- Construct HIV/AIDS prevention strategies, continuum of care and support among students
- Identify with, and use gender concepts with ease
- Utilize gender-sensitive language and live a life that reflects gender exposure
- Reflect on gender relations between women and men in society, and the impact on society
- Reduce gender stereotypes in their home and community at large
- Examine the impact of gender unequal relations on the spread of HIV/AIDS, gender based violence, myths, stereotypes and believes about males and females, resource distribution, the education system and many other issues that affect society and community at large

COMPUTER LITERACY	UCLC3409
NQF Level	4
Contact Hours	2L + 1PS/Week
Credits	8
Assessment	Continuous 60%; Examination 40% (1 x 2 hour paper)
Pre-requisites	None

Content: Understanding computer systems and technology: The problem-solving approach. Structure and components of a modern computer - processor, memory, hard drives, disk drives, interfaces. The Windows environment. **Principles of information processing:** word-processing, spreadsheets, presentations, databases. nature and use of software. **Practical exercises:** Use of MS Word, Excel, PowerPoint. Communication using email. Overview of Internet.

Exit Learning Outcomes

Upon completion of this module, students will be able to:

- Distinguish between the functions of various computer components and peripherals
- Use a computer under the Windows operating system
- Differentiate between word processors, spreadsheets, presentations and databases
- Perform practical exercises using MS Word, Excel and PowerPoint
- Be able to create own email address, communicate with email and use the Internet

ANATOMY	MBSA1533
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NQF level:	5
Contact Hours	4 Lecture hours per week + 2 hours of tutorial (or 3 hours of practice)
Credits:	60
Assessment:	40% continuous assessment + 60% final examination
Pre-requisites	None

Module description: This module administered over three consecutive semesters are designed to start with basic structure and increase in depth with horizontal integration with physiology the advancement of the module to cover the clinical application of anatomical principles to health and disease states. The modules are designed to focus on concepts and details of human anatomy and anatomical terminologies and acquaint students with the structures of the locomotive apparatus: the skeletal and muscular systems as well as the structures of the human body in relation to normal and abnormal processes of pregnancy, defects in fetal development and the external factors that interfere with the basic mechanisms of tissue morphogenesis are discussed. The additional focus of this module is on the structure and function of the cells and tissues of the human body. Students will be introduced to histological techniques essential in the identification and characterization of cells and tissues, normal histological characteristics of cells, tissues, and organs of the nervous, endocrine, and reproductive systems, and reviews the pathological changes that manifest in disease situations. Cell models, and where appropriate cadavers tissue histological slides, and electronic photomicrographs will be used and examined using the optic microscope.

Exit Learning Outcomes: At the end of the modules, a student is expected to be able to:

- Demonstrate the approaches to naming anatomical structures
- Explain the morphological and functional characteristics of the locomotive apparatus in relation to age,sex, and the environment
- Demonstrate skills in the different methods and histological techniques frequently used in the study of cells and tissues
- Explain the concepts of cell potentiation, differentiation, proliferation, and death, and characterize the structure of the different types of cells and tissues according to function
- Discuss normal development
- Interpret developmental defects of the embryo, fetus, placenta, and the amniotic fluid
- Identify preventive actions that contribute to decreasing the rate of birth of premature, retarded, or genetically defective children
- Explain the potential causes of infertility and the value of technological choices as solutions to the problem

- Explain the signs of normal and risky pregnancies from the standpoint of the embryo, fetus, amniotic fluid, and the mother
- Discuss the morphological and functional characteristics of the main structures of the nervous, endocrine, and reproductive systems as well as the organs of vision and hearing
- Interpret the symptoms of frequent diseases
- Compare the morphological characteristics of the structures of components of circulatory, urinary, respiratory, and digestive systems, and interpret the symptoms of frequent diseases produced by alterations of the components of these systems under the microscope, explain their functions
- Distinguish pathological specimens from normal ones
- Compare and contrast the morphological and functional characteristics of the main structures of the cell
- Relate the principal histological characteristics of different organs and systems of the human body in relation with their functions and identify these structures in both health and disease
- Discuss the transformations that take place during the development of different systems, Analyze the actions taken in preventing and detecting defects in a fetus
- Explain how modern techniques are used in the diagnosis of malformations
- Evaluate the normal fetal development and the effects of fetal, maternal, and placental factors on the growth and development of the fetus

Contents: Common anatomical terminologies, the anatomy of the active and passive branches of the locomotive apparatus of both the skeletal and muscular systems, histology and its importance in the study of the human body; the cell and its characterization under both light and electron microscopy; organelles and inclusion bodies' structures and functions; the cell cycle; histological techniques and methods; dead tissues and methods of study; characteristics, identifications, and functions of membranes, glands, the epithelial, connective, muscular, and nervous tissues, blood, cardiovascular, immune, respiratory, urinary, digestive, and integumentary systems, morphological and functional characteristics of the circulatory, respiratory, urinary, and digestive systems, central nervous system, organs of vision and hearing, peripheral and autonomic nervous, endocrine, and reproductive systems, peripheral nervous system, nerve ganglion, sensory receptors, the cerebrum, cerebellum, meninges, blood-stream barrier, special sensory receptors, internal ear, endocrine system (hypophysis, thyroid, parathyroid, adrenal, the islets of Langerhans), reproductive system (testis, intratesticular genital ducts, excretory genital ducts, accessory genital ducts, prostate, and seminal vesicles), and female reproductive system (ovary, oviduct, uterus, and mammary glands), basic concepts and processes of development, fertility, and pre-embryonic development; the embryo and placental development; development of the locomotive system and face; normal and pathologic embryo–fetal development.

PHYSIOLOGY
MBSP1533

NQF level:	6
Contact Hours	4 Lecture hours per week + 2 hours of tutorial (or 3 hours of practice)
Credits:	60
Assessment:	40% continuous assessment +60% final examination
Pre-requisites	None

Module description: This module administered over three consecutive semesters focus on the basic principles of Physiology and discuss in detail the normal functions of the nervous, endocrine, and reproductive systems, blood, cardiovascular system, respiratory, urinary, and digestive systems and the physiology of the functions of distribution, nutrition and interchange their regulatory mechanisms. It is designed to lay a solid foundation and review in detail concepts in Physiology essential in understanding the patho-physiology of diseases.

Exit Learning Outcomes: At the end of the three modules, a student is expected to be able to:

- Explain the functional organization of the human body as well as the biophysical base of the nervous, endocrine, and reproductive systems
- Explain the major mechanisms by which hormones bring about the effects on their target tissues
- Discuss the mechanisms of deviation from normal physiological functions and development of diseases
- Explain the functions of components, and the functional mechanisms of respiratory, cardiovascular, urinary and digestive systems as well as the effects of exercise
- Discuss control and regulatory mechanisms of body function

Contents: Excitable tissues, membrane potentials, action potentials, stimulus and energy transduction into impulses, impulse propagation, chemical transmission, synaptic transmission, sensory and motor pathways, integration of sensory impulses in the cortex, sensory and motor systems, and higher functions of the nervous, system, the hormone concept, second messenger systems employed by hormones, neuroendocrine connections, feedback control systems of the endocrine systems, and reproductive systems, fertility issues, fertilization, pregnancy and the associated physiological changes, labor and fetal changes at delivery, blood, blood groups, immunity and blood clotting, cardiovascular function, electrical events including electrocardiogram, respiratory, urinary, and digestive systems, functional organization of the human body, control of the internal body environment, transport of substances through the cell membrane, cell membrane potentials and action potentials, contraction of muscles, neuromuscular transmission, excitation contraction coupling, blood pressure control, role of the kidneys in long term of blood control, muscle blood flow, circulatory shock, heart failure, organization of the nervous system, physiology of pulmonary function, oxygen and carbon dioxide transport and acid base balance, physiology of the gastrointestinal system digestion and absorption, reproductive and endocrine physiology and energetic interchange.

BIOCHEMISTRY

MBSB1522

NOF level:	5
Contact Hours	4 Lecture hours per week + 2 hours of tutorial (or 3 hours of practice)
Credits:	40
Assessment:	40% continuous assessment + 60% final examination

Module description: This module administered over 2 consecutive semesters is designed to acquaint students to the basic structures and functions of cells and the human organism as a whole in both health and disease situations in terms of the properties of individual molecules by applying one of the most unifying and important concepts: the principle of complementarity of structure and function. This module also focuses on how the cell synthesizes, catabolizes, and stores macromolecules, generates energy and regulates its metabolic and information pathways in addition to reviewing the basic principles of genetics and frequent genetic diseases encountered in medical practice.

Exit learning Outcomes: At the end of the module, students will be able to:

- Relate the structural and functional organization of the eukaryotic cell

- Explain the properties and functions of the components of macromolecules that contribute to the structural and functional characteristics of substances crucial in life processes
- Discuss the biological functions of the different types of macromolecules
- Explain the molecular basis of the main mechanisms at play in regulating enzyme activities and various metabolic processes
- Describe the molecular mechanisms that allow the exchange of substances, energy, and signaling across the cell membrane
- Discuss the molecular events that occur during the conservation, transmission, and expression processes of the genetic information and the consequences of their variations due to the action of internal and external agents
- Explain the events of cellular respiration, their basic molecular mechanisms and their regulations, and how the cell synthesizes, catabolizes, and stores macromolecules
- Demonstrate a dynamic understanding of the interrelations between the main metabolic pathways and their regulations
- Explain the quantitative, and qualitative nutritional necessities of carbohydrates, lipids, and proteins, relate some metabolic dysfunctions of carbohydrates, lipids, and nitrogenous compounds with the molecular origin of such defects
- Explain the molecular basis of genetics
- interpret the inheritance of genetic diseases
- Discuss the abnormalities of human chromosomes and phenotypic characteristics of genetic diseases
- Explain the importance of the interaction of the genome with the environment

Contents: Introduction to the molecular biology of the cell, the building blocks of macromolecules, macromolecules and lipids, enzymes, biological membranes, molecular genetics, and fundamental problems in Molecular Biology, introduction to metabolism, cellular respiration, carbohydrate metabolism, lipid metabolism, nitrogenous compound metabolism, and integration and regulation of mammalian fuel metabolism, transmission of genes and their characteristics, gene linkage and recombination, genetic markers, study of genes in populations, cytogenetics, cytogenetic disorders involving autosomes and sex chromosomes, balanced translocations, phenotypic effects of unbalanced chromosomal abnormalities, multifactorial inheritance, DNA-testing and applications, cloning and contemporary ethical debates, and genetic counseling.

BEHAVIORAL SCIENCES AND PRIMARY HEALTH CARE

MBSC1533

NQF level:	5
Contact Hours	4 Lecture hours per week + 2 hours of tutorial (or 3 hours of practice)
Credits:	60
Assessment:	40% Continuous assessment + 60% final examination
Pre-requisites	None

Module description: The module administered over three consecutive semesters aims at introducing students to the basic principles of Primary Health Care from the very start. The module focus on the historical development of medicine as a socio-biological science, the concept of primary health care, the importance of environment for human health, the policy and guidelines of public health system in Namibia, and the main basic procedures which are frequently used in primary health care. In addition, the modules emphasize concepts of personality development, concepts of psychology, classical and contemporary theories of psychology, the importance of psychology in states of health and disease as it affects the individual, family, or community, interrelationships with the economic, social, and cultural environment, and communication and behaviour changes. These modules prepare a sound theoretical foundation on which to build skills cumulatively in the professional development.

Contents: Historical development of medicine as socio-biological science, the concept of primary health care, the importance of environment for human health, the policy and guidelines of public health system in Namibia, and the main

basic procedures which are frequently used in primary health care, personality and its classification, theories of psychology, socio-cultural practices and health seeking behaviour, behaviour formation and change, theories of communication, components of communication, including advocacy, social mobilization, empowerment, participatory health promotion, social marketing, communication strategy development, and evaluation.

Exit Learning Outcomes: At the end of the 3 modules should be able to:

- Conceptualize medicine as socio-biological science and humans as bio-psycho-social beings
- Perform basic procedures frequently used in primary health care practices
- Interpret the psychosocial manifestations and causes of disease
- Recognize simple behaviour changes and formation
- Demonstrate appropriate mental health problem intervention approaches for individuals, families, or population groups
- Implement intervention measures targeted at correction and prevention of mental health problems

PATHOLOGY		MPCP4625
NQF level:	7	
Credits:	40	
Assessment:	40% continuous assessment + 60% final examination must pass practical examination	
Pre-requisite:	Biochemistry (MBSB1522)	

Module description: The focus of this module is on the structural changes of tissues and organs of the human body, which result in or from pathological changes, or are caused by excessive functional adaptation or accumulation of the same.

Exit learning outcomes: At the end of this module a student is expected to be able to:

- Identify the fundamental morphological changes in cellular and sub-cellular structures in tissues and organs
- Explain the mechanisms of pathological processes
- Relate the morphological alterations with functional disorders
- Discuss features of hematological disorders
- Compare and contrast different types of cancers, their epidemiology, routes of metastasis
- Apply pathology as investigative tool in forensics

Contents: Introduction to general pathology, cell injury and death, inflammation, metabolic disorders, circulatory disorders, and neoplasia, endocrine disorders, neurological disorders such as tumours, strokes, primary and secondary malignancies, reproductive disorders such as tumours of the uterus, cervix, and ovaries, forensic and chemical pathology, clinical chemistry, concepts of inflammation, applications of pathology, normal cellular functions, disease and immunology, clinical genetics, cell injury, inflammation and repair cancer and benign tumours,, head and neck, gastrointestinal tract, liver and biliary tract, pancreas, kidney, lower urinary tract and the male genital tract, female genital tract, breast, endocrine system, skin, bones, joints, and soft tissue tumors, peripheral nerve and skeletal muscle, central nervous system, eye, cardiovascular system, respiratory system, lymphoreticular system and bone marrow, locomotor system, infections, immunosuppression, immunity, genetic disorders, chronic infections and their cytological features and diagnosis, tumours of the lymphatic system, Hodgkin's lymphoma, cancers of bone leukemia, myeloma, chronic non-infective diseases such as myocardial infarction, atheroma, breast cancer, lung cancer, serological studies, hormone assays, viral studies ELISA, Western Blot, organ specific function tests, liver function tests, thyroid function.

NQF level:	7
Credits:	40
Assessment:	40% Continuous assessment +60% final examinations must pass the practical examination
Pre-requisite:	Biochemistry (MBSB1522)

Module description: This module examines the nature, metabolism, nutrition, growth, pathogenicity, and prevention of microorganisms and their interactions with the human host, to review bacteria, fungi, viruses and parasites of medical importance and highlight the mechanisms of action of major classes of anti-microbial agents and the drug resistance that develop in the process, and the physical and chemical methods thereof in preventing infectious microorganisms. The modules also focus on reviewing the basic characteristics and functions of the immune system and its responses to intrusion of pathogens and foreign bodies into the body and discusses the nature, metabolism, nutrition, life-cycles, and pathogenicity of parasites of medical importance, their interactions with hosts, their diagnoses, prevention, and treatments, particularly those of the protozoa, helminth, cestode, trematode, and nematode classes, which are quite prevalent in the tropics.

Exit Learning Outcomes: At the end of the module the student is expected to be able to:

- Identify and classify bacteria, fungi, viruses and parasites of clinical importance
- Describe life cycles, modes of transmission and epidemiology of microorganisms, and the pathologies associated with their residence in the human host
- Implement control and preventive measures against microorganisms commonly encountered in Namibia
- Differentiate innate from adaptive immunity
- Explain the mechanisms at play in triggering immune responses or disorders by emphasizing their relationship to normal immune responses
- Apply knowledge on immune-responses and immune-factors in the prevention and treatment of diseases
- Characterize the different types of parasites of medical importance in the tropics in general
- Discuss the distinctive signs and symptoms of patients with parasitic infestations
- Demonstrate clinical skills essential for physical examination and analysis of results from laboratory tests of parasite infestations
- Exercise measures on parasite infestation prevention, control, and treatments
- Practice case management of diseases caused by parasitic infestations

Contents: Microbial metabolism, growth, and genetics; control of microorganisms; infection and host responses to bacteria, fungi, viruses and parasites; infectious diseases of human organ systems; epidemiology and nosocomial infections; zoonoses; practical guidelines for the diagnosis of infectious diseases; integrated disease surveillance and response; prevention and control of infectious diseases; principles of chemotherapy, chemoprophylaxis and escape mechanisms, dynamics of the immune response, allergy and hypersensitivity, immune tolerance, autoimmunity, immunodeficiency and acquired immunodeficiency syndrome, immunosuppression, transplantation of tissues and organs, immunosurveillance, tumor immunity, principles of blood transfusion, immunotherapy, and immunization, gastrointestinal tract infections due to protozoa, helminth, cestodes, and trematodes; arthropod-borne infections due to protozoa (malaria, African trypanosomiasis, South American trypanosomiasis, leishmaniasis), and helminthes (filariaes, loaisis, onchocerciasis).

NQF level:	7
Credits:	140
Assessment:	40% Continuous assessment + 60% final examination must pass clinical examination

Pre-requisite: Biochemistry (MBSB1522)

Module description: This module which is the mainstay and foundation of clinical medical practice is designed to introduce the students early on to the professional and technical skills, scientific knowledge, and human understanding necessary in the care of the sick, their families, and the community and build up on the art of medical practice to near perfection. The module is organized in clinical clerkships and clinical practice carried out in the ambulatory care settings and in medical wards of teaching hospitals. It emphasizes on the establishment of direct, one-to-one physician-patient relationships, the process of social communication, and the performance of physical examination based on competent use of professional skills and introduces students to different diseases that affect the human resulting from different aetiological causes, specifically from infectious agents, organic dysfunction, or injury. The full spectrum of communicable and non communicable diseases shall be covered with special emphasis on diseases which are prevalent in Namibia such as HIV and AIDS, dermatological and neurological disorders. Medical wards or outpatient clinics at teaching hospitals or health centers shall be used by students to relate clinical signs and symptoms of various diseases and the patho-physiological explanation of those signs and symptoms. The module is semi-integrated with Community Medicine and Primary Health Care. In addition the module will describe the most common dermatological diseases, distinguishing normal skin from abnormal skin and significant abnormalities from insignificant ones, integrating pertinent signs and symptoms into an appropriate differential diagnosis. The basic principles, applications, and techniques of X-ray radiography, laboratory investigations and other relevant imaging modalities shall also be introduced so that the students are able to read and identify both normal and abnormal radiological images and laboratory results that underpin medicine and evidence based clinical decision- making. This is an applied module on the use of different modalities of imaging to diagnose and manage common disease affecting different systems of the body. The module also introduces students to the emerging concept of disaster and risk management in the context of international, regional, and more importantly in the national perspectives of casualties that involve large numbers of people. The module focuses on risk management and emergency preparedness at disaster sites, community, and established health facility levels.

Exit Learning Outcomes: At the end of the modules, a student is expected is expected to:

- Carry out a medical interview
- Methodically perform a physical examination with full consideration of a patient's comfort, confidentiality, and privacy
- Accurately record and present to clinical consultants
- Develop professional and clinical reasoning skills
- Analyze and carry on differential diagnosis of diseases
- Evaluate the results and develop treatment plan for individual patients and their families within a health facility or community setting
- Explain the underlying mechanism(s), of abnormalities
- Develop and implement treatment plan or referral of patients
- Explain the pharmacology of frequently used drugs for the treatment of dermatological problems
- Develop professional skills and experience in conducting a medical interview
- Examining adult patients, preparing patient record and presenting the findings to clinical faculty
- Make clinical follow-up of patients
- Request cost-effective and rational use of laboratory tests in clinical reasoning and decision-making processes
- Use laboratory and diagnostic tools, and interpret results
- Identify the indications for requesting for X-ray and other specialized imaging diagnostic procedures, and prepare patients for the procedure
- Examine X-rays, radiographs, or dynamic images
- Differentiate normal and abnormal X-ray and laboratory findings
- Interpret patient clinical presentation on the basis of the findings
- Evaluate the indications for laboratory requests, choice of diagnostic tests, and procedures

- Interpret laboratory findings and explain patient signs, symptoms, and disease progression on the basis of laboratory test results and pathophysiology
- Assess radiographs and other forms of diagnostic imaging modalities
- Identify abnormal images, and explain the pathogenesis of the diseases and the mechanisms thereof leading to changes observed in radio-images
- Assess, design, and implement set of procedures and interventional protocols in preventing and managing human disasters and risks

Contents: Illnesses resulting from physical agents, chemicals, degenerative processes, and infectious agents affecting the nervous system, respiratory, cardiovascular, urinary, digestive, and endocrine systems, haematological diseases and diseases of the locomotor apparatus, patho-physiology of diseases, and the epidemiology of frequent health problems with particular reference to Namibia, approach of patient with skin disorder; diagnostic techniques; common skin disorders; infectious dermatosis: superficial mycosis, dermatosis caused by viruses, including HIV manifestations, dermatosis caused by zooparasites, pyoderma, skin manifestations of sexually transmitted diseases, leprosy; immunologically mediated skin diseases, papulosquamous disorders: psoriasis, lichen planus; benign and malignant pigmented lesions; drugs and preparations in common use for the treatment of common skin conditions. osteomyoarticular, respiratory, circulatory, digestive, urogenital, hemolymphopoietic, and endocrine systems, and fluid-electrolyte balance principles of radiation physics and radiological technology; imaging modalities and their application; radio-isotope imaging, computerized tomography, magnetic resonance imaging, ultrasound, radiological images of osteomyoarticular, respiratory, circulatory, digestive, urogenital, hemolymphopoietic, and endocrine systems; radio-therapeutics and bio-effects of radiation. general laboratory management, basic chemistry of body fluids, enzymatic, biochemical, and hematological tests on respiratory, circulatory, digestive, urogenital, hemolymphopoietic, and endocrine systems, communication skills, medical ethics, general, regional, and systemic physical examination of patients, historical development of disaster and risk management; assessing, designing, and implementing programs on reducing vulnerability, mitigating hazards, and building community capacity in promoting "culture of safety; the relationship between disasters and national developmental strategies and programs in Namibia; intersectorial cooperation in managing disasters; social, cultural, health, and environmental factors known to exacerbate disasters and how to mitigate the impacts; the role of health providers and institutions in managing and preventing disasters.

INDEPENDENT RESEARCH STUDIES

MCMR4770

NQF level:	7
Credits:	140
Assessment:	40% continuous assessment +60% independent research study, must pass research study
Pre-requisites	None

Module description: This module is offered during each of the semesters from the first semester of second year medicine until the tenth and final semester of the degree program. Every medical student has to write a thesis on any given topic of national interest as partial fulfillment towards earning the medical degree is expected to produce doctors with a sound scientific training necessary for the life-long practice of continuing learning and evidence based clinical practice. Research activities are carried over the five years of schooling and these include literature review, fieldwork, practicum, and when appropriate laboratory investigations. In each semester a student is expected to present his/her findings in a class seminar and submit them in writing for evaluation purposes. The module intensifies students on the use of computer programs for storing and analyzing data, and accessing information via the network and discusses basic statistics, probability theory and distribution, principles of sampling, data presentation, measurements of central tendency and dispersion, health statistics, demography, principles and methods of research methodology.

Exit Learning Outcomes: At the end of Year 5, each student is expected to be able to:

- Conduct literature search on any given module

- Read and Critique a scientific article a journal article
- Develop a research proposal
- Apply common computer programs
- Access information through computer networks
- Demonstrate information technology services in research and health education
- Develop a research methodology and tools such as questionnaires and sampling a population of interest
- Conduct a research study designed to address a given problem
- Design and carry out investigations or interventions
- Analyze data collected write papers for publication
- Analyze and interpret data from a research study
- Compose manuscripts targeted at journals on health issues
- Submit an independent study report for evaluation

Contents: Common computer programs, such as word processing and slide presentation, introduction to computer networks, Internet and Intranet, databases and statistical packages, telemedicine, and virtual library, research methodology, descriptive and analytical statistics, demography and health statistics, association, causality and statistical inference, literature review, reference citations, journal article critique, journal article presentation, research proposal development, tool of data collection, questionnaire development, quantitative vs qualitative research, sampling techniques and sample size determination, descriptive and analytical statistics, spread sheet Excel, EPI Info, SPSS, data analysis and presentation packages, manuscript development and publication.

COMMUNITY MEDICINE

MCMC5637

NQF level:	7
Credits:	60
Assessment:	40% continuous assessment +60% final examination
Pre-requisites:	Behavioral Science and Primary Health Care (MBSC1533)

Module description: This module focuses on the historical development of public health and the evolution of traditional and modern health delivery system in Namibia; the current health situation in Namibia, challenges, and anticipated future demand; health programs aimed at the prevention of disease and the promotion of health; demography and health statistics; health management, decentralized management systems, data-based and evidence-based decision making processes; techniques of planning, implementing, monitoring, and evaluating health programmes; environmental health (water supply and waste disposal system, food hygiene, housing, and institutional sanitation, vector control, occupational hazard, participatory hygiene, and sanitation transformation); epidemiology (types of epidemiological studies and methods of outbreak investigation and control, epidemiology of communicable diseases and non-infectious non-communicable diseases, analysis of the leading causes of mortality and morbidity, epidemiological /integrated disease surveillance, Integrated management of childhood diseases (IMCI), integrated disease surveillance and response (IDSR), healthcare for the preschool child, and school health services as well as the rights of the child, organization of MCH services in Namibia and also lays emphasis on the preparation of students for their future of evidence based medicine practice through practical engagements at the community level as a practicum in Child Health and reproductive health and principles of public health in the framework of the primary health care concept. in which students gain practical experience in child development and health in a primary health facility and community catchments area under the supervision of instructors and health facility workers. The module is also designed to describe the basic principles of professional conduct, ethics, and legal practice in health, with particular emphasis on social values, norms, and culture of the Namibian society.

Exit Learning Outcomes: At the end of the module a student is expected to be able to:

- Identify, diagnose, and manage common health problems of individuals, families, population groups, and communities
- Observe professional conduct with regard to patients, their families, and professional colleagues
- Evaluate ethical dilemmas and give professional evidence in a court of law
- Identify and monitor normal growth and development of children
- Acquire skills and experiences in immunization and immunization delivery services
- Identify frequently encountered health problems of children in a community
- Provide advice and counseling on child health and development
- Grasp the important role the individual, household, social, and cultural factors play in determining the delivery of a normal infant, normal development of children during the neonatal and early childhood periods
- Assess health problems of that community and workout an action plan in alleviating those problems
- Provide adolescent health services and maternal health care and family planning services in a primary health care facility and through follow-up in a household
- Diagnose pregnancy, monitor the development of normal pregnancy
- Identify high-risk pregnancy and normal puerperium, as well as grasp the important role the individual, household, social, and cultural factors play in determining the onset and outcome of pregnancy
- Identify reproductive health needs of adolescents and provide advice and counseling to all women
- Identify administrative and institutional management needs development action plans and cost-effective interventions and assess the outcome of such interventions

Contents: Traditional and modern health delivery system;; health programs aimed at the prevention of disease and the promotion of health; demography and health statistics; health management, decentralized management systems, evidence-based decision making processes; planning, implementing, monitoring, and evaluating health programmes; environmental health vector control, occupational hazard, participatory hygiene, and sanitation transformation); epidemiology integrated disease surveillance, Integrated management of childhood diseases (IMCI), integrated disease surveillance and response (IDSR), STI/HIV/AIDS, family planning and contraceptive use, antenatal care, post natal care, emergency obstetric care, maternal mortality, and reproductive health rights, basic principles, values, and norms with the emphasis of the Namibian society regarding health; the patient-physician relationship; common ethical dilemmas: fundamental ethical guidelines, conflicts between beneficence and autonomy, patients who lack making-decision capacity, decision about life-sustaining interventions, conflicts of interest; basic principles of medico-legal practice, review of the health related Namibian legislative code; forensic pathology: traumatic injuries in forensic medicine, asphyxia of medico-legal interest, sexual abuse, criminal abortion, individual identification; toxins, poisons, venoms, drug overdose; epidemiology, diagnosis, and general principles of treatment of alcoholism and drug dependency; HIV/AIDS; research and ethics; international codes and declarations; Hippocratic and other oaths in medicine.

PSYCHIATRY

MCMS6627

NQF level:	7
Credits:	40
Assessment:	40% continuous assessment + 60% final examination must pass clinical examination
Pre-requisite:	Behavioral Science and Primary Health Care (MBSC1533)
Co-requisite:	Pathology (MPCP4625)

Module description: This module is designed to introduce students to the common psychiatric and behavioural disorders encountered in general medical practice. The module underscores the need for primary care physicians to assume responsibility for the initial diagnosis and treatment of the most common mental disorders. The focus of this module is response of an organism to stress and the psychic alterations there are as well as the role of the physician in the prevention and treatment of patients with mental disorders and their rehabilitation.

Exit Learning Outcomes: At the end of the module a student is expected to be able to

- Conduct an interview of patients with mental disorders
- Identify clinical signs of mental disorders
- Make differential diagnosis, interpret results of diagnostic investigation,
- Explain the psycho-pathology of mental disorders, develop a treatment of disease or recurrence prevention plan, and present this to clinical faculty member (multi professional clinical discussions)
- Identify patients affected by stressful situations, patients with personality disorder or mental illness
- Prepare a medical record and present to a faculty member
- Counsel the individual or family members or make effective referral

Contents: Signs and symptoms associated with the most prevalent psychiatric diagnoses; anxiety disorders; mood disorders; somatoform disorders; personality disorders; addictive disorders; organic psychosis; mental handicap; childhood, adolescent, and geriatric mental health disorders and crisis interventions; epidemiology and management of mental health illness in Namibia, physician-patient relationship with vulnerable individuals or families, personality and response to stress, psychological and personality disorders and their therapies, management and rehabilitation, torture, population groups in crisis situations, child neglect and abuse, domestic violence, and gender and health.

PHARMACOLOGY**MCMP6627**

NQF level:	7
Credits:	40
Assessment:	40% Continuous assessment + 60% final examination
Pre-requisite:	Physiology (MBSP1533) and Biochemistry (MBSB1522)
Co-requisite:	Pathology (MPCP4625), Medical Microbiology (MPCM4625) and Internal Medicine (MCMM4770)

Module description: This module highlights the fundamental principles of action of all medicinal drugs and is semi-integrated with the module on Internal Medicine. The pharmacodynamics, pharmacokinetics, and toxicity of drugs used in diagnosis, treatment, and prevention of disease, with emphasis on drugs frequently encountered in clinical practice.

Exit Learning Outcomes: At the end of the module, a student is expected to be able to:

- Classify medicinal drugs
- Explain the mode of action, excretion of different medicinal drugs
- Recognize the side effects of drugs
- Develop and initiate emergency remedial measures
- Explain resistance to medicinal drugs
- Discuss medicinal and non medicinal drugs abuse and doping in athletes

Contents: Principles of pharmacology, mechanisms of action of drugs, kinetics of absorption, distribution, metabolism, and excretion, drugs that act on the nervous, respiratory, cardiovascular, urinary, digestive, and endocrine systems.

SURGERY**MCMS 6750**

NQF level:	8
Credits:	100
Assessment:	40% continuous assessment + 60% final examination must pass clinical examination

Pre-requisite: Anatomy (MBSA1533)
Co-requisite: Pathology (MPCP4625)

Module description: This module begins with an introduction to the basic principles of surgery and surgical procedures, both pre-operative and post-operative care, dealing with aseptic techniques, hospital infections, and anaesthesia and progresses to more advanced modules which review prevention, diagnosis, surgical, and non-surgical management of common conditions affecting bones, connective tissues, and joints, designed to prepare students to manage common surgical conditions and emergencies, including life-saving procedures. This module discusses diseases of the head and neck regions where some of the most common infectious diseases encountered by internists and other primary care physicians are found, structure, function, diseases, and basic remedies of the eye as well as common diseases of the urinary tract, their manifestation, causes, underlying patho-physiological mechanisms and their management. During the module students will be required to participate in the management of patients with surgical problems and their complications.

Exit Learning Outcomes: At the end of the module, as student is expected to be able to:

- Diagnose and handle surgical emergencies under stringent surgical conditions
- Suspect a surgical condition by carrying out an interview and physical examination, appropriately select laboratory investigations, interpret results of laboratory tests
- Explain underlying conditions, initiate preoperative management
- Carry out simple surgical interventions
- Assist during surgical operations
- Evaluate patients with surgical conditions
- Explain underlying patho-physiological changes
- Identify indications for surgical interventions and need for changing of management or referral of patients. Identify indications for intervention
- Prepare patients for emergency surgery
- Assess orthopedic health conditions through medical interviews and clinical examination of a patient
- Select and request for appropriate diagnostic investigation
- Interpret findings, explain the underlying pathology, and outline a management plan of the case.
- Recognize diseases affecting the head and neck
- Develop differential diagnoses
- Select appropriate diagnostic tests and Interpret test results
- Develop a treatment and disease prevention plan for head and neck disorders
- Carryout live-saving and emergency procedures involving ENT conditions under supervision
- Examine the eye, carryout tests for visual acuity and colour, diagnose diseases of the eye and ocular manifestations of systemic diseases as well as carryout simple treatment procedures under supervision, or follow proper referral procedures
- Identify disorders affecting the urological system

Contents: Principles of surgery; introduction to surgical procedures; anesthesia; emergency surgical conditions of the abdomen, chest and blood vessels; shock, trauma and injury; surgical infection, healing and repair; non-visceral tumors, diagnosis and management of frequent surgical conditions, pre- and post- operative care; independent management of minor surgical and live saving procedures, e.g. tracheostomy, thoracocentesis, abdominal puncture; assisting in elective surgery and surgical emergencies, including tooth extraction, articular and musculoskeletal disorders; interview and physical examination of patients; radiographic anatomy; diagnosis, treatment, rehabilitation, and prevention of traumatic and non-traumatic musculoskeletal disorders; underlying patho-physiological mechanisms; multiple injury and response to trauma; complications of traumatic lesions; external and internal immobilization methods, congenital ENT conditions, nasal hemorrhagic syndrome (epistaxis), nasal obstructive syndrome (sinusitis, foreign bodies, injury), nasal tumors, infections of the oral cavity and pharynx (adenoiditis, tonsillitis, pharyngitis), airway obstruction syndrome (laryngitis, croup, and

epiglottitis), affections of vocal cords, neck tumors, ear and mastoid infections (auricular cellulitis, perichondritis, otitis externa, otitis media, mastoiditis), hypoacusia, vertiginous syndrome, anatomy and physiology of the eyeball, socket, and visual pathways; signs and symptoms of primary eye diseases; congenital, immunological, inflammatory, and infectious diseases of the eye; eye trauma and foreign bodies; neoplasia; causes, diagnosis, and treatment of progressive loss of vision; causes, diagnosis, and treatment of sudden visual loss; haemorrhages; alterations of the eyeballs position; ocular complications of systemic diseases; exploration of the ophthalmic patients; minor eye Topics covered include symptoms and signs urological conditions at different age groups; congenital malformations; internal and external urological malformations; urinary tract infections; nephrolithiasis; low urinary tract obstruction; lumbo-abdominal tumors; genital tumors; voiding dysfunction, incontinence, impotence and male infertility.surgery; blindness prevention; tests for visual acuity and colour; imaging for eye investigations. \

PEDIATRICS

MCMP8630

NQF level:	8
Credits:	60
Assessment:	40% continuous assessment + 60% final examination must pass clinical examination
Pre-requisites:	Pathology (MPCP4625) and Medical Microbiology (MPCM4625)
Co-requisites:	Pharmacology (MCMP6627) and Community Medicine (MCMC5637)

Module description: This module introduces students to the evaluation and management of the newborn, identification and management of diseases of infancy and childhood, and management of paediatric emergencies, evaluation and management of common paediatric conditions and emergencies. It prepares students in developing clinical reasoning in paediatrics, making laboratory and diagnostic requests, carrying out simple diagnostic procedures and laboratory tests, developing a management plan, advising children, adolescents and parents on a health problem, its prevention, and management in a health facility or community.

Exit Learning Outcomes: At the end of the module a student is expected to be able to:

- Professionally interview parents or guardian of the new-born, an infant, or a child
- Carry out physical examination on patients, select diagnostic tests
- Evaluate results before proposing an intervention plan
- Write patient record and present the case to clinical faculty member(s)
- Identify the presence of a health problem or acute emergency in a child through interview or by carrying out medical examination
- Initiate life-saving interventions in emergency situations
- Stabilize the clinical state of a patient, refer as necessary
- Request for appropriate laboratory investigations
- Interpret findings, explain the patho-physiology of an illness, and manage a patient independently while under supervision

Contents:

Growth and development, child and adolescent Psychology, behavior, children with special needs, nutrition, pathophysiology of body fluids and fluid therapy pediatric drug therapy, critical care medicine, human genetics, metabolic diseases, perinatal and neonatal medicine, adolescent medicine, immunology allergy, rheumatology, infectious diseases, digestive system, respiratory system, disease of the blood, cancer and benign tumors, nephrology, urologic disorders in Infants, children gynecologic problems of childhood, endocrine system, neurology, neuromuscular disorders, disorders of the eye, ear, skin, bone and joint disorders, environmental health hazards, laboratory medicine, integrated management of childhood illnesses (IMCI); neonatology, growth and development; nutrition; infectious diseases; HIV/AIDS; diseases of the upper respiratory tract; diseases of the lower respiratory tract; disorders of the immune system; acute and chronic digestive system disorders; disturbances of acid-base balance; cardiovascular diseases; renal diseases; nervous system diseases;

hemolymphopoietic and endocrine diseases, differential diagnosis, management and prevention of emergency, acute or chronic illness in childhood and adolescence, medical documentation, management of terminally ill and bereavement, psycho-social aspects of diseases in children, resuscitation of new-born, counseling, HIV/AIDS, pediatric drug dosages and their side effects, rehabilitation, ethical and medico-legal issues in pediatrics.

OBSTETRICS AND GYNECOLOGY

MCMO8630

NQF level:	8
Credits:	60
Assessment:	40% Continuous assessment + 60% final examination must pass clinical examination
Pre-requisites:	Pathology (MPCP4625) and Medical Microbiology (MPCM4625)

Module description: This module begins with introduces students to the diagnoses and treatments of diseases of the female reproductive system and the normal processes of pregnancy and puerperium and the management of common obstetrical and gynecological conditions and their complications.

Exit Learning Outcomes: At the end of the module, a student will be expected to be able to:

- Apply professional skills to identify diseases affecting the reproductive system
- Carryout selected diagnostic investigations
- Develop an intervention plan
- Conduct appropriate investigations, interpret results
- Explain the underlying patho-physiological processes, and develop a management plan
- Perform practical and surgical interventions independently or as an assistant to clinical faculty member
- Prepare patient record, present findings to clinical faculty members, and make proper referrals of patients

Contents: Anatomy and physiology of the female reproductive system; gynecologic exploration; major gynecologic syndromes: leucorrhoea, pelvic pain and menstrual abnormalities; affections of vulva and vagina; benign and malignant affections of uterus; ovarian tumors; pelvic inflammatory disease; affections of breasts; uterine prolapse; climacterium and menopause; normal pregnancy; physiology and diagnosis of pregnancy; assessment and investigations of pregnancy; antenatal care; normal stages of delivery; normal and abnormal puerperium; maternal lactation; contraception and infertility; sexual education and family planning; female genital mutilation; further complications, physiology and management of normal pregnancy; high-risk pregnancy; abnormal pregnancy; medical conditions and HIV in pregnancy; abnormal stages of labor; ectopic pregnancy; patho-physiology of high risk and abnormal pregnancy; obstetric operations, e.g. caesarean section and curettage; supervision of other caregivers within a health facility or home visits; ethical issues in obstetrics- all with specific reference to practicing in Namibia. Hysteroscopy and laparoscopy. Urinary incontinence. Pelvic floor dysfunction I: uterovaginal prolapse. Menopause and the postmenopausal woman. Assisted reproduction. infertility. Endometriosis. Chronic pelvic pain. Pelvic infection. Premenstrual syndrome. Menstrual problems: menorrhagia and primary dysmenorrhagia. Polycystic ovary syndrome and secondary amenorrhoea. Primary amenorrhoea. Gynecological disorders of childhood and adolescence. The role of ultrasound in gynecology. The menstrual cycle. Normal and abnormal development of the genital tract. Termination of pregnancy. Contraception. Obstetric statistics. Miscellaneous medical disorders. Hematological problems in pregnancy. Renal disease. Diabetes and endocrine disease in pregnancy Heart disease in pregnancy. Hypertensive disorders. Malpresentation, malposition, cephalopelvic disproportion and obstetric procedures. Induction and augmentation of labor. Prolonged pregnancy. Preterm labor. 20 Multiple pregnancy. Disorders of fetal growth and assessment of fetal well-being Obstetric emergencies. 16 Trophoblast disease. Ectopic pregnancy. Recurrent miscarriage. Spontaneous miscarriage. Neonatal care for obstetricians. Puerperium and lactation Analgesia and anesthesia. Fetal monitoring during labor. labor. Antenatal care. Pre-conception counseling. Normal fetal growth3 Maternal physiology The placenta and fetal membranes Prenatal diagnosis and genetic Benign disease of the vulva. Malignant disease of the vulva and the vagina. Benign diseases of the vagina, cervix and ovary. Epithelial ovarian cancer. Premalignant and

malignant disease of the cervix. Benign disease of the uterus. Cancer of the uterine corpus. Sexual dysfunction. Ethical dilemmas in obstetrics and gynecology The law and the obstetrician and gynecologist. Domestic violence and sexual assault.